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## Okul İklimi, Akademik İyimserlik ve Okul Etkililiği Arasındaki İlişkinin İncelenmesi<sup>1</sup>

Sema KOCAMANOĞLU<sup>2</sup>, Ender KAZAK<sup>3</sup>

### Examining the Relationship Between School Climate, Academic Optimism and School Effectiveness

#### Abstract

This study was conducted to determine the relationship between school climate, academic optimism and school effectiveness perceptions of high school teachers. Relational survey model, one of the quantitative research models, was used in the study. The research sample consists of 348 teachers working in different types of public high schools in the central district of Düzce province in the 2022-2023 academic year. "Demographic Information Form", "School Climate Scale" adapted into Turkish by Canlı, Demirtaş, and Özer, "Academic Optimism Scale" developed by Wayne K. Hoy (2006) and adapted into Turkish by Çoban and Demirtaş (2011), and "School Effectiveness Scale" developed by Hoy (2009) were used to collect the data. It was determined that the data were normally distributed, and Pearson Correlation Analysis, and Multiple Linear Regression Analysis were performed. According to the findings obtained, it has been determined that all the sub-dimensions of teachers' perceptions about school climate are at the "mostly" level. When looking at the concept of academic optimism, which is another variable, it was found that the "self-efficacy" dimension, which is the sub-dimensions of the scale, is at the "mostly agree" level in line with teachers' perceptions, while the "trust" and "academic emphasis" dimensions, which are the other sub-dimensions, are at the "moderate agree" level. It was determined that teachers' perceptions while their perceptions of school effectiveness were at the "moderate" level. As a result of the analyses, it was determined that there was a positive, statistically significant, and high-level relationship between teachers' school climate, academic optimism, and school effectiveness variables. According to the results of the analysis, it was determined that both variables significantly predicted the dependent variable, school effectiveness. However, it has been determined that school climate has a greater impact on school effectiveness than the academic optimism variable. For teachers to perceive school effectiveness at a high level, administrators' supporting teachers' efforts and encouraging teachers to ensure the continuity of these practices by giving feedback on good ones can help the school achieve its expected goals.

**Keywords:** Teacher, School, School Climate, Academic Optimism, School Effectiveness

#### Özet

Bu araştırma; lise kademesinde görev yapan öğretmenlerin okul iklimi, akademik iyimserlik ve okul etkililiği algıları arasındaki ilişkiyi tespit etmek amacıyla yapılmıştır. Araştırmada nicel araştırma modellerinden biri olan ilişkisel tarama modeli kullanılmıştır. Araştırma örneklemini 2022-2023 eğitim-öğretim yılı Düzce ili Merkez ilçesindeki kamuya ait farklı lise türlerinde çalışan 348 öğretmen oluşturmaktadır. Verilerin toplanmasında "Demografik Bilgiler Formu", Canlı, Demirtaş ve Özer tarafından Türkçe'ye uyarlanan "Okul İklimi Ölçeği", Hoy (2006) tarafından geliştirilen, Çoban ve Demirtaş (2011) tarafından Türkçe'ye uyarlanan "Akademik İyimserlik Ölçeği" ve Hoy (2009) tarafından geliştirilen "Okul Etkililiği Ölçeği" kullanılmıştır. Değişkenlerin normal dağılım gösterip göstermediğine ilişkin değişkenlerin her birinin normallik sınaması yapılmıştır. Verilerin normal dağılım gösterdiği belirlenmiş olup, Pearson Korelasyon Analizi ve Çoklu Doğrusal Regresyon Analizi yapılmıştır. Elde edilen bulgulara göre, öğretmenlerin okul iklimine yönelik algılarının tüm alt boyutlarının "Çoğunlukla" düzeyinde olduğu tespit edilmiştir. Bir diğer değişken olan akademik iyimserlik kavramında görüldüğü üzere öğretmenlerin algıları doğrultusunda ölçeğin alt boyutları olan "öz yeterlik" boyutunun "Çoğunlukla Katılıyorum" düzeyinde olduğu, diğer alt boyutlar olan "Güven" ve "Akademik Vurgu" boyutlarının ise "Orta Düzeyde Katılıyorum" düzeyinde olduğu tespit edilmiştir. Öğretmenlerin okul etkililiğine ilişkin algılarının ise "Orta" düzeyde olduğu tespit edilmiştir. Yapılan analizler sonucu öğretmenlerin okul iklimi, akademik iyimserlik ve okul etkililiği değişkenleri arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki olduğu belirlenmiştir. Analiz sonuçlarına göre her iki değişkenin de bağımlı değişken olan okul etkililiğini anlamlı bir biçimde yordadığı tespit edilmiştir. Bununla birlikte okul ikliminin akademik iyimserlik değişkenine göre okul etkililiği üzerinde daha fazla etkiye sahip olduğu belirlenmiştir. Öğretmenlerin okul etkililiğini yüksek düzeyde algılamaları için okullarda yöneticilerin öğretmenlerin çabalarını desteklemesi, yapılan iyi uygulamalarla ilgili geribildirimde bulunarak öğretmenlerin bu uygulamaların devamlılığını sağlamaya yönelik teşvik edilmesi okulun beklenen hedeflerine ulaşmasını sağlayabilir.

**Anahtar Kelimeler:** Öğretmen, Okul, Okul İklimi, Akademik İyimserlik, Okul Etkililiği

<sup>1</sup> Bu makale, ikinci yazar danışmanlığında, birinci yazar tarafından hazırlanan yüksek lisans tez çalışmasından üretilmiştir.

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## Extended Abstract

### Introduction

School climate refers to the qualities that define the school, distinguish it from other schools, affect the teachers and students' behavior, and affect the feelings of teachers and students (Ak, 2019). The concept of academic optimism is defined as teachers' positive views about themselves, their students, and their parents (Ataş Akdemir, 2016). According to Hoy, Tarter, and Hoy (2006), academic optimism, which is an effort to make a difference in student achievement, consists of three dimensions: teachers' self-efficacy, the academic emphasis of the school, and teachers' trust in students and parents. Effectiveness is a concept that expresses the degree to which an organization achieves the desired outcomes (Yükü and Atağan, 2009). Although school effectiveness is a concept related to the degree to which students can be taught, the main goal of the school is to achieve the objectives of the programs and to ensure behavioral change (Yürek and Cömert, 2021).

Yıldırım (2017) concluded in his study that students in safe and positive school environments are more successful. Various studies on school climate have revealed that a positive school climate increases the willingness to learn, minimizes the negative effects of socio-economic differences on achievement, contributes to academic achievement, increases the commitment of students, and contributes to the performance level of teachers (Thapa, Cohen, Guffey, and Higgins-D'Alessandro, 2013). Özgenel (2020) states that creating a positive atmosphere in schools will have an impact on the outcomes of students, teachers, and other people working in the school and thus contribute to the development of the school. According to Edmond (1979), the effectiveness of the school can be increased to the extent that the school climate is positive (Yüner, 2018). From this point of view, it can be said that the climate in schools will affect the results expected from the school.

In this context, it can be said that the school climate can increase the effectiveness of the school. When the literature is analyzed, studies have been conducted on school climate, academic optimism, and school effectiveness by addressing various variables separately. However, there is no research on the relationship between these three variables. Considering the above information, it is thought that school climate can affect the academic optimism level of the school, and the academic optimism level will increase school effectiveness at a high rate. Determining the relationship between these three variables is important for the development of school organizations. With this study, it is thought that school effectiveness will be strengthened in schools by identifying the situations that negatively affect school climate and supporting the concept of academic optimism. The purpose of this study is to examine the relationship between school climate, academic optimism, and school effectiveness. In this direction, the following questions were asked:

1. What are the perception levels of teachers about the school climate?
2. What are the perception levels of teachers about academic optimism?
3. What are the perception levels of teachers about school effectiveness?
4. Is there a significant relationship between school climate, teachers' academic optimism levels, and school effectiveness?
5. Are teachers' perceptions of school climate and academic optimism significant predictors of their perceptions of school effectiveness?

### Method

Since this study was conducted to determine the relationship between school climate, academic optimism, and school effectiveness in line with the teachers' opinions, the relational survey model, which is one of the quantitative research models, was used. Selected from the universe with easy operation method. The sample of the study consisted of 355 teachers working in high schools in public institutions in the central district of Düzce province in the 2022–2023 academic year. Seven teachers were excluded because they filled out the forms incompletely. The data obtained from the remaining 348 participants was analyzed. "Demographic Information Form", "School Climate Scale" adapted into Turkish by Canlı, Demirtaş, and Özer, "Academic Optimism Scale" developed by Hoy (2006) and adapted into Turkish by Çoban and Demirtaş (2011), and "School Effectiveness Scale" developed by Hoy (2009) were used to collect the data. After the data were collected, they were transferred to the SPSS 25.0 program after the necessary arrangements were made through the Excel program. The normality test of each of these variables was performed by checking whether they were normally distributed. The normality distribution, kurtosis and skewness values, histogram showing the normal distribution, and Q-Q plot graph were examined. For the range of skewness and kurtosis coefficient,  $\pm 1.5$ , determined by Tabachnick and Fidell (2013), was taken as a criterion, and the skewness and kurtosis in this value range were used as

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evidence for the normality of the data. Since the data were normally distributed, parametric tests such as the, correlation analysis, and regression analysis were conducted.

### Findings

It is seen that teachers' perceptions of school climate are at the level of "mostly" in general and in all sub-dimensions of the scale. It is understood that teachers' perception of academic optimism is at the level of "mostly agree" in the dimension of "self-efficacy" and "moderately agree" in other sub-dimensions and on the overall scale. According to teachers' perceptions, it is understood that the findings related to school effectiveness are at a moderate level. According to teachers' perceptions, there is a positive, statistically significant, and high-level relationship between school climate, academic optimism, and school effectiveness variables. According to the results of the analyses, it was seen that both variables significantly predicted the dependent variable, school effectiveness.

### Results

As a result of the research, it was determined that the opinions regarding the perception level of the teachers were at the level of "mostly" according to the averages in the school climate scale. In other words, teachers perceive the school climate similarly positively. In terms of teachers' perceptions of school climate, it was determined that teachers agreed with the statements in the dimensions of democracy and dedication to school, leadership and interaction, success factors, sincerity, and conflict at the "most" level. As a result of the research, it was determined that the views on teachers' perceptions of the concept of academic optimism were at the level of "partially agree," in line with the averages on the overall scale. When the sub-dimensions were analyzed, it was determined that the "self-efficacy" sub-dimension was at the level of "mostly agree" and the other sub-dimensions were at the level of "partially agree." As a result of the research, it was determined that the teachers' opinions were at the level of "Sometimes I Agree" according to the averages in the scale related to school effectiveness. When the research findings were analyzed, it was determined that there was a positive, statistically significant, and high-level relationship between teachers' perceptions of school climate and academic optimism. According to the results of the research, it was determined that school climate and academic optimism variables significantly predicted school effectiveness. In addition, both variables have significant predictive power separately. It has been determined that the variable that affects school effectiveness the most is school climate.

### Giriş

Bilgiyi ortaya çıkarma, yayma ve bilgiye ulaşılabilirliği sağlama konusunda etkili ve önemli kurumların başında okullar yer almaktadır (Usta ve Kahraman, 2021). Okul örgütünün toplumdan aldığı insanı işleyerek tekrar topluma geri vermesi en önemli özelliğidir (Bursalıoğlu, 1982). Bu özelliği ile okulun diğer örgütlerden ayrıldığı ve insan yetiştirmeye yönelik önemli bir amacı olduğu söylenebilir. Öğretme ve öğrenmeye hizmet eden okulların var olma sebebi öğrencilerin öğrenmesini gerçekleştirmektir (Hoy ve Miskel, 2012). Eğitimin amacı, verimli bir öğrenme ortamı oluşturmaktır ve okulların bu amaçları gerçekleştirebilmesi için büyük oranda olumlu bir iklime sahip olmaları gerekmektedir (Özgenel, 2020). Okul iklimi, okulu tanımlayan, onu diğer okullardan ayıran, öğretmen ve öğrencilerin davranışlarını etkileyen nitelikler, öğretmen ve öğrenciler tarafından hissedilen duyguyu ifade etmektedir (Ak, 2019). Bir örgüt olan okullarda çalışan bireyler kendilerini iyi hissettikleri takdirde olumlu bir okul atmosferinden söz edilebilir (Gök ve Tarayan, 2023). Bu bağlamda okul ikliminin olumlu olması ve devamlılığı sürecinde okul yöneticilerinin sorumlulukları bulunmaktadır (Zorbaz, Demirtaş Zorbaz ve Ulaş Kılıç, 2020). Okul yöneticilerin yanı sıra okul iklimine etki eden diğer kişiler ise öğretmenlerdir (Kazak, 2016). Aynı zamanda okullardaki öğretmenlerin başarısını, çalışmaya olan istekliliğini, tutum ve davranışlarını okul iklimi belirlemektedir (Şenel ve Buluç 2016). Diğer bir ifade ile olumlu okul ikliminin öğretmenlerin tutum ve davranışlarını etkilediği söylenebilir.

Olumlu iklime sahip okullarda çalışan öğretmenler öğrencilerine, akademik başarıyı vurgulamakta ve ulaşılabilir hedefler belirlemeleri konusunda destek olmaktadır (Keçeli, 2022). Olumlu iklimin hüküm sürdüğü okullardaki tüm üyeler birbirleriyle saygı çerçevesinde etkileşim içerisindedirler (Güneş, 2019). Bu okullarda, öğretmenlerin motive edilmesi bağlılığın oluşmasını sağlanmakta, ilişkilerin güven temelli olmasına, verimlilik ve performansın artmasına katkıda bulunarak başarının sürdürülebilirliğinin oluşmasına imkân vermektedir (Halis ve Uğurlu, 2008). Buna karşın, olumsuz bir atmosferin hakim olduğu okullarda kişiler arasındaki ilişkilerde soğukluk ve uzaklık olmakta, öğretmenler yapacakları uygulamalarda çekimser davranmakta ve bu nedenle öğrencilerin okul başarılarının olumsuz olarak etkilendiği bilinmektedir (Ördek İnceoğlu, 2020).

Okul başarısında çeşitli faktörlerin etkili olduğu bilinmekle birlikte hangi faktörün daha etkili olduğuna yönelik fikir birliğine varılamamıştır (Boz, 2016). Geleneksel görüşe göre okullarda başarı, yetenek ve motivasyon sonucu oluşmaktadır varsayımı üzerine kurulmuştur (Çoban ve Demirtaş, 2011). Seligman (1998) ise, başarı için gerekli olan üçüncü bir etkenin iyimserlik kavramı olduğunu ileri sürmektedir. İyimserlik,

gelecekle ilgili olumlu beklentilere sahip olma düşüncesi olarak tanımlanmıştır (Carver, Scheier, Segerstrom, 2010). Akademik iyimserlik kavramı ise öğretmenlerin kendileri, öğrencileri, veliler ile ilgili görüşlerinin olumlu olması olarak tanımlanmaktadır (Ataş Akdemir, 2016). Bir başka tanıma göre akademik iyimserlik, eğitim kurumlarının veya öğretmenlerin, öğrencilerin akademik başarılarını olumlu yönde etkileyebileceklerine dair inançlarını veya beklentileri olarak ifade edilebilir (Ergen, 2016, s. 40). Hoy, Tarter ve Wolfhook Hoy'a (2006) göre, öğrenci başarılarına yönelik fark oluşturma çabası olan akademik iyimserlik, öz yeterlilik, akademik vurgu ve güven olmak üzere üç boyuttan oluşmaktadır. Öz yeterlik, bireyin gelecekte karşılaşılabileceği zorluklarla baş edebilme kapasitesinin varlığına yönelik kendine olan inancı ve yargısıdır (Senemoğlu, 2005). Akademik vurgu ise okulların eğitim öğretim esnasında başarıya yönelik inançlarını ve buna bağlı olarak gösterdikleri destek ve çabayı ifade etmektedir (Kurum, 2022). Diğer bir boyut olan güven, öğrenci ve velilerin açıklık, saydamlık, güvenilirlik ve dürüstlüğüne dair öğretmen algılarını kapsamaktadır (Kılınç, Polatcan, Atmaca ve Koşar, 2021). Öğrenci başarısıyla ilişkili bu üç kavram öğrenci başarısına yönelik benzer ve güçlü etkilere sahip olmakta ve incelenen çalışmalar ışığında okulun normatif ve davranışsal ortamını şekillendirmektedir (Smith ve Hoy, 2007). Buradan hareketle okulda kolektif yeterliğin oluşmasının, öğretmenlerin akademik vurguyu benimsemeleri ve okulda güven ortamının oluşması öğrenci başarısı üzerinde etkilere sahip olduğu söylenebilir. Bu bağlamda akademik iyimserliği benimseyen öğretmenlerin, öğrencilerin tümünün başarılı olması için uygun ortamın oluşturulacağı düşüncesinin geliştiği görülmektedir (Seyhan, Soylu, Ercan ve Uçaktürk, 2023).

Akademik iyimserliği benimseyen öğretmenler, öğrencilerin her birinin eşsiz olduğunu, gerekli imkan sağlandığında bütün öğrencilerin başarılı olabileceğini, öğrencilerin başarısını sağlamaya yönelik olarak öğrenci ve ailelere güven duyulması ve ailelerle dayanışma içerisinde olunması gerektiğini düşünmektedirler (Yılmaz ve Kurşun, 2015). Bu doğrultuda öğrencilerin alacağı öğretimin kalitesinin artırılması, okul içinde öğrenme koşullarının iyileştirilmesi ve öğrenci ihtiyaçlarının en uygun şekilde karşılanması için öğretmenlerin akademik iyimserlik düzeyinin yüksek olmasının önemli olarak görülmektedir. Okullarda eğitimin kalitesini artırmaya ilişkin çabalar ise etkili okul kavramının ortaya çıkmasını sağlamıştır (Ada ve Akan, 2007).

Etkililik kavramı, örgütün istediği çıktılara ulaşma derecesini ifade eden bir kavramdır (Yükçü ve Atağan, 2009). Okul etkililiği ise öğrencilerin öğretilirlik derecesi ile ilgili bir kavram olmakla birlikte, okulun esas hedefi, programlardaki amaçları kazandırmak ve davranış değişikliğini sağlamaktır (Yürek ve Cömert, 2021). Diğer bir ifade ile örgütün amaçlarını gerçekleştirebildiği kadar etkili olduğu söylenebilir. Öğrencinin başarı durumu, iş tatmini, öğretmen ve öğrenci performansı bir örgüt olan okulun etkililiğinin varlığının kanıtı olarak görülebilir (Hoy ve Miskel, 2012). Etkili ve verimli bir yapı kuramayan örgütler varlıklarını sürdürmekte sıkıntıya düşebilmekte, sistemdeki olumsuzlukları yok edemeyen bir örgüt için örgütün devamlılığı söz konusu olmamakta, bu nedenle örgütlerin varlıklarını devam ettirebilmeleri açısından etkili olmaları büyük bir önem taşımaktadır (Yumuşak ve Korkmaz, 2021).

Yıldırım (2017), çalışmasında güvenli ve olumlu okul ortamındaki öğrencilerin daha başarılı oldukları sonucuna ulaşmıştır. Okul iklimi ile ilgili yapılan çeşitli çalışmalar, okul ikliminin olumlu olmasının öğrenme istekliliğini artırdığını, sosyo-ekonomik farklılıkların başarı üzerindeki olumsuz etkilerini minimum düzeye indirdiğini, okul ikliminin kalitesinin akademik başarıya katkıda bulunduğunu, öğrencilerin bağlılıklarını artırdığını, öğretmenlerin performans düzeyine katkı sağladığını ortaya koymuştur (Thapa, Cohen, Guffey, Higgins-D'Alessandro, 2013). Özgenel (2020) okullarda olumlu bir atmosfer yaratmanın öğrenci, öğretmen ve okulda çalışan diğer kişilerin ve okulun çıktılarını üzerinde etkili olacağını ve böylelikle okulun gelişmesine katkı sağlayacağını ifade etmektedir. Edmond'a (1979) göre, okul iklimi olumlu olduğu ölçüde okulun etkililiği yükseltilebilmektedir (Yüner, 2018). Buradan hareketle okullarda var olan iklimin öğretmenlerin verimliliğini ve okuldaki beklenen sonuçları etkileyebileceği söylenebilir. Vaux (2015), araştırmasında, iyimserlik ve iklimin öğrenci başarısı ve okul etkililiği üzerindeki etkisini öğretmen algılarına göre incelemiştir. Akademik iyimserlik ve örgütsel iklimin birbiriyle ve öğrenci başarısıyla ilişkili olduğunu tespit etmiştir.

Eğitimde kalitenin yükseltilmesi için okulların etkililiğinin yükseltilmesi gerekmektedir (Korkmaz ve Ada, 2019). Okullarda faaliyetlerin yürütülmesini sağlayan kişi öğretmen olduğu için, okulla ilgili kararlarda öğretmenin görüşünün alınması, öğretmenin okulda memnuniyet duygusunun oluşması okulların amaçlarına ulaşılmasını kolaylaştırmaktadır (Küçük, 2020). Bu doğrultuda öğretmenlerin okul ile ilgili düşünce ve duygu durumlarının belirlenip buna yönelik eksikliklerin giderilmesi hem okulun atmosferinin iyileştirilmesi, hem de okulların başarıya ulaşması açısından önemli olduğu söylenebilir. Alan yazın incelendiğinde okul iklimi akademik iyimserlik ve okul etkililiği ile ilgili ayrı ayrı çeşitli değişkenler ele alınarak araştırmalar yapılmıştır. Vaux (2015), araştırmasında bu üç değişken arasındaki ilişkiyi incelemiştir. Ancak okul iklimi, akademik iyimserlik ve okul etkililiği arasındaki ilişkiyi ele alan ulusal düzeyde herhangi bir araştırmaya rastlanmamıştır. Yukarıdaki bilgiler ışığında, öğretmenlerin okul iklimi, akademik iyimserlik ve okul etkililiği algılarını belirleyerek, öğretmenlerin okul iklimi ve akademik iyimserliklerinin okul etkililiği üzerindeki etkilerini tespit etmenin önemli olduğu düşünülmektedir. Elde edilen sonuçlarla hem alan yazına hem uygulamaya katkı

## Okul İklimi, Akademik İyimserlik ve Okul Etkililiği Arasındaki İlişkinin İncelenmesi

sağlanacağı düşünülmektedir. Bu çalışma ile okul iklimini olumsuz etkileyen durumlar tespit edilip akademik iyimserlik kavramı desteklenerek okullarda okul etkililiğinin güçleneceği düşünülmektedir.

Bu araştırmanın amacı, okul iklimi ile akademik iyimserlik ve okul etkililiği arasındaki ilişkiyi incelemektir. Bu doğrultuda aşağıdaki sorulara cevap aranmıştır.

1. Öğretmenlerin, okul iklimine ilişkin algı düzeyleri nelerdir?
2. Öğretmenlerin, akademik iyimserliğe ilişkin algı düzeyleri nelerdir?
3. Öğretmenlerin, okul etkililiğine ilişkin algı düzeyleri nelerdir?

4. Okul iklimi, öğretmenlerin akademik iyimserlik düzeyleri ve okul etkililiği arasında anlamlı bir ilişki var mıdır?

5. Öğretmenlerin okul iklimi ve akademik iyimserlik algıları, okul etkililiği algılarının anlamlı yordayıcıları mıdır?

### Yöntem

#### Araştırmanın Modeli

Bu araştırma, öğretmenlerin görüşleri doğrultusunda okul iklimi ile akademik iyimserlik ve okul etkililiği arasındaki ilişkiyi belirlemeye yönelik olarak yapıldığından nicel araştırma modellerinden biri olan ilişkisel tarama modeli kullanılmıştır. Bu model, iki ya da daha çok sayıdaki değişkenler arasında meydana gelen birlikte değişimin varlığını veya derecesini tespit etmeyi amaçlayan bir araştırma modelidir (Karasar, 2009). Araştırmada üç temel değişken bulunmaktadır. Bu değişkenlerden “okul iklimi ve akademik iyimserlik” araştırmanın bağımsız değişkenini oluştururken “okul etkililiği” değişkeni ise araştırmanın bağımlı değişkenini ifade etmektedir.

#### Evren ve Örneklem

Araştırmanın evrenini 2022/2023 eğitim öğretim yılında Düzce ili Merkez ilçesinde bulunan kamu kurumlarındaki liselerde görev yapan öğretmenler oluşturmaktadır. Düzce İl Milli Eğitim Müdürlüğünden 2022-2023 eğitim öğretim yılına ait edinilen istatistikî bilgiler doğrultusunda liselerde çalışan öğretmenlerin sayıları 1.197 olup araştırmanın evrenini oluşturmaktadır. Evrenden uygun örnekleme yöntemi ile örneklem seçilmiştir. Uygun örnekleme yöntemi, araştırma için gerekli olan büyüklükteki gruba erişene kadar, en ulaşılabilir olan yanıtlayıcılardan başlanarak oluşturulmaktadır (Büyüköztürk vd., 2010). Araştırmacı bu yöntemle katılımcıları seçerken kolay ulaşılabilir durumda olanları ve uygun çalışılabilecek olanları seçer (Korkmaz, 2020).

Gereken örneklem büyüklüğü %95 güven seviyesi ve %5 hata payına göre hesaplanıp, örneklem sayısı 290 olarak tespit edilmiştir (Büyüköztürk vd., 2010). Bu doğrultuda gönüllü olan 355 öğretmen çalışmanın örneklemini oluşturmuştur. Öğretmenlerden yedi tanesi formları eksik doldurduğu için analizlere dahil edilmemiştir. Geriye kalan 348 katılımcıdan alınan verilerin analizi yapılmıştır. Araştırmaya katılan öğretmenlere ait çeşitli demografik veriler Tablo 1’de gösterilmiştir.

**Tablo 1. Araştırmaya Katılan Öğretmenlerin Demografik Özellikleri**

Değişken	N	%
<b>Cinsiyet</b>		
Kadın	210	60,3
Erkek	138	39,7
<b>Eğitim Düzeyi</b>		
Lisans	254	73,0
Lisansüstü	94	27,0
<b>Yaş Aralığı</b>		
21-35 Yaş	119	34,2
36-44 Yaş	119	34,2
45 Yaş ve Üzeri	110	31,6
<b>Mevcut Okuldaki Öğretmen Sayısı</b>		
1-45 Arası	110	31,6
46-59 Arası	111	31,9
60 ve Üzeri	127	36,5
<b>Mevcut Okuldaki Çalışma Süresi</b>		
1-3 Yıl	130	37,4



4-6 Yıl	96	27,6
7 Yıl ve Üzeri	122	35,0
<b>Mesleki Kıdem</b>		
1-9 Yıl	106	30,5
10-17 Yıl	107	30,7
18 Yıl ve Üzeri	135	38,8

Tablo 1’den anlaşılacağı üzere araştırmaya katılan öğretmenlerin (%60,3) kadın, kalan kısmı erkektir (%39,7). Eğitim düzeylerine göre dağılımında görüldüğü üzere öğretmenlerin büyük çoğunluğunun lisans mezunu (%73,0), kalan kısmının lisansüstü mezunu (%27,0) olduğu anlaşılmaktadır. Yaş değişkenine göre dağılımında görüldüğü üzere 21-35 yaş ve 36-44 yaş arasında eşit oranda (%34,2) bir dağılım varken 45 yaş ve üzerinde daha az bir oran (%31,6) söz konusudur. Mevcut okuldaki öğretmen sayısı dağılımına göre en çok katılım 60+ sayıda öğretmenin olduğu okullarda çalışan öğretmenlerde (%36,5) iken 1-45 arası öğretmeni olan okullardaki öğretmenlerin oranı (%31,6) ve 46-59 arası öğretmeni olan okullardaki öğretmenlerin oranı (%31,9) birbirine yakındır. Mevcut okuldaki çalışma süresi değişkenine göre ise en çok katılım 1-3 yıl arası çalışma süresi olan öğretmenlerde (%37,4), daha sonra 7+ yıldır aynı okulda çalışan öğretmenlerde (%35,0) ve en sonda ise mevcut okulunda 4-6 yıldır çalışan öğretmenlerde (%27,6) olduğu görülmektedir. Mesleki kıdem değişkenine göre dağılımında görüldüğü üzere en çok katılımın mesleki kıdemi 18+ yıl olan öğretmenlerde (%38,8) olduğu anlaşılmaktadır. Mesleki kıdemi 1-9 yıl (%30,5) ve mesleki kıdemi 10-17 yıl arası olan öğretmenlerin (%30,7) oranı birbirine oldukça yakındır.

### Veri Toplama Araçları

Araştırmada veriler dört bölümden oluşan veri toplama aracı ile toplanmıştır. Bu araştırmada Kişisel Bilgiler Formu, Okul İklimi Ölçeği, Akademik İyimserlik Ölçeği ve Okul Etkililiği Ölçeği kullanılmıştır. Araştırma öncesinde ölçekleri hazırlayanlar ile iletişim kurularak gerekli izinler alınmıştır. Bu form ve ölçeklerle ilgili açıklamalar aşağıda yapılmıştır.

### Demografik Bilgiler Formu

Kişisel bilgi formunda öğretmenlere altı soru yöneltilmiştir. Öğretmenlerin yaşları, cinsiyetleri, mesleki kıdemleri, mevcut okullarındaki çalışma süreleri, eğitim düzeyleri, çalıştıkları okuldaki öğretmen sayısı sorulmuştur. Edinilen bilgilere göre analizler yapılmıştır.

### Okul İklimi Ölçeği

Öğretmenlerin okul iklimi algı düzeylerini ölçen Canlı, Demirtaş ve Özer (2018) tarafından geliştirilen “Okul İklimi” ölçeği kullanılmıştır. Ölçek 23 maddeden oluşmaktadır. Okul iklimi ölçeğindeki 2, 21, 22 ve 23 maddeleri ters maddelerdir. Elde edilen her bir alt boyutta yer alan maddelerin içerikleri dikkate alınarak birinci alt boyut “Demokratiklik ve Okula Adanma”, ikinci alt boyut “Liderlik ve Etkileşim”, üçüncü alt boyut “Başarı Etkenleri”, dördüncü alt boyut “Samimiyet” ve beşinci alt boyut “Çatışma” olarak isimlendirilmiştir. Bu ölçek likert yapıda hazırlanmıştır. Ölçeğin geliştirilmesi sırasında yapılan geçerlik çalışmalarında yapı geçerliği ve kapsam geçerliği incelenmiştir. Ölçeğin güvenilirliği için de Cronbach Alpha güvenilirlik katsayısı, madde-toplam korelasyonları ve test-tekrar test korelasyonu hesaplanmıştır. Doğrulayıcı faktör analizi (DFA) sonucunda, ölçek için model-veri uyumunun kabul edilebilir seviyede olduğu görülmüştür.

Ölçeğin güvenilirlik incelemesi sonucunda ise alt boyutların Cronbach Alpha iç tutarlılık katsayıları; “Demokratiklik ve Okula Adanma” için .90, “Liderlik ve etkileşim” için .89, “Başarı Etkenleri” için .75, “Samimiyet” için .85 ve “Çatışma” için .73 olarak belirlenmiştir. Ölçeğin test-tekrar test korelasyon katsayısı ise “Demokratiklik ve okula adanma” boyutu için .92, “Liderlik ve Etkileşim” boyutu için .96, “Başarı Etkenleri” boyutu için .82, “Samimiyet” boyutu için .91 ve “çatışma” boyutu için .94 olarak hesaplanmıştır. Yapılan araştırma sonucunda, okul iklimi ölçeğinin geçerli ve güvenilir bir ölçme aracı olduğu ve öğretmenlerin okul iklimine yönelik görüşlerinin belirlenmesi için uygun bir ölçme aracı olduğu tespit edilmiştir (Canlı vd., 2018). Bu araştırmada ölçeğin Cronbach Alpha değeri .0,939 olarak belirlenmiştir.

### Akademik İyimserlik Ölçeği

Okulların akademik iyimserlik düzeyini belirlemek amacıyla Wayne K. Hoy (2006) tarafından geliştirilen, Çoban ve Demirtaş (2011) tarafından Türkçe’ye uyarlanan ölçek formu kullanılmıştır. Orijinal ölçek formu 30 maddeden oluşmaktadır. Çoban ve Demirtaş (2011), 98 öğretmenle yapmış olduğu faktör analizinin sonucunda maddelerin orijinalinde olduğu gibi üç faktöre ayrıldığını tespit edilmiştir. Ancak orijinalinde yer alan 11 madde düşük yük değerleri alması veya içerik olarak diğer boyutlara kaydığı için bu maddeler ölçekten çıkarılmıştır. Bu maddelerin ölçekten çıkarılmasıyla ölçek 19 maddeye düşürülmüştür. Ölçek likert tipi hazırlanmıştır.

## Okul İklimi, Akademik İyimserlik ve Okul Etkililiği Arasındaki İlişkinin İncelenmesi

Ölçek üç boyutludur. Bunlar öz yeterlilik, güven ve akademik vurgu'dur. Ölçekten alınan en düşük değer 19, en yüksek değer ise 95'tir. Ölçeğin öz yeterlilik boyutunda yer alan maddeler olumsuzdur ve tersten puanlanmaktadır. Ölçeğin güven boyutu toplam varyansın %37.75'ini, akademik vurgu boyutu %10.22'sini, öz yeterlilik boyutu %8.94'ünü açıklamaktadır. Üç boyutun açıkladığı kümülatif varyans oranı ise %56.92'dir. Ölçeğin güvenilirliğini belirlemek için Cronbach's Alpha iç tutarlılık katsayıları ( $\alpha$ ) incelenmiştir. Bu katsayı Öz Yeterlilik faktörü için .68, Güven faktörü için .89, Akademik Vurgu faktörü için .86 ve ölçeğin tümü için .85 olarak hesaplanmıştır. Bu çalışmada ölçeğin Cronbach Alpha değeri 0,801 olarak belirlenmiş olup ölçeğin güvenilirliğinin yüksek olduğu söylenebilir (Çoban ve Demirtaş, 2011).

### Okul Etkililiği Ölçeği

OEÖ 8 maddeden oluşmakta olup tek boyutlu bir ölçektir. Ölçek 'Bu okulda üretilen ürün ve hizmetlerin kalitesi çok iyidir', 'Bu okulda öğretmenler, okul kaynaklarını etkili bir şekilde kullanır' gibi maddelerden oluşmaktadır (Yüner ve Özdemir, 2020, s. 396). Orijinal ölçeğin yapılan güvenilirlik analizi sonucunda ölçeğin Cronbach Alpha katsayısının .85 olduğu görülmüştür (Hoy, 2009). Bu araştırma için OEÖ'nün geçerlik ve güvenilirlik analizleri yapılmıştır. Ölçeğin güvenilirliğini belirlemek için Cronbach alfa katsayısına bakılmış olup, Geçerlik analizi için DFA tekrarlanarak ve belirlenen uyum değerlerine ilişkin [ $\chi^2=60.96$ ;  $Sd=20$ ;  $\chi^2/Sd=3.04$ ;  $AGFI=.96$ ;  $GFI=.98$ ;  $NFI=.94$ ;  $CFI=.96$ ;  $RMSEA=.07$ ] ölçeğin geçerlilik ve güvenilirliğe sahip olduğu ortaya konmuştur. Ölçek a likert yapıda hazırlanmıştır. Bu araştırma kapsamında yapılan güvenilirlik analizi sonucunda OEÖ'nin Cronbach alfa değeri .927 olarak belirlenmiştir.

### Verilerin Toplanması

Araştırma verileri Düzce Üniversitesi Bilimsel Araştırma ve Yayın Etik Kurulundan 25.10.2022 tarihli ve 2022/412 karar sayılı etik izni ile toplanmıştır. Ayrıca çalışmada okullarda uygulama yapmak için Düzce İl Millî Eğitim Müdürlüğü'nden izin alınmıştır. Araştırmada Demografik Bilgiler Formu, OİÖ, AİÖ ve OEÖ Google Formlar uygulamasında birleştirilerek tek bir form haline getirilmiştir. Araştırmada ölçekler hem Google Form üzerinden hem de okullara gidilerek toplanmıştır. Araştırmanın verileri, 2022-2023 eğitim-öğretim yılında Düzce ili merkez ilçesinde bulunan liselerde görev yapan öğretmenlerden gönüllük esasına dayalı olarak elde edilmiştir. Anket uygulanan öğretmenlere, ölçeklerle ilgili bilgiler verilerle elde edilen verilerin hiçbir kişi, kurum ya da kuruluşla paylaşılmayacağı ifade edilmiştir.

### Verilerin Analizi

Veriler toplandıktan sonra Excel programı aracılığıyla gereken düzenlemeler yapıldıktan sonra SPSS 25.0 programına aktarılmıştır. Araştırmada kullanılan üç ölçekten (okul iklimi, akademik iyimserlik ve okul etkililiği ölçeği) alınan puanların aritmetik ortalama ve standart sapma değerleri belirlenmiştir. Veri analizine başlanmadan önce hangi analiz testlerinin kullanılacağına karar vermek için demografik özellikler, OİÖ ve AİÖ ve OEÖ ile içerdikleri alt boyutların normallik değerleri kontrol edilmiştir. Bu değişkenlerin normal dağılım gösterip göstermediğine ve sonrasında parametrik ya da parametrik olmayan testlerden hangilerinin kullanılacağına karar verilmeden önce değişkenlerin her birinin normallik sınaması yapılmıştır. Normallik dağılımında basıklık ve çarpıklık değerlerine, normal dağılımı gösteren histograma ve Q-Q plot grafiğine bakılmıştır. Çarpıklık ve basıklık katsayısı aralığı için Tabachnick ve Fidell'in (2013) belirlediği  $\pm 1,5$  ölçüt olarak alınmıştır ve bu değer aralığındaki çarpıklık-basıklık verinin normalliğine kanıt olarak kullanılmıştır.

**Tablo 2.** Bağımsız ve Bağımlı Değişkenlere Ait Basıklık ve Çarpıklık Değerleri

Değişkenler	Normallik Testleri						Çarpıklık	Basıklık	Sonuç
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk					
	İstatistik	Sd	P	İstatistik	Sd	P			
Okul İklimi	0,061	348	.003	0,986	348	.002	-0,229	0,166	Normal
Akademik İyimserlik	0,051	348	.028	0,992	348	.058	0,234	0,298	Normal
Okul Etkililiği	0,101	348	.000	0,970	348	.000	-0,349	0,135	Normal

a. Lilliefors Significance Correction

Tablo 2'de görüldüğü üzere her üç değişkenin de çarpıklık ve basıklık değerlerinin  $\pm 1,5$  aralığındadır. Bu değerler, üç değişkenin de normal dağıldığını göstermektedir. Veriler normal dağıldığı için parametrik testlerden, Korelasyon Analizi ve Regresyon Analizi ile devam edilmiştir.

**Bulgular****Birinci Alt Probleme İlişkin Bulgular**

Araştırmaya katılan öğretmenlerin okul iklimine ilişkin algı düzeyleri ve alt boyutlarına ilişkin standart sapma ve aritmetik ortalama değerleri Tablo 3'te sunulmuştur.

**Tablo 3. Öğretmenlerin Okul İklimi Algı Düzeylerine İlişkin Bulgular**

Alt Boyutlar	N	Alınabilecek Maksimum Puan	$\bar{X}$	SS	Düzye
Demokratiklik ve Okula Adanma (Faktör 1)	348	30	24,36	0,57	Çoğunlukla
Liderlik ve Etkileşim (Faktör 2)	348	30	23,58	0,73	Çoğunlukla
Başarı Etkenleri (Faktör 3)	348	20	15,60	0,65	Çoğunlukla
Samimiyet (Faktör 4)	348	15	11,34	0,73	Çoğunlukla
Çatışma*	348	20	14,12	0,81	Çoğunlukla
Okul İklimi (Genel)	348	115	89,01	0,56	Çoğunlukla

Tablo 3'e bakıldığı zaman araştırmaya katılan öğretmenlerin okul iklimi ölçeğinin her bir alt boyutuna ilişkin aritmetik ortalama ve standart sapma değerleri görülmektedir. *Demokratiklik ve Okula Adanma* alt boyutunu toplam 6 madde meydana getirmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 24,36; SS= 0,57 olarak hesaplanmıştır ve "Çoğunlukla" düzeyindedir. İkinci alt boyut olan *Liderlik ve Etkileşim* toplam 6 maddeden meydana gelmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 23,58; SS= 0,73 olarak hesaplanmıştır ve "Çoğunlukla" düzeyindedir. Üçüncü alt boyut olan *Başarı Etkenleri* toplam 4 maddeden meydana gelmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 15,60; SS= 0,65 olarak hesaplanmıştır ve "Çoğunlukla" düzeyindedir. Dördüncü alt boyut olan *Samimiyet* toplam 3 maddeden meydana gelmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 11,34; SS= 0,73 olarak hesaplanmıştır ve "Çoğunlukla" düzeyindedir. Beşinci alt boyut olan *Çatışma* toplam 4 maddeden meydana gelmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 14,12; SS= 0,81 olarak hesaplanmıştır ve "Çoğunlukla" düzeyindedir. Okul İklimi ölçeği toplam 23 maddeden meydana gelmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 89,01; SS= 0,56 olarak hesaplanmıştır ve "Çoğunlukla" düzeyindedir.

**İkinci Alt Probleme İlişkin Bulgular**

Araştırmaya katılan öğretmenlerin akademik iyimserlik algı düzeyleri ve alt boyutlarına ilişkin standart sapma ve aritmetik ortalama değerleri Tablo 4'te sunulmuştur.

**Tablo 4. Akademik İyimserlik Algısına İlişkin Bulgular**

Alt Boyutlar	N	Alınabilecek Maksimum Puan	$\bar{X}$	SS	Düzye
Öz yeterlik (Faktör 1)	348	25	21,50	3,64	Çoğunlukla Katılıyorum
Güven (Faktör 2)	348	35	23,81	4,66	Orta Düzeyde Katılıyorum
Akademik vurgu (Faktör 3)	348	35	23,85	5,05	Orta Düzeyde Katılıyorum
Akademik İyimserlik (Genel)	348	95	69,18	10,85	Orta Düzeyde Katılıyorum

Tablo 4'e bakıldığı zaman araştırmaya katılan öğretmenlerin algılarına göre akademik iyimserlik ölçeğinin her bir alt boyutuna ilişkin aritmetik ortalama ve standart sapma değerleri görülmektedir. *Özyeterlik* alt boyutunu toplam 5 maddeden meydana getirmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 21,50; SS= 3,64 olarak hesaplanmıştır ve "Çoğunlukla Katılıyorum" düzeyindedir. *Güven* alt boyutunu toplam 7 madde meydana getirmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 23,81; SS= 4,66 olarak hesaplanmıştır ve "Orta Düzeyde Katılıyorum" düzeyindedir. *Akademik Vurgu* alt boyutunu toplam 7 madde meydana getirmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 23,85; SS= 5,05 olarak hesaplanmıştır ve "Orta Düzeyde Katılıyorum" düzeyindedir. *Akademik İyimserlik* ölçeğini toplam 19 madde meydana getirmektedir ve aritmetik ortalama değeri  $\bar{X}$ = 69,18; SS= 10,85 olarak hesaplanmıştır ve "Orta Düzeyde Katılıyorum" düzeyindedir.

**Üçüncü Alt Probleme İlişkin Bulgular**

## Okul İklimi, Akademik İyimserlik ve Okul Etkililiği Arasındaki İlişkinin İncelenmesi

Araştırmaya katılan öğretmenlerin algıladıkları okul etkililiğine ilişkin standart sapma ve aritmetik ortalama değerleri Tablo 5’te sunulmuştur.

**Tablo 5.** Okul Etkililiği Ölçeğine Ait Standart Sapma ve Aritmetik Ortalama Değerleri

Değişken	N	Min.	Max.	$\bar{X}$	SS	Düzye
Okul Etkililiği (Genel)	348	1,00	5,00	3,88	0,64	Bazen Katılıyorum

Tablo 5’te görüleceği üzere araştırmaya katılan öğretmenlerin algılarına göre okul etkililiği ölçeğinin genel toplamının aritmetik ortalama ve standart sapma değerleri görülmektedir. Toplam 4 maddeden meydana gelen bu ölçeğin aritmetik ortalama değeri  $\bar{X}$ = 3,88; SS= 0,64 olarak hesaplanmıştır ve “ Bazen Katılıyorum” düzeyindedir.

#### Dördüncü Alt Probleme İlişkin Bulgular

Tablo 6’da öğretmenlerin okul iklimi, akademik iyimserlik ve okul etkililiği algı düzeyleri arasındaki ilişkiyi gösteren Pearson Korelasyon Analizi sonuçları yer almaktadır.

**Tablo 6.** Okul İklimi, Akademik İyimserlik ve Okul Etkililiği Ölçeği Genel Toplamı Arasındaki Pearson Korelasyon Analizi Sonuçları

Değişkenler		Okul İklimi	Akademik İyimserlik	Okul Etkililiği
Okul İklimi	<i>R</i>	1	.70**	.75**
	<i>P</i>		.000	.000
	<i>N</i>		348	348
Akademik İyimserlik	<i>R</i>		1	.73**
	<i>P</i>			.000
	<i>N</i>			348
Okul Etkililiği	<i>R</i>			1
	<i>P</i>			
	<i>N</i>			348

Analiz sonuçlarına göre öğretmenlerin okul iklimi algısı ile akademik iyimserlik algısı arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki vardır ( $r=0,70$ ;  $p<0,01$ ). Diğer anlatımla okullardaki iklim pozitif oldukça bu durum öğretmenlerin akademik iyimserlik düzeylerini de yükseltmektedir. Ayrıca, akademik iyimserlik düzeyi arttıkça okul ikliminde de artış görülmektedir. Öğretmenlerin okul iklimi algısı ile okul etkililiği algısı arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki vardır ( $r=0,75$ ;  $p<0,01$ ). Diğer ifadeyle okullardaki iklim pozitif yönlü oldukça okulların etkililik düzeyleri de yükselmektedir.

Okulların etkililik düzeyi arttıkça aynı zamanda okul iklimi de pozitif yönlü olmaktadır. Öğretmenlerin akademik iyimserlik algısı ile okul etkililiği algısı arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki vardır ( $r=0,73$ ;  $p<0,01$ ). Diğer ifadeyle öğretmenlerin akademik iyimserlik düzeyi arttıkça okulların etkililik düzeyleri de yükselmektedir. Okulların etkililik düzeyi arttıkça öğretmenlerde daha fazla akademik iyimserlik görülmektedir.

#### Beşinci Alt Probleme İlişkin Bulgular

Tablo 7’de okul iklimi ve akademik iyimserliğin okul etkililiğini yordamasına ilişkin yapılan çoklu doğrusal regresyon analizi sonuçları yer almaktadır.

**Tablo 7.** Bağımsız Değişkenlerin Bağımlı Değişkeni Yordama Düzeyini Gösteren Çoklu Doğrusal Regresyon Analizi Sonuçları

Değişken	B	Standart Hata <sub>B</sub>	B	T	p	Kısmi r	İkili r
Sabit	0,159	0,153		1,042	.298		
Okul İklimi	0,529	0,052	0,460	10,119	.000	0,478	0,328
Akademik İyimserlik	0,024	0,003	0,405	8,912	.000	0,433	0,289
R = 0,799	R <sup>2</sup> = 0,638						
F (2, 345) = 303,983	p < 0,05						

Analiz sonuçlarına göre tüm değişkenler normallik varsayımlarını karşılamakta ve çoklu bağlantısallık sorunu bulunmamaktadır (VIF = 1.971; Durbin-Watson = 1.919; Tolerance değeri = .0507). Analiz sonuçlarına göre her iki değişken bir arada iken bağımlı değişken olan okul etkililiği üzerinde anlamlı bir yordama yapmaktadır ( $R=0.799$ ;  $R^2 = 0.638$ ;  $p<0,05$ ).  $p$  değerlerinde görüldüğü üzere tüm değişkenlerin ayrı ayrı anlamlı yordama gücüne sahiptir. Bağımsız değişkenlerin bağımlı değişkeni yordama düzeyi %63,8'dir. Okul ikliminde meydana gelen bir birimlik değişim, okul etkililiğinde 0,529 birimlik pozitif yönlü değişim meydana getirirken; akademik iyimserlikte meydana gelen bir birimlik değişim, okul etkililiğinde 0,024 birimlik değişim oluşturmaktadır.  $\beta$  değerlerine göre okul etkililiği üzerinde en fazla etkisi olan değişken okul iklimi'dir.

## Tartışma ve Sonuç

### Birinci Alt Probleme İlişkin Tartışma ve Sonuç

Araştırmanın birinci alt probleminde öğretmenlerin, okul iklimine ilişkin algı düzeyleri tespit edilmiştir. Araştırma sonucunda okul iklimi ölçek genelindeki ortalamalara göre öğretmenlerin algı düzeyine ilişkin görüşlerin “çoğunlukla” düzeyinde olduğu tespit edilmiştir. Diğer bir ifadeyle öğretmenler okul iklimini benzer şekilde olumlu olarak algılamaktadır. Araştırma sonuçları doğrultusunda öğretmenlerin, kendi aralarında ve öğrenciler arasındaki ilişkileri demokratik buldukları, okullarında bireysel farklılıklara saygı gösterildiği, büyük ölçüde iletişim probleminin olmadığı, öğretmenlerin okulu benimsedikleri, okulla ilgili durumlarda sorumluluk üstlenmeyi istedikleri, öğretmenlerin taleplerini okul yöneticisine kolayca ilettikleri, okulda oluşan problemlerin açık bir biçimde tartışıldığı, öğretmenlerden beklentilerini açıkça dile getirdiği söylenebilir. İlgili alan yazın incelendiğinde benzer sonuçlara rastlanmıştır. Pınar (2023), Korkmaz ve Ada (2019) araştırmasında, öğretmenlerin görüşleri doğrultusunda okul iklimine ilişkin görüşlerinin “Çoğunlukla” düzeyinde olduğunu tespit etmiştir. Benzer şekilde, Keçeli (2022) ve Ada (2020) yaptıkları çalışmada, öğretmenlerin okul iklimini yüksek düzeyde algıladıklarını tespit etmişlerdir. Buna karşın Akhan Çağırtekin (2022) ve ise yaptıkları çalışmada ortaöğretim kurumlarında çalışan öğretmenlerin okul iklimine yönelik algılarının orta düzeyde olduğunu belirlemiştir. Okul iklimine ilişkin öğretmenlerin algıları açısından; okul iklimi ölçeğinin tamamında, demokratiklik ve okula adanma, liderlik ve etkileşim, başarı etkenleri, samimiyet ve çatışma boyutlarında yer alan ifadelerle öğretmenlerin “çoğunlukla” düzeyinde katıldıkları tespit edilmiştir. Yapılan çalışmalarda ulaşılan sonuçlarla araştırma sonuçları örtüşmektedir (Aydın, 2022).

### İkinci Alt Probleme İlişkin Tartışma ve Sonuç

Araştırmanın ikinci alt probleminde öğretmenlerin, akademik iyimserliklerine ilişkin algı düzeyleri tespit edilmiştir. Araştırma sonucunda akademik iyimserlik kavramının ölçek genelindeki ortalamalar doğrultusunda öğretmenlerin algılarına ilişkin görüşlerin “orta düzeyde katılıyorum” düzeyinde olduğu tespit edilmiştir. Alt boyutlarda görüldüğü üzere sadece “öz yeterlik” alt boyutunda “çoğunlukla katılıyorum” düzeyindedir. Araştırma sonuçlarına göre öğretmenlerin, başarılı sonuçlar elde etmek için gerekli becerilere sahip olduğu, disiplin problemleriyle başa çıkabildikleri, öğrencilerin öğrencilerle koşullar ne olursa olsun ilgilenmeyi bırakmadıkları söylenebilir. “Güven” ve “akademik vurgu” alt boyutlarının ise “orta düzeyde katılıyorum” düzeyinde olduğu belirlenmiştir. Buradan hareketle öğretmenlerin, velilerin sözlerine ve kendilerine destek olacaklarına tam anlamıyla inanmadıkları çıkarımı yapılabilir. Öğretmenler öğrencilerin onlar için koyulan hedefleri başarabileceklerine ilişkin inançlarının orta düzeyde olduğu söylenebilir. Alan yazın incelendiğinde benzer sonuçlara rastlanmıştır. Kurt (2018), yaptığı çalışmada öğretmenlerin akademik iyimserlik düzeylerinin “orta” düzeyde olduğu bulgusuna ulaşmış ve diğer boyutlara göre en yüksek alt boyutun öz yeterlik olduğunu tespit etmiştir. Uysal (2021) yaptığı çalışmada, öğretmenlerin akademik iyimserlik düzeylerinin orta düzeyde olduğunu tespit etmiş, alt boyutlar incelendiğinde ise öz yeterlik alt boyutunun en düşük düzeyde olduğunu tespit etmiştir.

Yapılan bazı çalışmalarda ise farklı sonuçlara ulaşılmıştır Ergen (2016), sınıf öğretmenlerinin akademik iyimserlik düzeylerine ilişkin yaptığı çalışmada “çoğu zaman” düzeyinde olduğunu tespit etmiştir. Coşkun Yurtyapan (2022) yaptığı çalışmada, öğretmenlerin görüşleri doğrultusunda akademik iyimserlik düzeylerinin orta düzeyin üstünde olduğunu tespit etmiştir. Tepe (2018) yaptığı çalışmada, öğretmenlerin akademik iyimserlik algılarının iyi düzeyde olduğu bulgusuna ulaşmıştır. Gökler ve Taştan (2018), öğretmenlerin akademik iyimserliğe yönelik algılarının yüksek olduğunu belirlemiş, öğretmenlerin okul akademik iyimserliğe yönelik olumlu görüşe sahip olduklarını tespit etmiştir. Yüksek düzey öz yeterliğe sahip kişiler düşük öz yeterliğe sahip kişilere oranla, zorluk derecesi yüksek çalışmalar karşısında daha rahat ve verimlilik düzeyleri daha yüksek olabilirken tam tersi durum söz konusu olduğunda yapacakları çalışmaların zorluk derecesi az da olsa daha zor olduğu inancına sahiptirler (Çoban ve Demirtaş, 2011). Bu nedenle öğretmenlerin öz yeterlik düzeyinin yüksek olmasının üretkenlikleri açısından önemli olduğu söylenebilir.

### Üçüncü Alt Probleme İlişkin Tartışma ve Sonuç

Araştırmanın üçüncü alt probleminde öğretmenlerin, okul etkililiğine ilişkin algı düzeyleri tespit edilmiştir. Araştırma sonucunda öğretmenlerin görüşleri doğrultusunda okul etkililiğine ilişkin ölçek genelindeki ortalamalara göre görüşlerin “Bazen Katılıyorum” düzeyinde olduğu belirlenmiştir. Diğer bir ifadeyle öğretmenlerin okul etkililiğine ilişkin algılarının olumlu olduğu söylenebilir. Bu sonuç alan yazındaki diğer çalışmalarla örtüşmektedir. Arslan, Satıcı ve Kuru (2006), Cerit ve Yıldırım (2017), öğretmenlerin okul etkililiği algılarının orta düzeyde olduğunu tespit etmiştir. Alan yazında farklı araştırma sonuçlarına da rastlanmıştır. Çubukçu ve Girmen (2006), Namlı (2017), Ada (2020) yaptığı çalışmada okul etkililiğinin yüksek düzeyde olduğunu tespit etmiştir. Bu doğrultuda, öğretmenlerin görev yaptıkları okulları orta düzeyde etkili olarak algıladıkları söylenebilir. Bu bağlamda öğretmenlerin okulun etkililiği konusunda eğitim ve öğretim hizmetlerinin niteliğine ilişkin inançlarının orta düzeyde olduğu söylenebilir. Okul kaynaklarından bazen yararlandığı ve okuldaki değişikliklerin öğretmenler tarafından kısmen kabul edilebilir düzeyde algılandıkları, öğretmenlerin yenilikler konusunda bilgilendirilmeyi orta düzeyde algıladıkları görüşünde oldukları söylenebilir.

### Dördüncü Alt Probleme İlişkin Sonuç ve Tartışma

Araştırmanın dördüncü alt problemine yönelik araştırma sonucuna göre, öğretmenlerin okul iklimi algısı ile akademik iyimserlik algısı arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki olduğu tespit edilmiştir. Başka bir ifade ile okul iklimi ile akademik iyimserlik paralellik göstermekte, okullardaki iklimin olumlu olması öğretmenlerin akademik iyimserlik düzeylerini arttırmaktadır. Akademik iyimserlik düzeyinin artması da okul iklimini olumlu olarak etkilemektedir. Kılınç (2013), Vaux (2015), Ratnawati, Utomo, Ningsih ve Setyaputri (2022) yaptığı araştırma sonuçlarına göre öğretmenlerin akademik iyimserliği ile okul iklimi arasında pozitif ve anlamlı bir ilişki olduğunu tespit etmiştir. Reeves (2010), yaptığı çalışmada örgüt ikliminin akademik iyimserlik arasında orta düzeyde anlamlı bir ilişki olduğunu belirlemiştir. Yani, örgütsel iklim ne kadar iyi olursa akademik iyimserlik de o kadar fazla olacağı sonucuna ulaşmıştır. Araştırma sonuçlarından yola çıkılarak bireysel farklılıklara saygılı, demokratik bir ortamın sağlandığı, çalışanların okulu sahiplendiği, öğretmenlerin sorumluluk duygusuyla hareket ettiği, okul yöneticilerinin öğretmenlere gerekli kaynakları sağladığı okullarda, öğretmenlerin kendi becerilerine ve öğrenci başarısına ilişkin inançlarının ve çabalarının artacağı, öğrenciler arasında olumlu ilişkilerin kurulacağı, öğretmen öğrenci ve veli arasında güvenin oluşabileceği söylenebilir.

Araştırma sonuçlarına göre öğretmenlerin okul iklimi algısı ile okul etkililiği algısı arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki bulunduğu tespit edilmiştir. Diğer bir ifadeyle olumlu ikliminin olduğu okullarda okulların etkililik düzeyleri artmakta, okulların etkililik düzeyi arttıkça da olumlu okul iklimi oluşmaktadır. Buradan yola çıkarak okul ikliminin okul etkililiğini arttırmada önemli bir faktör olduğu, öğretmenlerin çalışma ortamının iyileştirilmesi ve olumlu bir iklim sağlanması sonucu öğretmenin verimliliği artırılarak öğrenci başarısı sağlanabileceği söylenebilir. Alan yazın incelendiğinde benzer sonuçlara ulaşmak mümkündür. Özgenel (2020), Ada (2020) yaptığı çalışmada, okul iklimi ile okul etkililiği arasında pozitif yönlü istatistiksel olarak anlamlı bir ilişkinin bulunduğu tespit etmiştir. Yine alan yazın incelendiğinde okul iklimi ile okul etkililiği arasında anlamlı ve güçlü bir ilişkinin olduğu çalışma sonuçlarına ulaşılmıştır (Korkmaz ve Ada, 2019). Şenel ve Buluç (2016), yaptığı çalışmada okul iklimi ile okul etkililiği arasında olumlu yönde, orta düzeyde ve anlamlı bir ilişki olduğunu tespit etmiştir.

Araştırma sonuçları incelendiğinde öğretmenlerin akademik iyimserlik algısı ile okul etkililiği algısı arasında pozitif yönlü, istatistiksel olarak anlamlı ve yüksek düzeyde bir ilişki bulunduğu tespit edilmiştir. Başka bir ifadeyle öğretmenlerin akademik iyimserlik düzeyi arttıkça okulların etkililik düzeyleri de yükselmektedir. Alan yazında benzer sonuçlara ulaşılmıştır. Tepe (2018), yaptığı çalışmada öğretmenlerin akademik iyimserlik düzeyleri ile okul etkililiği arasında pozitif yönlü, anlamlı ilişkiler olduğu sonucuna ulaşmıştır. Yüner ve Özdemir (2020), yaptığı çalışmada kolektif öğretmen yeterliği ile okul etkililiği arasında pozitif yönlü orta düzeyde bir ilişki olduğu tespit etmiştir. Yılmaz ve Sarpkaya (2021), öğretmenlerin okul müdürüne güven algıları ile öğrenci ve veliye güven algıları arasında pozitif yönlü, zayıf düzeyde bir ilişki bulunduğunu belirlenmiştir.

### Beşinci Alt Probleme İlişkin Tartışma ve Sonuç

Araştırmanın beşinci alt probleminde öğretmenlerin okul iklimi ve akademik iyimserlik algıları, okul etkililiğinin anlamlı yordayıcıları olma durumu analiz edilmiştir. Araştırma sonuçları incelendiğinde, okul iklimi ve akademik iyimserlik değişkeninin okul etkililiğini anlamlı bir biçimde yordadığı tespit edilmiştir. Okul iklimi ve akademik iyimserlik değişkeninin de ayrı ayrı anlamlı yordama gücüne sahip olduğu belirlenmiştir. Okul etkililiğini en çok etkileyen değişkenin okul iklimi olduğu tespit edilmiştir. Buradan yola çıkılarak öğretmenlerin çalışma ortamlarının düzenlenmesi, olumlu ortamın yöneticiler ve öğretmenler tarafından oluşturulması, okul içindeki iletişim ve işbirliğinin güçlendirilmesinin, çalışanlar arasında gruplaşmaların önlenip samimi bir

ortamın oluşturulmasının öğrenci başarısı ve niteliğini ve dolayısıyla okulun verimliliği ve kalitesi açısından önemli olduğu söylenebilir. Başarının vurgulandığı, güven ortamının sağlandığı ve öğretmenlerin kendi becerilerine güvenmesinin öğrenci motivasyonu ve başarısı açısından önemli olduğu, dolayısıyla bu yönlü yapılan çalışmaların okulun etkililiğini arttıracığı söylenebilir. Alan yazın incelendiğinde bu araştırma sonuçlarıyla benzer sonuçlara rastlanmıştır. Korkmaz ve Ada (2019), Şenel ve Buluç (2016), Tepe (2018), (Yılmaz ve Sarpkaya, (2021), yaptığı araştırma sonucunda okul ikliminin, okul etkililiğini anlamlı ve güçlü bir biçimde yordadığını tespit etmiştir. Bahçetepe (2013) yaptığı çalışmada, okul ikliminin destekleyici öğretmen davranışları ve başarı odaklılık boyutları ile akademik başarı arasında olumlu yönde güçlü bir ilişki olduğunu tespit etmiştir. Buradan hareketle olumlu atmosferde çalışan öğretmenlerin istenilen çıktılara ulaşılabilirliği kolaylaştırdığı, olumsuz bir okul atmosferinin ise öğretmen motivasyonunu düşüreceği ve istenilen çıktıları negatif yönde etkileyeceği söylenebilir. Okul ikliminin okulun hedeflerini gerçekleştirme, etkililiğini artırma ve öğrencilerin akademik başarısı üzerindeki etkileri açısından önemli olduğu çıkarımı yapılabilir.

### Öneriler

Öğretmenlerin okul etkililiği algıları orta düzeyde olduğu tespit edilmiştir.. Öğretmenlerin okul etkililiğini yüksek düzeyde algılamaları için okullarda yöneticilerin öğretmenlerin çabalarını desteklemesi, yapılan iyi uygulamalarla ilgili geribildirimde bulunarak öğretmenlerin bu uygulamaların devamlılığını sağlamaya yönelik teşvik edilmesi okulun beklenen hedeflerine ulaşmasını sağlayabilir. Öğretmenlerin akademik iyimserlik düzeyleri orta düzeydedir. Buna yönelik öğretmenlerin görüşleri alınarak bu doğrultuda etkinlikler yapılabilir. Okul yöneticileri okuldaki öğretmenlerin başarılarını paylaşarak duygusal yönden kendilerini iyi hissetmelerini sağlayabilir. Bu değişkenler arasındaki ilişkileri belirlemeye yönelik ilkökul ve ortaokul kademelerindeki kamu ve özel kurumlarda görev yapan öğretmenlerin görüşleri alınarak karşılaştırılabilir. Araştırmada elde edilen bulguların nedenlerine ilişkin öğretmen görüşleri doğrultusunda nitel desende araştırmalar yapılabilir. Yapılacak olan yeni araştırmalarda öğretmenin yanı sıra yönetici ve velilerin görüşleri alınabilir. Aynı zamanda büyük ve küçük ölçekli okullar karşılaştırılmaya yönelik çalışmalar da yapılabilir.

### Katkı Beyanı

Birinci yazar teorik kısım, yöntem, bulgular ve tartışma sonuç kısımlarını inşa ederken, ikinci yazar çalışmanın her aşamasında danışman olarak katkı sunmuştur

### Çatışma Beyanı

Yazarlar arasında herhangi bir çıkar çatışması bulunmamaktadır.

### Kaynakça

- Ada, K. (2020). *Ortaokullarda okul iklimi ile okul etkililiği arasındaki ilişkide öğretmen kolektif yeterliğinin aracılık rolü* (Yayımlanmamış yüksek lisans tezi). Gazi Üniversitesi, Ankara.
- Ada, Ş. & Akan, D. (2010). Değişim sürecinde etkili okullar. *Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Dergisi*, (16), 343-373.
- Ak, K. (2019). *Okul iklimi ile öğretmenlerin işe yabancılaşma düzeyleri arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). Ondokuz Mayıs Üniversitesi, Samsun.
- Akhan Çağırtekin, B. (2022). *Öğretmenlerin örgütsel değer algıları ile örgütsel bağlılık ve okul iklimi arasındaki ilişki* (Yayımlanmamış doktora tezi). Dicle Üniversitesi, Diyarbakır.
- Arslan, H., Satıcı, A., & Kuru, M. (2006). Devlet ve özel ilköğretim okullarının etkililiğinin araştırılması. *Eğitim ve Bilim*, 31(142), 15-25.
- Ataş Akdemir, Ö. (2016). *Öğretmen algılarına göre yöneticilerin dağıtımçı liderlik davranışlarının okulların akademik iyimserlikleri ile örgütsel bağlılık ve okul başarısıyla ilişkisi* (Yayımlanmamış doktora tezi). Atatürk Üniversitesi, Erzurum.
- Aydın, F. (2022). *Öğretmen kimliğinin oluşmasında hizmet öncesi eğitim ve okul ikliminin rolü* (Yayımlanmamış doktora tezi). Yüzüncü Yıl Üniversitesi, Van.
- Bahçetepe, Ü. (2013). *İlköğretim sekizinci sınıfların akademik başarıları ile algıladıkları okul iklimi arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). İstanbul Üniversitesi, İstanbul.
- Boz, A. (2016). *Okul yöneticilerinin otantik liderlik davranışları ile okulların akademik iyimserlik ve öğretmenlerin örgütsel sinizm düzeyleri arasındaki ilişki* (Yayımlanmamış Doktora Tezi). Dicle Üniversitesi, Diyarbakır.

## Okul iklimi, Akademik İyimserlik ve Okul Etkililiği Arasındaki İlişkinin İncelenmesi

- Bursalıoğlu, Z. (1982). *Okul yönetiminde yeni yapı ve davranış* (6. Baskı ). Ankara: Ankara Üniversitesi Eğitim Fakültesi Yayınları.
- Büyüköztürk, Ş., Kılıç Çakmak, E., Akgün, Ö. E., Karadeniz, Ş. & Demirel, F. (2010). *Bilimsel Araştırma Yöntemleri* (17. Baskı). Ankara: Pegem Yayınları.
- Canlı, S., Demirtaş, H., & Özer, N. (2018). Okul iklimi ölçeğinin geçerlik ve güvenilirlik çalışması. *İlköğretim Online*, 17(4), 1797-1811. <https://doi.org/10.17051/ilkonline.2019.506842>
- Carver, CS, Scheier, MF., ve Segerstrom, SC (2010). İyimserlik. *Klinik Psikoloji İncelemesi*, 30 (7), 879–889.
- Cerit, Y. & Yıldırım, B. (2017). İlkokul müdürlerinin etkili liderlik davranışları ile okul etkililiği arasındaki ilişki. *Bartın Üniversitesi Eğitim Fakültesi Dergisi*, 6(3), 902-914. <https://doi.org/10.14686/buefad.312405>
- Coşkun Yurtyapan, E. (2022). *Paylaşılan liderlik ile okul akademik iyimserlik ilişkisi* (Yayımlanmamış yüksek ++lisans tezi). Ömer Halisdemir Üniversitesi, Niğde.
- Çoban, D., & Demirtaş, H. (2011). Okulların akademik iyimserlik düzeyi ile öğretmenlerin örgütsel bağlılığı arasındaki ilişki. *Kuram ve Uygulamada Eğitim Yönetimi*, 17(3), 317-348.
- Çubukçu, Z., & Girmen, P. (2006). Ortaöğretim kurumlarının etkili okul özelliklerine sahip olma düzeyleri. *Manas Üniversitesi Sosyal Bilimler Dergisi*, 8(16), 121-136.
- Edmonds, R. (1979). Effective school for the urban poor. *Educational Leadership*, 37, 15-27.
- Ergen, Y. (2016). *Sınıf öğretmenlerinin sınıf yönetim becerileri, akademik iyimserlikleri ve mesleki bağlılıkları arasındaki ilişki (Malatya ili örneği)* (Yayımlanmamış doktora tezi). Ondokuz Mayıs Üniversitesi, Samsun.
- Gök, R. & Tarayan, M. (2023). İlkokul öğretmenlerinin olumlu okul iklimine ilişkin görüşleri. *Asya Studies-Academic Social Studies/Akademik Sosyal Araştırmalar*, 7(24), 43-66. <https://doi.org/10.31455/asya.1256048>
- Gökler, R., & Taştan, N. (2018). Öğretmenlerin kişilik özellikleri ile okul akademik iyimserliği arasındaki ilişkinin incelenmesi. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 38(1), 333-358
- Güneş, A. (2019). *Öğretmenlerin örgütsel adalet algıları, örgütsel sessizlik düzeyleri ve örgütsel vatandaşlık davranışları arasındaki ilişki (Pendik İlçesi Örneği)* (Yayımlanmamış yüksek lisans tezi). Uludağ Üniversitesi, Bursa.
- Halis, M. & Uğurlu, Ö. Y. (2008). Güncel çalışmalar ışığında örgüt iklimi. *ISGUC The Journal of Industrial Relations and Human Resources*, 10(2), 101-123.
- Hoy, W. K. (2009). School effectiveness index. Retrieved from [http://www.waynehoy.com/school\\_effectiveness\\_index.html](http://www.waynehoy.com/school_effectiveness_index.html).
- Hoy, W. K. & Miskel, C. G. (2012). Eğitim yönetimi: teori, araştırma ve uygulama (7. Basım), (çev. Ed. S. Turan). Ankara: Nobel Yayın Dağıtım.
- Hoy, W. K., Tarter, C. J., & Hoy, A. W. (2006). Academic optimism of schools: A force for student achievement. *American Educational Research Journal*, 43(3), 425–446. <https://www.jstor.org/stable/4121765>
- Karasar, N. (2009). Bilimsel Araştırma Yöntemleri. Nobel Yayınları, Ankara.
- Kazak, E. (2016). *Okul yöneticilerinin öğretim liderliği davranışları ile okulda kuşaklararası iklim ve kuşaklararası öğrenme arasındaki ilişki* (Yayımlanmamış doktora tezi). Kocaeli Üniversitesi, Kocaeli.
- Keçeli, İ. (2022). *İlkokul öğretmenlerinin okul iklimi algıları ile örgütsel mutluluk düzeyleri arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). İstanbul Kültür Üniversitesi, İstanbul.
- Kılınç, A. Ç. (2013). The relationship between individual teacher academic optimism and school climate. *International Online Journal of Educational Sciences*, 5(3), 621-634.
- Kılınç, A. Ç., Polatcan, M., Atmaca, T. & Koşar, M. (2021). Öğretmen mesleki öğrenmesinin yordayıcıları olarak öğretmen öz yeterliği ve bireysel akademik iyimserlik: Bir yapısal eşitlik modellemesi. *Eğitim ve Bilim*, 46(205), 373-394. <http://dx.doi.org/10.15390/EB.2020.8966>
- Korkmaz, M., & Ada, K. (2019). Ortaokullarda okul iklimi ve okul etkililiği arasındaki ilişkinin incelenmesi. E. Kırak, E. Babaoğlu, Çelik, & A. Çilek (Eds.), *İçinde Eğitim Araştırmaları-2019* (ss. 38-54). Eyuder.



- Korkmaz, İ. (2020). Nicel arařtırmalarda evren, örneklem, örnekleme teknikleri. (Editörler: Behçet Oral, Ahmet Çoban), Kuramdan uygulamaya eğitimde bilimsel arařtırma yöntemleri (1. Baskı). Ankara: Pegem Akademi Yayınları.
- Kurt, Ş. (2018). *Öğretmenlerin politik yetileri ile akademik iyimserlik düzeyleri arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). Uşak Üniversitesi, Uşak.
- Kurum, M. (2022). *Sınıf öğretmenlerinin akademik iyimserlikleri ile mesleki öz yeterlik alguları arasındaki ilişkinin incelenmesi: Ankara ili örneği* (Yayımlanmamış yüksek lisans tezi). Bülent Ecevit Üniversitesi, Zonguldak.
- Küçük, Ö. (2020). *Okul müdürlerinin toksik liderlik davranışları ile okul etkililiği arasındaki ilişkide örgütsel sinizm ve psikolojik sermayenin aracılık etkisi* (Yayımlanmamış doktora tezi). Fırat Üniversitesi, Elâzığ.
- Namlı, A. (2017). *Lise müdürlerinin destekleyici liderlik davranışlarının ve kolektif güvenin okul etkililiği üzerindeki etkisi* (Yayımlanmamış doktora tezi). Fırat Üniversitesi, Elâzığ.
- Ördek İnceoğlu, S. (2020). *Okul öncesi dönemdeki çocukların erken akademik ve sosyal becerileri ile okul iklimi arasındaki ilişkinin incelenmesi* (Yayımlanmamış doktora tezi). Çukurova Üniversitesi, Adana.
- Pınar, E. (2023). *Öğretmenlerin yönetici ruhsal liderlik ve okul iklimi alguları arasındaki ilişkinin incelenmesi*. (Yayımlanmamış yüksek lisans tezi). Osmangazi Üniversitesi, Eskişehir.
- Reeves, J. B. (2010). *Academic optimism and organizational climate: an elementary school effectiveness test of two measures*. Doctoral dissertation. The University of Alabama Tuscaloosa.
- Şenel, T., & Buluç, B. (2016). İlkokullarda okul iklimi ile okul etkililiği arasındaki ilişki. *TÜBAV Bilim Dergisi*, 9(4), 1-12.
- Tabachnick, B. G., & Fidell, L. S. (2013). *Using multivariate statistics* (6th ed.), Boston: Allyn and Bacon.
- Özgenel, M. (2020). *Örgüt ve okul iklimi*, M. Özgenel (Ed.), Ankara: Nobel.
- Ratnawati, V., Utomo, H. B., Ningsih, R., & Setyaputri, N. Y. (2022). The role of democratic parenting, school climate, and internal locus of control as predictors of academic optimism. *International Journal of Evaluation and Research in Education*, 11(3), 1210-1217.
- Senemoğlu, N. (2005). *Gelişim öğrenme ve öğretim* (12. Baskı). Ankara: Gazi Kitabevi.
- Seyhan, Ö., Soylu, A., Ercan, M. & Uçaktürk, İ. H. (2023). Okullarda ve öğretmenlerde akademik iyimserlik inancına yönelik kavramsal bir çerçeve. *International Social Sciences Studies Journal*, 9(109), 5968-5976. DOI: <http://dx.doi.org/10.29228/sss.6.7234>
- Smith, P. A. & Hoy, W. K. (2007). Academic optimism and student achievement in urban elementary schools. *Journal of Educational Administration*, 45(5), 556-568. Doi: [10.1108/09578230710778196](https://doi.org/10.1108/09578230710778196)
- Tepe, N. (2018) *Kolaylaştırıcı okul yapısı, akademik iyimserlik ve okul etkililiği arasındaki ilişkinin incelenmesi* (Yayımlanmamış doktora tezi). Gazi Üniversitesi, Ankara.
- Thapa, A., Cohen, J., Guffey, S., & Higgins-D'Alessandro, A. (2013). A review of school climate research. *Review of Educational Research*, 83(3), 357–385. Doi: [10.3102/0034654313483907](https://doi.org/10.3102/0034654313483907)
- Usta, M. E. & Kahraman, S. (2021). Okullarda görev yapan yönetici ve öğretmenlerin örgütsel iklim ve örgütsel öğrenme alguları arasındaki ilişkinin incelenmesi. *Atatürk Üniversitesi Kazım Karabekir Eğitim Fakültesi Dergisi*, 43, 95-119. <https://doi.org/10.33418/ataunikkefd.863250>
- Uysal, E. (2021). *Öğretmenlerin akademik iyimserlik yaklaşım düzeyleri ile öğrenme okulu alguları arasındaki ilişki* (Yayımlanmamış yüksek lisans tezi). Kocaeli Üniversitesi, Kocaeli
- Uzun, T. (2023). *Öğretmenlerin algıladıkları örgütsel destek düzeyi ile akademik iyimserlik arasındaki ilişkinin incelenmesi* (Yayımlanmamış yüksek lisans tezi). Atatürk Üniversitesi, Erzurum.
- Vaux, N. D. (2015). *Academic optimism and organizational climate as predictors of academic achievement and school effectiveness*. Doctoral thesis. The University of Alabama. Tuscaloosa, Alabama.
- Yıldırım, S. (2017). *Liselerde öğrenci ve öğretmenlerin güvenli okul iklimi alguları ile öğrencilerin akademik başarıları arasındaki ilişki* (Yayımlanmamış doktora tezi). Hacettepe Üniversitesi, Ankara.
- Yılmaz, E. & Kurşun, A. (2015). Okul kültürü ile akademik iyimserlik arasındaki ilişki. *Mehmet Akif Ersoy Üniversitesi Eğitim Fakültesi Dergisi*, 1(35), 46-69. <https://doi.org/10.21764/efd.53902>

## Okul İklimi, Akademik İyimserlik ve Okul Etkililiği Arasındaki İlişkinin İncelenmesi

- Yılmaz, K. & Sarpkaya, R. (2021). Öğretmenlerin örgütsel farkındalık ve örgütsel güven algıları ile okulların örgütsel etkililik düzeyleri. *Adnan Menderes Üniversitesi Eğitim Fakültesi Eğitim Bilimleri Dergisi*, 12(2), 60-73.
- Yumuşak, H. & Korkmaz, M. (2021). Okul etkililiği konulu tez ve makalelerin incelenmesi: Bir içerik analizi çalışması. *Gazi Üniversitesi Gazi Eğitim Fakültesi Dergisi*, 41(3), 1771-1800.
- Yükçü, S., & Atağan, G. (2009). Etkinlik, etkililik ve verimlilik kavramlarının yarattığı karışıklık. *Atatürk Üniversitesi İktisadi ve İdari Bilimler Dergisi*, 23(4), 1-13.
- Yüner, B. (2018). *Okul yönetimi ile okul iklimi arasındaki ilişkinin öğretmen görüşlerine göre incelenmesi* (Yayımlanmamış doktora tezi). Hacettepe Üniversitesi, Ankara.
- Yüner, B., ve Özdemir, M. (2020). Okul yenilikçiliği ile öğretmen yaratıcılığı arasındaki ilişkinin incelenmesi. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 50, 162-179. <https://doi.org/10.9779/pauefd.538207>
- Yürek, U. & Cömert, M. (2021). Okul yöneticilerinin değişimi yönetme yeterlikleri ile algılanan okul etkililiği ne düzeydedir?. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 25(4), 1762-1781. <https://doi.org/10.53487/ataunisobil.892369>
- Zorbaz O., Demirtaş-Zorbaz, S. & Ulaş-Kılıç Ö. (2020). Ergenlerin sorunlu internet kullanımı: günlük zorlukların ve sosyal izolasyonun rolü. *Addicta: Türkiye Bağımlılık Dergisi*, 7(1), 41-47.

## Perceptions of Teacher Candidates about the Concept of "Education 5.0" Öğretmen Adaylarının "Eğitim 5.0" Kavramına İlişkin Algıları

Sevda KOÇ AKRAN<sup>1</sup>

### Abstract

The main purpose of this research is to determine the perceptions of teacher candidates about the concept of Education 5.0. The study group of the research based on the phenomenology design consists of 50 teacher candidates studying at the Faculty of Education in Siirt University. A semi-structured interview form developed by the researcher was used as a data collection tool in the research. MAXQDA was preferred in the analysis of the data. The data were subjected to content analysis. At the end of the research, opinions on the definition and purpose of Education 5.0 were obtained. The purpose of Education 5.0 is to provide digital learning. It is to offer a flexible learning environment to the individual. It is to increase the use of technology in society. It is to include the use of robots in education. It is to create e-living spaces. It is emphasized that Education 5.0 is the education of the future. Additionally, it has been determined that Education 5.0 is a human-oriented education, smart society education, education in which technology is used extensively and an education approach in which values cannot be transferred. In addition to Education 5.0, other educational understandings were also included in the study. Education 1.0 is the education of the agricultural community and traditional education is adopted. Education 2.0 is transition education to industrial society and traces of teacher-centered education can be seen. Reflections of traditional education can also be seen in Education 3.0. However, compared to the other two educations, there is a transition to student-centered education here. Education 4.0 is the education of the information society. Technology is used extensively in this education. On the other hand, Education 5.0 adopts an understanding of super-intelligent societies. Artificial intelligence applications and advanced technology are used extensively here.

**Keywords:** Education, Education 5.0, Education 4.0, Education 3.0, Education 2.0, Education 1.0

### Özet

Bu araştırmanın temel amacı, öğretmen adaylarının Eğitim 5.0 kavramı hakkındaki algılarını belirlemektir. Olgubilim desenine dayalı araştırmanın çalışma grubunu, Siirt Üniversitesi, Eğitim Fakültesinde öğrenim gören 50 öğretmen adayı oluşturmaktadır. Araştırmada veri toplama aracı olarak, araştırmacı tarafından geliştirilen yarı yapılandırılmış görüşme formu kullanılmıştır. Verilerin analizinde MAXQDA tercih edilmiştir. Veriler içerik analizine tabi tutulmuştur. Araştırma sonunda Eğitim 5.0 tanımı ve amacına yönelik görüşler elde edilmiştir. Eğitim 5.0'in amacı dijital öğrenmeyi sağlamaktır. Esnek öğrenme ortamını bireye sunmaktır. Toplumda teknoloji kullanımını artırmaktır. Eğitimde robotların kullanımına yer vermektir. E-yaşam alanlarını oluşturmaktır. Eğitim 5.0'in geleceğin eğitimi olduğu vurgulanmaktadır. Ayrıca Eğitim 5.0'in insan odaklı eğitim, akıllı toplum eğitimi, teknolojinin yoğun kullanıldığı eğitim ve değerlerin aktarılamadığı bir eğitim anlayışı olduğu tespit edilmiştir. Araştırmada Eğitim 5.0'in yanı sıra diğer eğitim anlayışlarına da yer verilmiştir. Eğitim 1.0 tarım toplumunun eğitimidir ve geleneksel eğitim benimsenmektedir. Eğitim 2.0, sanayi toplumuna geçiş eğitimidir ve öğretmen merkezli eğitimin izleri görülmektedir. Eğitim 3.0'da da geleneksel eğitimin yansımaları görülmektedir. Fakat diğer iki eğitime oranla burada öğrenci merkezli eğitime bir geçiş bulunmaktadır. Eğitim 4.0 ise bilgi toplumunun eğitimidir. Teknoloji bu eğitimde yoğun olarak kullanılmaktadır. Eğitim 5.0 ise süper zeki toplumların olduğu bir anlayışı benimsemektedir. Yapay zekâ uygulamaları ve ileri teknoloji burada yoğun bir şekilde kullanılmaktadır.

**Anahtar Kelimeler:** Eğitim, Eğitim 5.0, Eğitim 4.0, Eğitim 3.0, Eğitim 2.0, Eğitim 1.0

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## INTRODUCTION

Education makes a transition from theoretical knowledge to a practical understanding. Now, technological tools and developments reveal the importance of application. After knowledge becomes meaningful in the human mind, it is expected that learning will be transformed into concrete behavior. Education 5.0 is seen as a reflection of such an expectation in today's education system. Education 5.0 is the blending of theoretical and applied knowledge (Muzira and Bondai, 2020). Education 5.0 develops human capital that can apply the knowledge store to produce technological innovations. It guides the new education policy by using the heritage doctrine and indigenous resources to solve national problems (Dziwa and Postma, 2020).

It is a known fact that the human profiles, education policies and practices that Education 5.0 wants to raise in accordance with today's society are different from other societies. When we look at the past societies, there are many developments that affect every period. These developments enable societies to call them Society 1.0, Society 2.0, Society 3.0, Society 4.0 and Society 5.0 (See Figure 1).

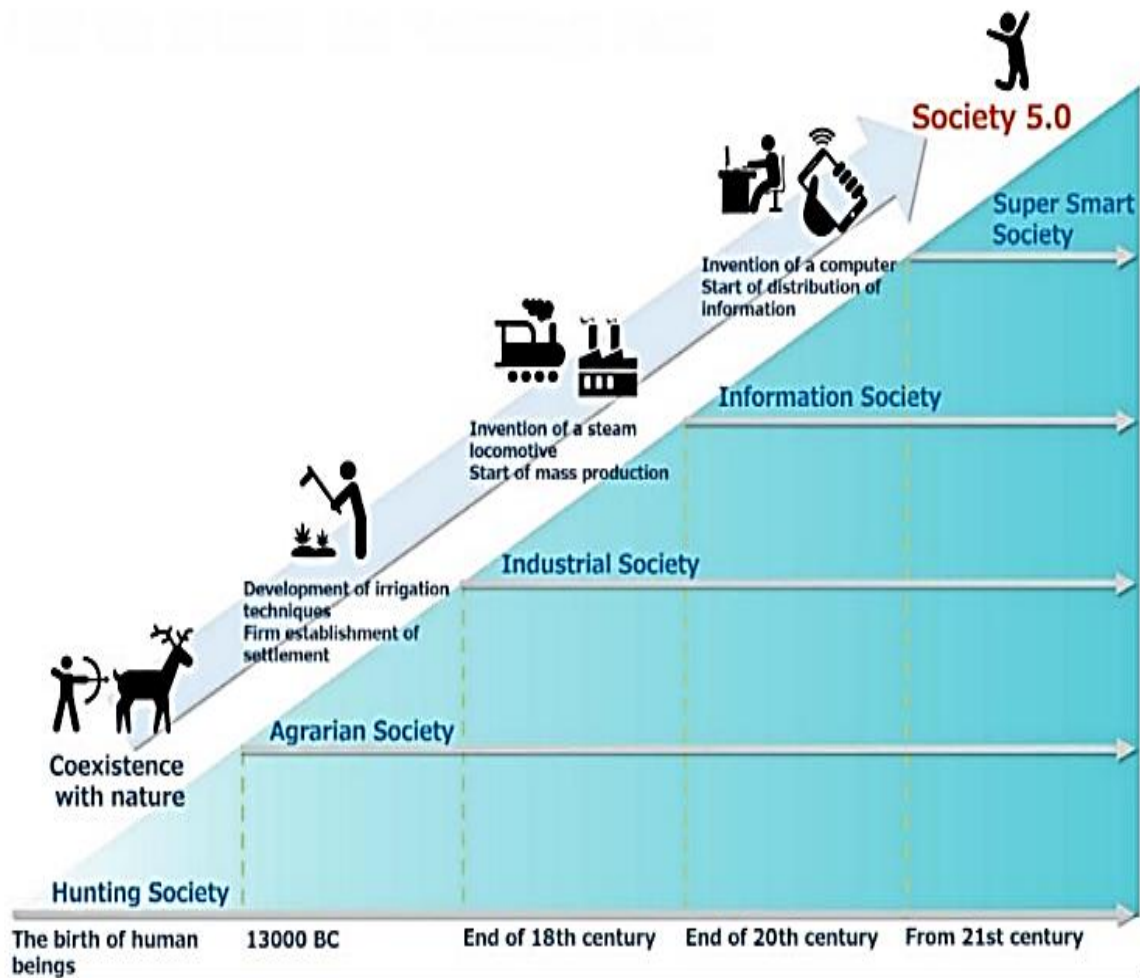


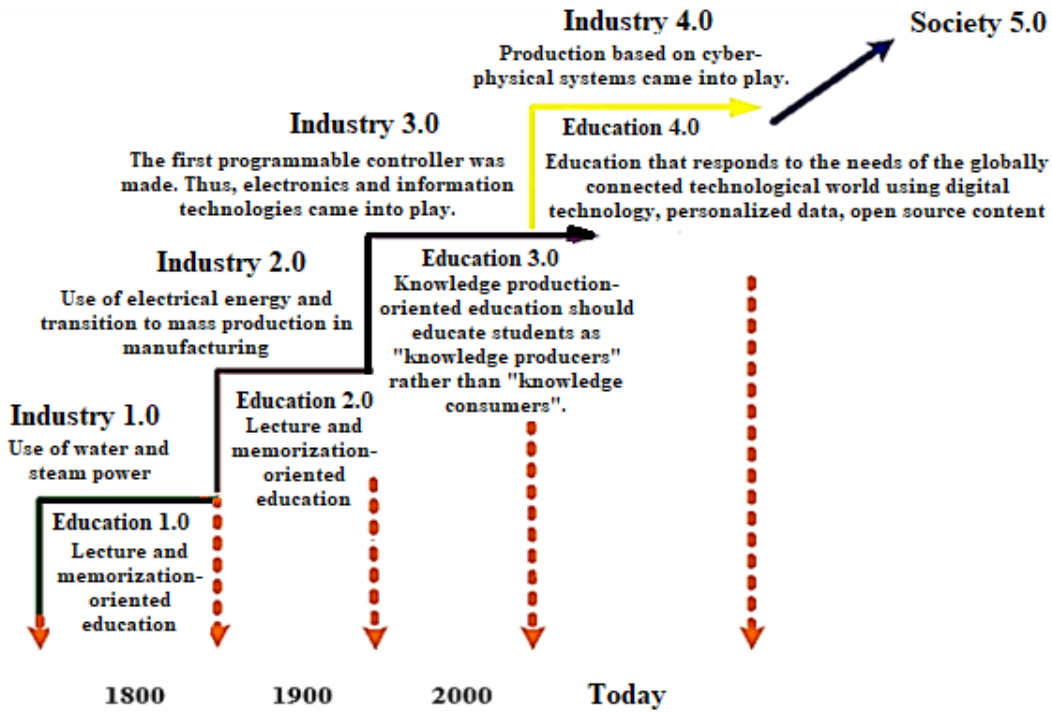
Figure 1. Evolution of societies (Alvarez-Cedillo, Aguilar-Fernandez, Sandoval-Gomez and Alvarez-Sanchez, 2019:695).

The society 1.0 structure was shaped by the developments in the living spaces of the most

primitive societies and these societies were known as hunting and gathering societies. When we look at the general structure of these societies, the dominant human type is the "prosthetic person". In this society, which sees man as a being equipped with many prostheses, the objects of the industrial world are like auxiliary prostheses that ensure the adaptation of man to the society in which he/she lives. For example, people go from one place to another by car. It is almost as if the car is a limited natural extension of our body in terms of movement for human beings. It enables people to go further and faster. There is a "civilized person" profile in Society 2.0. The people here adopt an understanding that makes a living through agriculture, that is, produces based on the land. Society 3.0 covers a period dominated by the industrial era. The invention of steam powered machines and production in the factory are among the general characteristics of these societies. In Society 3.0, there is the realistic/rational type of person. The rational man is inspired by an economic approach. He/she pays attention to the distinction between subject and object. In order to be happy, he/she structures his/her interest on the fact of "material". Society 4.0 is expressed as information societies. In this society where robots and artificial intelligence applications are in transition, "computer" is a defining criterion. Because with the computer, "information" was both produced and consumed quickly. In Society 5.0, an understanding arising from the combination of "human" and "technology" is advocated in life from primitive societies to the present day. Here, there is a profile that uses and develops augmented realism, artificial intelligence and advanced robot applications and can use technology at a high level (Salgues, 2018; Büyüksulu, 2020).

In the realization of digital transformation, Society 5.0 guides both the individual and the society (Kocaman Karoğlu, Bal and Çimşir, 2020). Because Society 5.0 is expressed as "Digital Society", "Creative Society" or "Super Intelligent Society". It is possible to see the most basic example of this in Japan. The concept of "Society 5.0" was first introduced by the Japanese government. Under the leadership of Japan, in 2015, the Japanese Government, together with the business federation Keidanren, at the initiative of President Shinzo Abe, established the criteria for Society 5.0. Society 5.0 For Lorenz Granrath, coordinator and research director of the Japan National Center for Science and Technology, and for many researchers, these criteria are to include society within industry. The aim is to build a "super-intelligent society". Therefore, Society 5.0, presented in the 5th Science and Technology Master Plan covering the fiscal years 2016-2021, was approved by the Council of Ministers on January 22, 2016 and inspired by Industry 4.0. It is a society model that was discussed at the Information Technologies Fair CeBIT 2017 held in Hannover, Germany, by Japanese Prime Minister Shinzo Abe. It is a transformation philosophy that emphasizes human and machine, robot interaction. It is a concept that reflects a situation that is simultaneously integrated with networks. It integrates new technologies such as sensor, robot, big data and cloud computing with society. Here, targets are set in order to increase the quality of life in the society and accelerate sustainable economic development (Alvarez-Cedillo, Aguilar-Fernandez, Sandoval-Gomez and Alvarez-Sanchez, 2019; Arı, 2021; Bölükbaşı, 2021).

In the denominations such as Society 1.0, Society 2.0, Society 3.0, Society 4.0 and Society 5.0, developments in the conditions of the day, technological inventions, level of development of the country, literacy, economic and educational etc. dimensions have been effective. When this effect is examined in terms of education, it is seen that there are differences such as transferring the subjects, determining the duties and responsibilities of the teacher, experiencing changes in the attitudes and behaviors of the students, and using technology in teaching environments. Experienced differences shape all teaching activities from basic education to higher education (See Figure 2).



**Figure 2.** *Education-Industrial Revolution relationship* (Kuru-Çetin, Nayir ve Taşkın, 2020:14).

Since the traditional education approach is dominant in Education 1.0, the student memorizes the information here. Essays, assignments, tests and some group works are traditionally done in the classroom. The student is in a passive position. Classroom activities are organized with a teacher-centered educational approach. Traditional education practices such as Education 1.0 continued in Education 2.0. However, in recent years, it has switched to computer and internet-oriented education. In this training, traditional assessment approaches, activities in the classroom environment were limited, and it was aimed to increase cooperation between universities (as well as internationally) and to establish one-to-one communication between students and universities. Here, the teacher became a guide and student activity was provided (Songkram, Chootongchai, Khlaisang and Koraneekij, 2021). In Education 3.0, the "knowledge generation" process is aimed depending on technological tools.

Education 4.0 is structured to meet Industry 4.0 needs. New learning environments, models such as flipped learning, personalization of learning, giving the student the right to choose about learning opportunities, using project-based learning activities, accessing big data (bigdata) for students, ensuring the transition of information from theory to practice (mentoring, going out to the field more with internship experiences) As a result, the change in evaluation criteria is expressed as the changes that come with Education 4.0 (Kuru-Çetin, Nayir and Taşkın, 2020). An education approach focused on innovation and production is being adopted with these changes (Demir, 2018). In Education 5.0, which is a higher perspective, "technology" becomes a key concept. Because today, technology is known as the guiding and determining concept in artificial intelligence and its use in education, health, engineering and many other fields. Now, in many countries of the world, technology is seen as a "must have" title in political issues in the decisions taken to become Society 5.0. For example, in Mexico, Society 5.0 is defined as a human-centered society that enables the creation of systems that integrate cyberspace and physics in economic progress and solving social

problems (Alvarez-Cedillo, Aguilar-Fernandez, Sandoval-Gomez and Alvarez-Sanchez, 2019).

It is desired to reach the Education 5.0 targets at all education levels from basic education to higher education. In these goals, individuals' having high-level thinking skills is among the priority topics. Especially in higher education, individuals need to have creative and critical thinking abilities and the environmental conditions to use these skills. Because the main framework of industrialization and innovations consists of self-directed, collaborative problem solving, critic and innovative individuals (Dziwa and Postma, 2020). Although Education 5.0 aims to raise such individuals suitable for the 21st century, the "economy" factor is seen as one of the biggest obstacles to this. In other words, an institution's physical infrastructure and financial resources cause negative perspectives on Education 5.0. For this reason, many societies today are not ready for Education 5.0. Considering the education and technological infrastructure of societies, it is known that Education 5.0 is in its infancy (Muzira and Bondai, 2020). For example, after Zimbabwe gained full independence in 1980, higher education has focused on three core outcome areas (known as Education 3.0) of teaching, research and community service. As a result of the digital age's expectations from the individual and the direction of the society, they added two more indicators, innovation and industrialization, and created a new doctrine called Education 5.0. Their aim was to raise graduates who could think scientifically and analyze problems objectively in higher education institutions (Dziwa and Postma, 2020). In the 1990s, both the education system and the labor market were regulated in Germany. In the last two decades, the higher education system has made strong progress towards further regionalisation. There have been successful education and training projects supported and financed by private institutions, companies. The strong interactions between workers, employers, the common area and other social stakeholders are a reflection of these supports. These reflections, which have developed as 4.0 in education, are actually seen as steps that facilitate the transition to 5.0 in Education in Germany. Similar progress can be seen in Sweden. A number of structural reforms took place in Sweden in 1992. After 1992, Sweden has been among the countries that show a high level of decentralization and progress in education. In the 2011 Swedish Education Act, education reforms focused more on electoral independence, independent academies and student security. In addition, the definition of profit targets in schools, increasing academic success and improving conditions for academic staff were discussed. Improving these issues in education with the understanding of Education 4.0 has been the main subject of the Swedish education system (Alvarez-Cedillo, Aguilar-Fernandez, Sandoval-Gomez and Alvarez-Sanchez, 2019:695).

The developments seen from Education 1.0 to Education 5.0 provide us with information about the "learning" of our future generations. It enables teachers, parents and administrators to act together in today's Z generation and all future generations. In the education system, it gives feedback to higher education institutions about the training of teachers and the skills they should have. These skills include "recording and editing audio files, creating visually interesting content, creating interesting presentations, creating digital quizzes, editing and sharing information in digital environments, using blocks and Wikipedia for students, creating digital data graphics and posters, accessing new content and creating attractive presentations" (Kuru-Çetin, Nayir and Taşkın, 2020;14-15). Equipping teachers working in higher education or other education levels with all kinds of "technology"-based skills in the digital cycle means that generations, who are the input and output of the society, receive better education. For this reason, considering the fact that the general structure, education system and individual profile of each society are different from each other, it should not be forgotten that "teachers" are an important educational element among the differences in every period. Their thoughts and expectations about innovations and changes should be taken into account with such a perspective. Especially starting from higher education, which is the first

step of the teaching profession, teacher candidates should be guided to continuously improve themselves in lifelong learning and to perform this profession in the best way. Support should be given in adopting and adapting to innovations with the changing society and education. When he/she is a teacher, learning environments that will use high-level skills such as technology, critical thinking, creative thinking and problem solving should be offered. The opinions of both teachers and teacher candidates should be taken into account for a better learning environment. From this point of view, the perceptions of teacher candidates regarding Education 5.0, where the unlimited possibilities of "technology" are presented to the individual, constitute the problem sentence of this research.

### Purpose of the Research

The sub-problems of this research aimed at determining the perceptions of teacher candidates about the concept of "Education 5.0" are as follows:

- ✓ What is Education 5.0 according to teacher candidates?
- ✓ How is Education 5.0 different from Education 1.0, Education 2.0, Education 3.0 and Education 4.0 according to teacher candidates?

### METHOD

#### Research Design

Phenomenology design was used in the study. The phenomenology design is preferred in qualitative studies in order to determine the experiences, perceptions and meanings attributed to a phenomenon by the individual (Onat Kocabıyık, 2015). For this reason, phenomenology design was used in order to determine the perceptions, experiences and meanings attributed to the concept of "Education 5.0" by teacher candidates in the research and the data obtained from it were subjected to content analysis.

#### Study Group

The study group of the research consists of 50 teacher candidates studying at Faculty of Education in Siirt University. Demographic information of the participants is given in Table 1.

**Table 1.** *Demographic information of the participants*

Variables		f	%
<b>Gender</b>	Female	20	40
	Male	30	60
	<b>TOTAL</b>	<b>50</b>	<b>100</b>
<b>Grade</b>	2nd Grade	22	44
	3rd Grade	16	32
	4th Grade	12	24
	<b>TOTAL</b>	<b>50</b>	<b>100</b>
<b>Department</b>	Classroom Teaching	13	26
	Elementary Mathematics	9	18
	Turkish Teaching	6	12
	Social Studies Teaching	5	10
	Science Teaching	4	8
	English Teaching	5	10
	Guidance and Psychological Counseling	8	16
<b>TOTAL</b>	<b>50</b>	<b>100</b>	



As seen in Table 1, 40% of the participants in the study are female and 60% are male. 44% of the research consists of 2nd grade, 32% 3rd grade, 24% 4th grade students. Of these classes, 26% are studying in Classroom Teaching, 18% are studying in Elementary Mathematics Teaching, 12% are studying in Turkish Teaching, 10% are studying in Social Science Teaching, 8% are studying in Science Teaching, 10% are studying in English Teaching and 16% are studying in Guidance and Psychological Counseling.

### **Research Instruments and Processes**

Semi-structured interview form and open-ended questionnaire form developed by the researcher were used as data collection tools in the research. Interview is the interviewer's response to the questions asked by the interviewer with his/her feelings and thoughts. The interviewer collects information about the research topic with the information obtained from here. The semi-structured interview has a more flexible structure than the structured interview. Because in semi-structured interviews, additional questions are asked to the predetermined questions, and there is no obligation to ask the questions in a certain order (Bilim, 2015). One of the reasons why semi-structured interview is preferred in the research is that it gives the person the opportunity to express himself/herself, additional questions are asked during the interview and the place of the questions is changed depending on the feelings and thoughts of the interviewer.

Care was taken to ensure that the questions were appropriate for the research purpose while preparing the semi-structured interview form in the research. For this purpose, certain stages have been taken into account. While preparing the interview form, firstly, a literature review was conducted on the subject. A question pool was created within the framework of the literature. There are six questions in the pool. Expert opinion (two faculty members in the Department of Curriculum and Instruction, one Turkish Teacher) was taken regarding the suitability of the questions for the study group. Experts evaluated the questions in the question pool by taking into account the options "Appropriate", "Not Appropriate" and "Needs Correction", and the relevant items were corrected by the researcher. Based on the feedback received from experts, the number of questions was reduced to two. In order to determine whether these questions were understandable and whether the participant was suitable for the group, the interview form was applied to 10 teacher candidates for 30-35 minutes. Interviews with participants were conducted face-to-face in classrooms. During the interviews, the researcher asked questions and noted the answers from the participants.

### **Data Analysis**

The MAXQDA qualitative data program was used in the study. Certain stages were taken into account while analyzing the data in the program. According to Creswell, these are as follows (Cited by Dede, 2017). In the first step, data is prepared and organized. In this research, the opinions of the teacher candidates about the concept of Education 5.0 were taken and transferred to the computer environment. The second step is to read and analyze all of the data. All the data obtained about Education 5.0 were carefully read by the researcher and necessary notes were taken. In the third step, data coding was done. While coding here, text and imaginary parts are presented in the same category. In the research, two main categories were created in total, and themes and codes were included under them. In addition, the researcher made the coding process based on the participant's views and using the concepts determined in the literature.

In the fourth step, similar codes are gathered under the same theme. These are considered

important in the interpretation of the findings. In the fifth stage, themes and codes are interpreted in the findings section.

Validity and reliability stages were also included in the analysis of the data. Inclusion of questions in the data collection tool related to Education 5.0 in Validity, and examinations within this framework in the analysis section ensured the validity of the scope. Analysis of the interviews, transferring them in the findings section, and making direct quotations are among the ways to ensure validity. In addition, other methods were also examined to ensure validity. These are internal validity (credibility-validity) and external validity (transferability-reliability). Credibility is associated with the concepts of "internal validity" and "truth value" in the literature (Tutar, 2022). In qualitative research, in order to ensure credibility, either data diversification, description or expert opinion is used. In this research, expert opinion was used to ensure credibility.

External validity (transferability) was examined after internal validity in the research. As it is known, detailed descriptions are included in transferability and concepts, codes and themes can be generalized. In addition, in order to ensure transferability in qualitative research, the researcher is expected to be familiar with the research topic, literature, study population, number of groups and interview duration. Similarly, participants need to be determined through purposeful sampling (Tutar, 2022). Some of the methods to ensure internal validity were used in this research. Among the ways to ensure internal validity are the researcher's mastery of the concept of Education 5.0, the level of readiness being sufficient, being in communication with the study group, the number of groups being appropriate for qualitative research, and the duration of the interview being sufficient depending on the number of questions. In addition, participants' voluntary participation in the research and reaching participants through easily accessible sampling method are seen as other ways to ensure external validity.

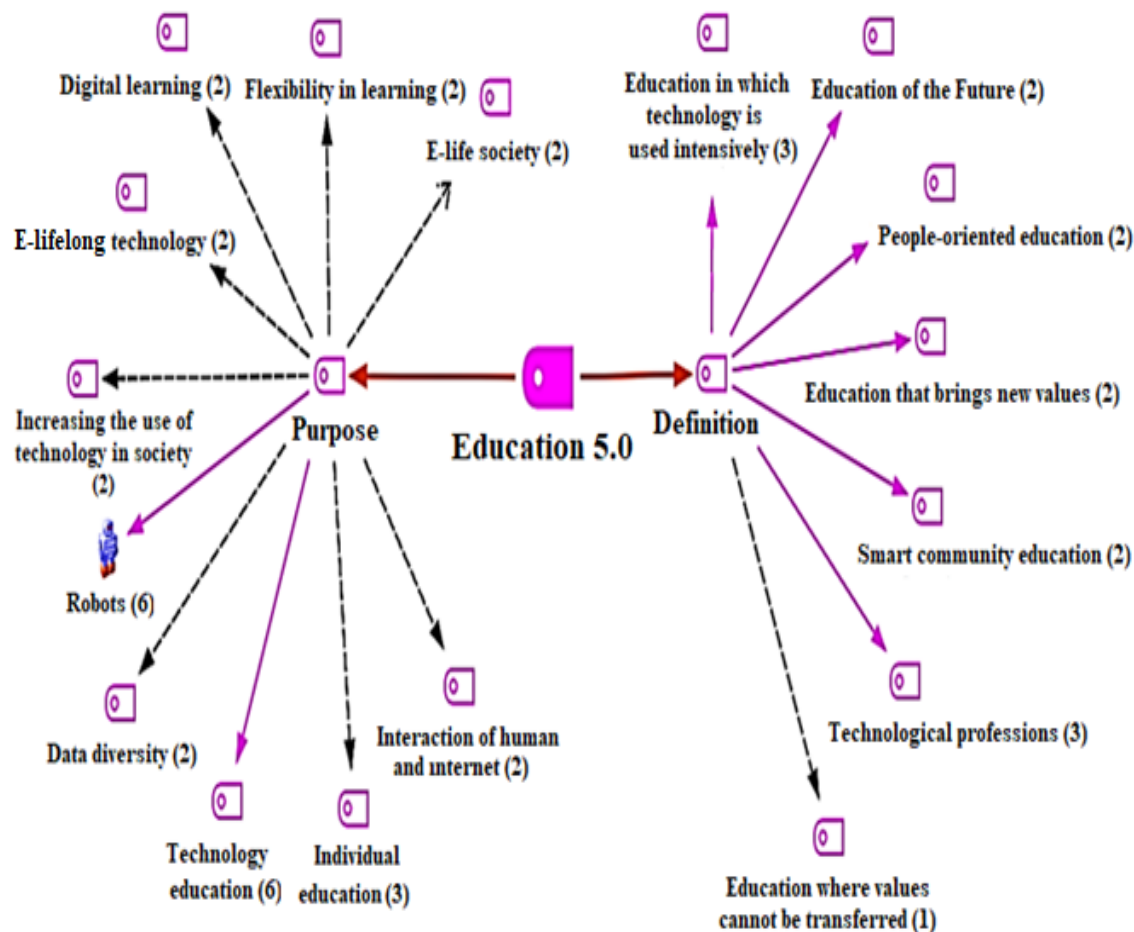
Validity is seen as an important concept as well as reliability in research. For this reason, some methods are used to ensure reliability. These are internal reliability, external reliability, transferability, consistency, believability, confirmability, approvability and verifiability. In order to ensure verifiability in the research, coding reliability was checked (Tutar, 2022). Expert opinion was sought here. While getting expert opinion, a code list was first created. Another expert's opinion was taken regarding the code list. Afterwards, the agreement between the coders was checked. Miles and Huberman (2019) reliability formula was used and the reliability was found to be .95. Another method used to ensure reliability in research is consistency. While ensuring consistency, care was taken to structure the findings in a way that reflected the participants' feelings and thoughts. In addition, the research design must be determined correctly as a criterion of reliability. Here, the phenomenological pattern was used in accordance with the purpose of the research. Another method used for reliability is confirmability. In confirmability, the results obtained are verified by the data collected and the situation investigated. However, there is a point that is seen as a limitation of the research when conducting confirmability. Since there are very few studies on Education 5.0, the discussion section is limited to the resources available.

In the research, the names of the participants were kept confidential and the codes of S1, S2, S3.....S50 were given to the opinions of the participants.

## FINDINGS / RESULTS

### Opinions of teacher candidates about Education 5.0

Opinions of the participants about Education 5.0 are given in Figure 3.



**Figure 3.** *The Code-Theory Model of the Education 5.0 theme*

As can be seen in Figure 3, the participants' views on Education 5.0 are gathered under two themes: purpose and definition. Codes such as “technology education (f=6)”, “robots (f=6)”, “individual education (f=3)”, “interaction of human and internet (f=2)”, “data diversity (f=2)”, “increasing the use of technology in society (f=2)”, “e-lifelong technology (f=2)”, “digital learning (f=2)”, “flexibility in learning (f=2)” and “e-life society (f=2)” are included in the purpose theme. Codes such as “education where technology is used intensively (f=3)”, technological professions (f=3), education of the future (f=2), people-oriented education (f=2)”, “education that brings new values (f=2)”, “smart community education (f=2)” and “education where values cannot be transferred (f=2)” are included in the definition theme.

Some excerpts from the participants' opinions about Education 5.0 are given below.

S11: The most important feature of this society is the intensive use of technology in education.

S22: ...I think that more technological tools are used in this education.

S26: ...when we look at the world today, education uses 5.0. This shows how much they

have advanced in technology.

S38: Universities, especially world universities, use robots in their education....

S39:...as far as I know, Japan uses robots in the education system...

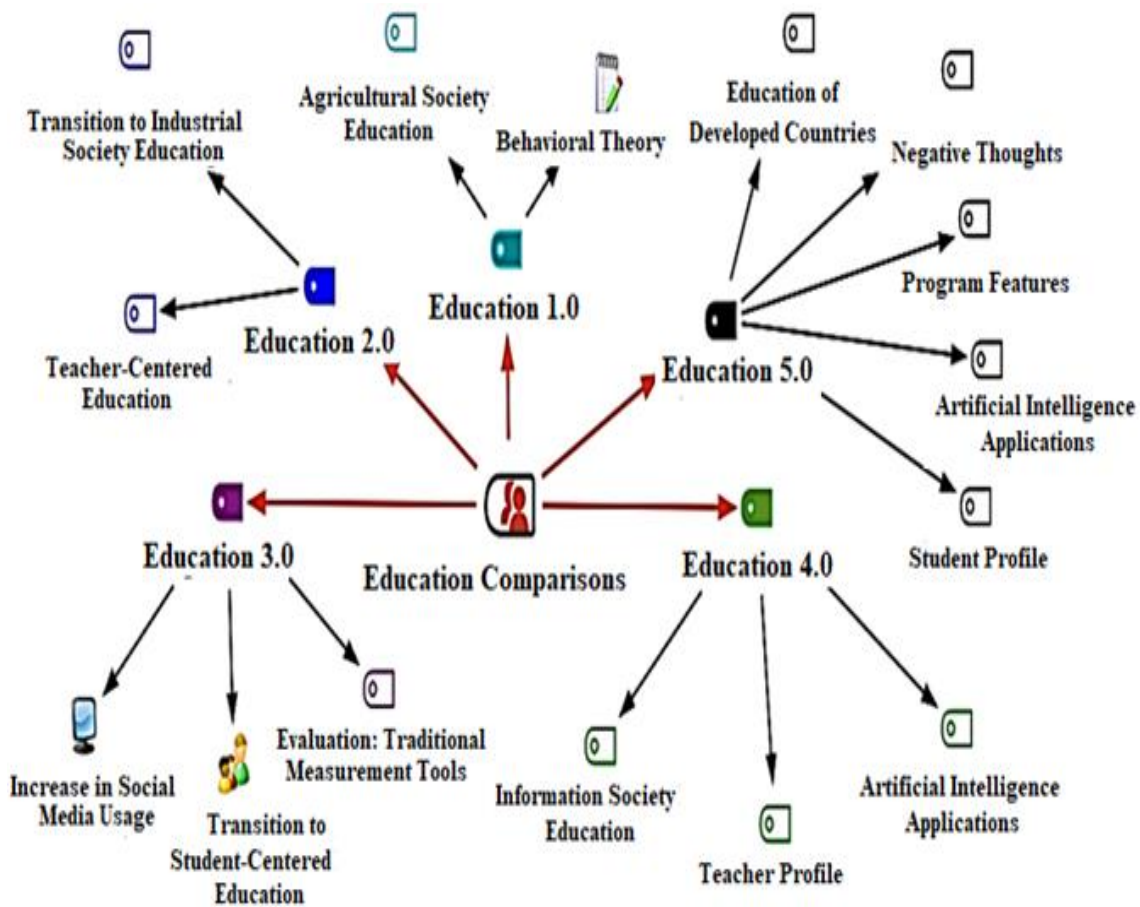
S41:...I know that there are robots to assist the teacher....

S42: New professions emerge with Education 5.0. Because technology is developing day by day...

S43: The more technology develops, the more technological professions emerge...

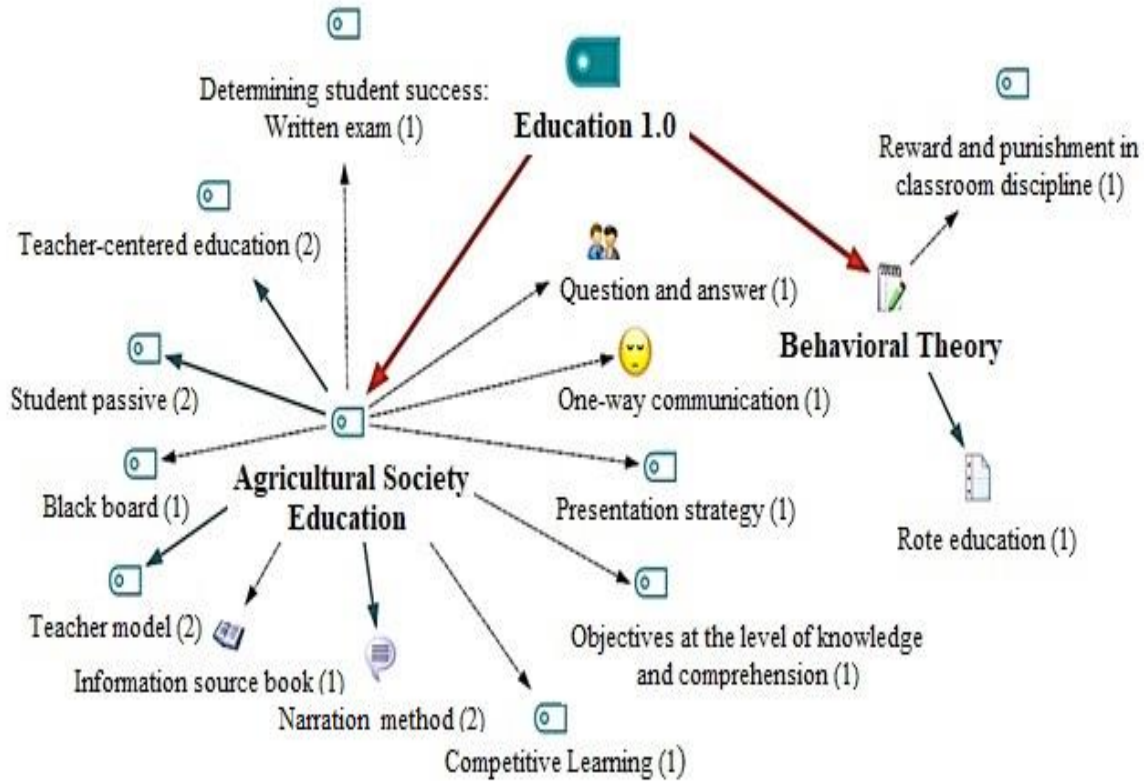
### Opinions of teacher candidates' on the difference of Education 5.0 from Education 1.0, Education 2.0, Education 3.0 and Education 4.0

The views of the participants on educational comparisons are given in Figure 4.



**Figure 4.** Comparison of the educations- Code-Theory Model

As seen in Figure 4, the views of the participants on the comparison of education were gathered under five themes as Education 1.0, Education 2.0, Education 3.0, Education 4.0 and Education 5.0. Detailed representations of these themes are shown in Figure 5, Figure 6, Figure 7, Figure 8, Figure 9.



**Figure 5.** The Code-Theory Model of the Education 1.0 theme

The Education 1.0 theme is divided into two themes as agricultural society education and behavioral theory. The theme of agricultural society education consists of "narration method (f=2)", "teacher-centered education (f=2)", "student passive (f=2)", "teacher model (f=2)", "determining student success: written exam (f=1)", "blackboard (f=1)", "information source book (f=1)", "competitive learning (f=1)", "objectives at knowledge and comprehension level (f=1)", "teaching strategy through presentation (f=1)", "one-way communication (f=1)" and "question and answer (f=1)" codes. The theme of behavioral theory includes "reward and punishment in classroom discipline (f=1)" and "rote learning (f=2)" codes.

Some excerpts from the participants' views on Education 1.0 are given below.

S2: Since technology did not develop in agricultural society, the teacher was always the one who explained the subject.

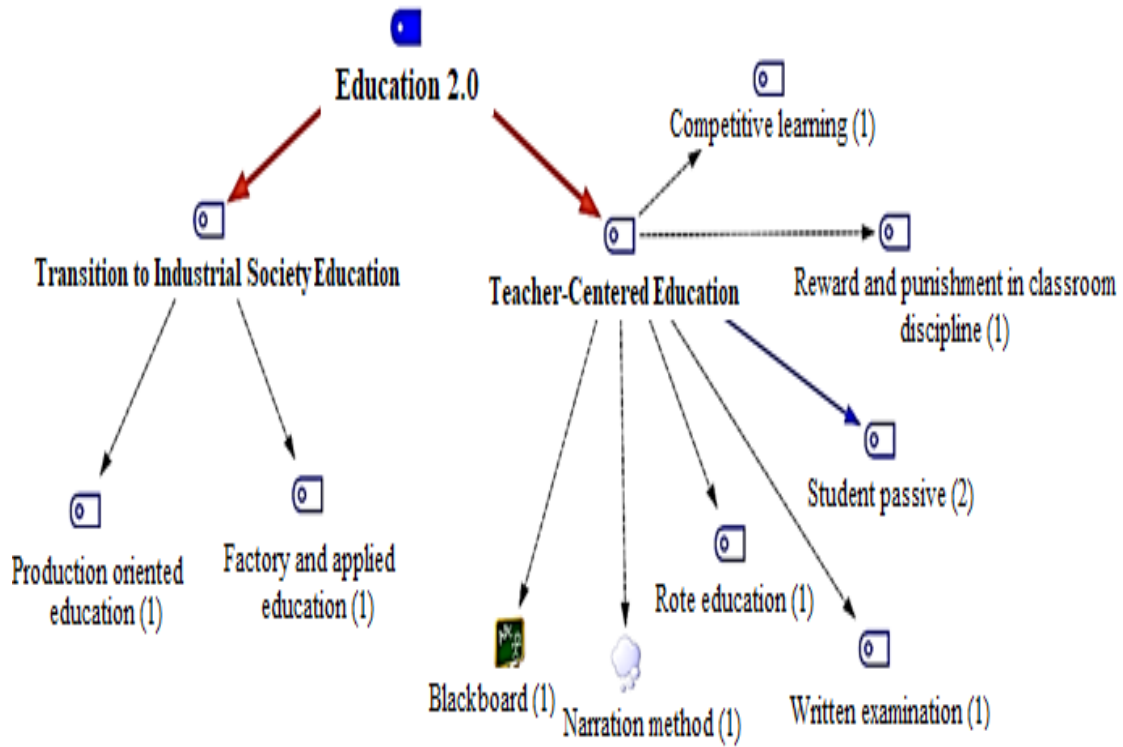
S5: It is an education in which there is excessive transfer of verbal information.

S6: The teacher was speaking and the student was in the listening position.

S13: The student could not be very active in this education and even remained passive.

S14: The student sees the teacher as the only source of information here.

S44: The student generally took the teacher as a model more.



**Figure 6.** *The Code-Theory Model of the Education 2.0 theme*

According to the participants, there are two themes in Education 2.0. These are transition to industrial society education and teacher-centered education. The theme of transition to industrial society education consists of codes such as "production-oriented education (f=1)", "factory and applied education (f=1)". The theme of teacher-centered education consist of "student passive (f=2)", "chalkboard (f=1)", "learning method (f=1)", "rote learning (f=1)", "written exam (f) =1)", "reward and punishment in class discipline (f=1)" codes. From this point of view, it can be said that there is a traditional education approach in Education 2.0.

Some excerpts from the participants' views on Education 2.0 are given below.

S4: There is more teacher-centered education in Education 2.0. In other words, there is a result-oriented understanding, not a process.

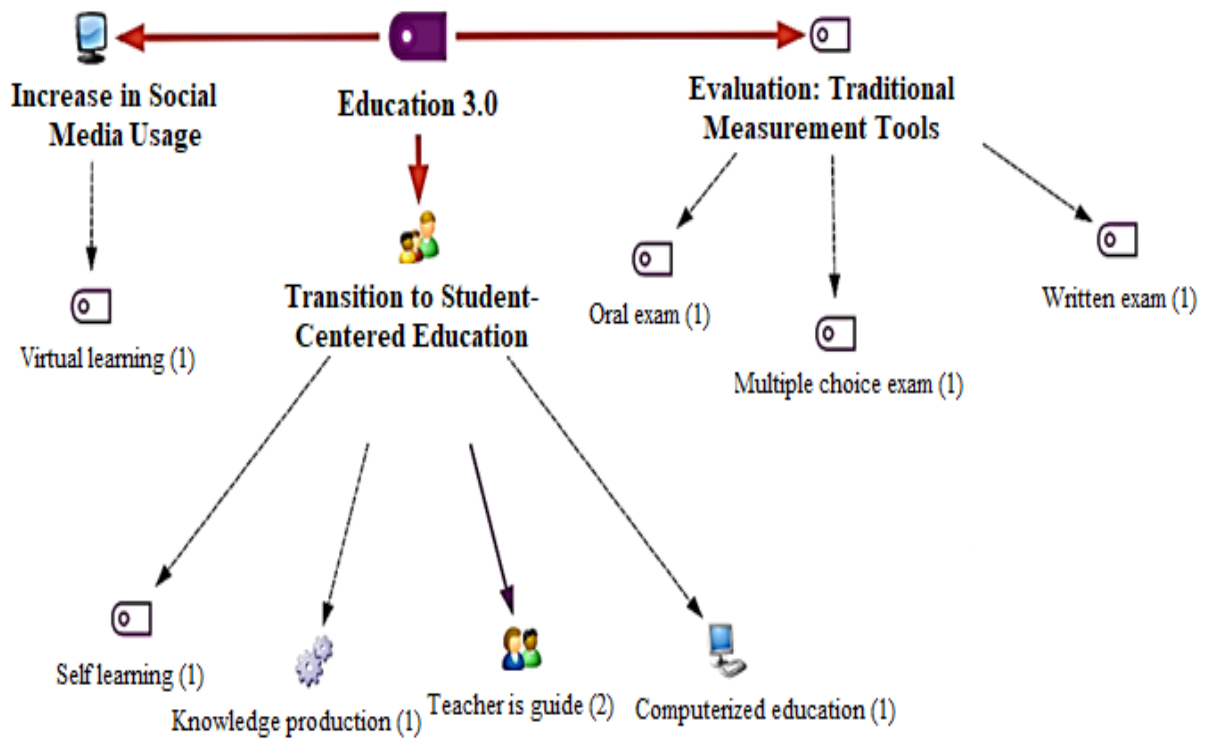
S16:....at first glance, I did not understand the difference between this training and Education 5.0. When I have some knowledge, my understanding of education before 2004 comes to mind.

S24: ...the student is active in education 5.0, but passive here.

S36: In this education, students memorize information mostly.

S40: ....student cognitive passivity is in question. Whatever is given to us in this education, we get it. We configure.

S48: If I obey the classroom and teacher rules, I will not be punished in this education. But Education 5.0 has a technological environment. You are productive. In Education 2.0, if you cause a discipline problem in the classroom, you will be penalized. You will be rewarded if you follow the rules and do the assigned homework.



**Figure 7.** *The Code-Theory Model of the Education 3.0 theme*

As seen in Figure 7, three themes were created in the analysis of the participants' views on Education 3.0 according to the Code Theory Model. These are "increase in social media usage", "transition to student-centered education and "evaluation: traditional measurement tools". "Virtual learning (f=1)" code is in the theme of increase in social media usage and also there are codes such as "teacher is guide (f=2)", "self-learning (f=1)", "knowledge production (f=1)" and "computerized education (f=1)" in the theme of transition to student-centered education. It is seen that there are "oral exam (f=1)", "multiple choice exam (f=1)" and "written exam (f=1)" codes in the theme of evaluation: traditional measurement tools.

Some excerpts from the participants' views on Education 3.0 are given below.

S8: Students learn in virtual environments with the development of technology.

S12: The only source of information for the teacher is decreasing in this education. Teacher guidance is now being talked about....

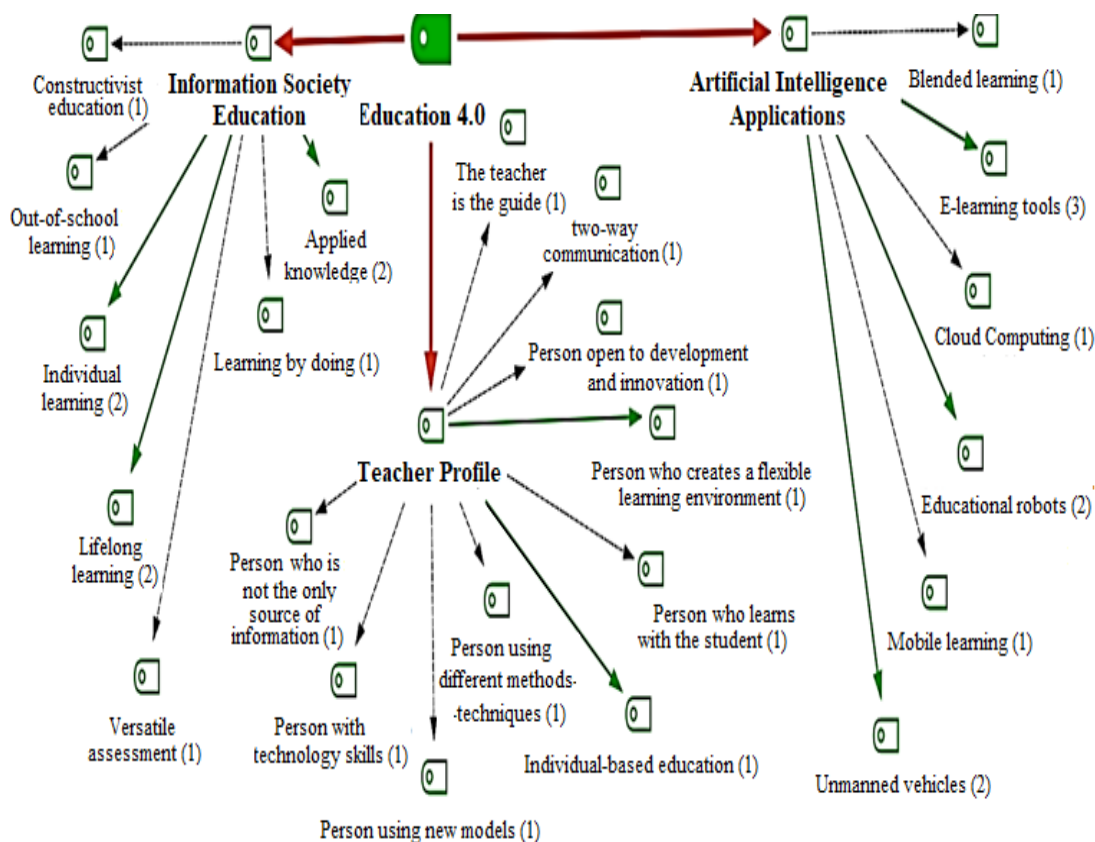
S31: The teacher guides the student in the formation of knowledge....

S34: ...in some courses, for example, there are oral exams in language classes...

S46: ...The multiple-choice exam, which is the most used exam and our favorite exam, was still used today.

S50: ...Written exam was used in language lessons. In fact, the traces of traditional education still continue.





**Figure 8.** The Code-Theory Model of the Education 4.0 theme

As seen in Figure 8, three themes were created based on the opinions of the participants on Education 4.0. These are information society education, teacher profile and artificial intelligence applications. The theme of information society education consist of codes such as "applied knowledge (f=2)", "individual learning (f=2)", "lifelong learning (f=2)", "constructivist education (f=1)", "out-of-school learning ( f=1)", "versatile assessment (f=1)" and "learning by doing (f=1)". In the theme of teacher profile there are codes such as "individual-based education (f=2)", "person who creates a flexible learning environment (f=2)", "teacher guide (f=1)", "two-way communication (f=1)", "person open to development and innovation (f=1)", "person who learns with the student (f=1)", "person using different methods-techniques (f=1)", "person using new models (f=1)", "person with technology skills (f= 1)" and "person who is not the only source of information (f=1)". In the theme of artificial intelligence applications there are codes such as "e-learning tools (f=3)", "educational robots (f=2)", "unmanned vehicles (f=2)", "blended learning (f=1)", "cloud computing (f=1)" and "mobile learning (f=1)".

Some excerpts from the participants' views on Education 4.0 are given below.

S1: In the past, the information was based on memorization, now applied information is given with this education.

S3: In an advanced society, there is understanding of education of the previous e-society, and in this respect, more applied knowledge is given.

S19: There is this education approach in individual teaching as well as group teaching.

S21: Learning does not happen only in a certain time period. It's life-long...



S25:...we learn new information and behaviors. Because we are learning with technological tools.

S27: There is a flexible learning environment....

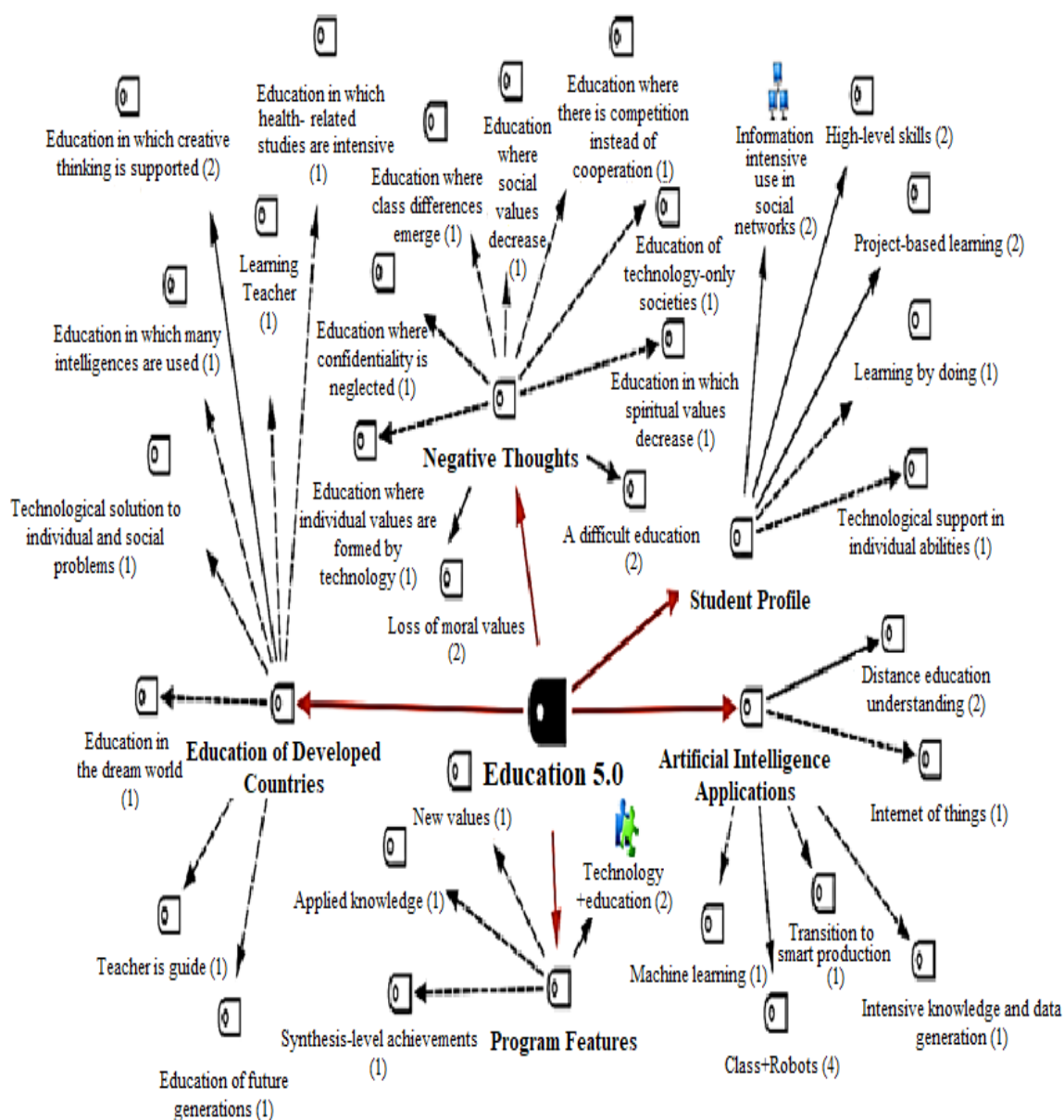
S29: We always do learning. We are not tied to just one time.

S32: There is no similar learning path in Education 4.0...

S35: Learning does not take place only in the classroom. There are e-learning environments outside the classroom.

S37:...technological tools are used in the course teaching process.

S45:... e-learning tools are used a lot...



Şekil 9. The Code-Theory Model of the Education 5.0 theme

As can be seen in Figure 9, five themes have been created based on the views of the participants on education 5.0. These are "Education of Developed Countries", "Program Features",

"Negative Thoughts", "Student Profile" and "Artificial Intelligence Applications". The theme of education of developed countries consist of codes such as "education in which creative thought is supported (f=2)", "education where health -related studies are carried out intensively (f=1)", "learning teacher (f=1)", "education using many intelligence (f=1)", "technological solution to individual and social problems (f=1)", "education in the dream world (f=1)", "teacher s guide (f=1)" and "education of future generations (f=1)".

The theme of program features consist of codes such as "Technology+Education (f =2), "New Values (f=1)", "Applied knowledge (f=1)" and Synthesis-level achievements (f=1)".

The theme of negative thoughts consist of codes such as "The loss of moral values (f=2), "A difficult education (f=2)", "Education where individual values are formed with technology (f = 1)", "Education where privacy is neglected (f = 1)", "Education where class differences emerge (f = 1)", "Education where social values decrease (f=1)", "Educaton where there is competition instead of cooperation (f=1)", " Education of Technology-only Societies (f=1)" and "Education in which spiritual values decrease (f=1)".

In the student profile theme “intensive use of information in social networks (f = 2)”, “high-level skills (f=2)”, “project-based learning (f=2)”, “learning by doing and experiencing (f=1)”, “technological support in individual abilities (f=1)” codes are seen.

In the theme of artificial intelligence applications, "class + robots (f=4)", "distance education understanding (f=2)", "internet of things (f=1)", "intensive knowledge and data generation (f=1)", "transition to smart production (f=1)" and "machine learning (f=1)" codes are included.

Some excerpts from the participants' views on Education 5.0 are given below.

S7: Different technologies are used in this education. This situation develops our creativity.

S9:...creativeness develops in every aspect. There are robots and high-end technology.

S10: As a whole, technology influences education.

S15: Technology and education are intertwined....

S17: Children learn many behaviors through technology. This situation causes them to remain unfamiliar with values....

S18: Currently, students have a general profile. That's because they use technology too often...

S20: Students access information through social networks and consume this information quickly.

S23: Although it is not used extensively in our country, there is an education system in which robots are used in the classroom.

S28: Perhaps the education of the understanding of society that we do not exist in. Because here, robots are used as resources to assist the teacher.

S30:...it is the expected class model. I would like to grow up in such an education.

S33:...I think it is very nice to use robots in education alongside teachers. Where the teacher cannot reach, support is received from robots...

## DISCUSSION, CONCLUSION, RECOMMENDATIONS

In the research, participants were asked about their opinions on Education 5.0. Based on these views, two themes were created. These are purpose and definition. In the purpose theme, the most emphasis was placed on technology, education and robots. Apart from these views, the aims of Education 5.0 include individual education, interaction of people and the internet, data diversity, increasing the use of technology in society, e-lifelong technology, digital learning, flexibility in learning, and e-life society. The definition theme includes education where technology is used extensively, technological professions, education of the future, human-oriented education, education that brings new values, smart society education and education where values cannot be transferred. Considering the perceptions towards Education 5.0, it is seen that positive opinions are in the majority in the research. According to the participants, Education 5.0 is a concept that young people are more interested in than older people. Because young people see this education as the education of the future. He/she thinks that learning with this education will be at the center of education. The individual transfers the acquired values to the new professions they will perform in the future. In other words, the individual is more open to innovations and changes with Education 5.0. In Education 5.0, objectives such as digital learning, e-lifelong technology, flexibility in learning, getting support from robots, data diversity, individual education, human and internet interaction are the reflections of these changes. As a result of these reflections, the individual has high-level thinking skills at certain levels of education. It is possible to see the most concrete examples of this in higher education. Individuals who can think creatively, think critically, produce quick solutions to problems and make self-assessment are raised with Education 5.0, which is among the aims of higher education. According to Dziwa and Postma (2020), Education 5.0 reverses challenging economic and technological tools for these purposes and makes them available to the individual. On the other hand, existing approaches, models, methods, techniques for learning in societies continue to be largely teacher-centered, reduce the student to a passive role and fail to provide him/her with high-level skills (Watson, Watson and Reigeluth, 2013).

The research examined the participants' opinions on the difference between Education 5.0 and Education 1.0, Education 2.0, Education 3.0 and Education 4.0. Education 1.0 was examined first in the comments. The Education 1.0 theme is divided into two themes: agricultural society education and behavioural theory. In agricultural society education, opinions such as narrative method, teacher-centered education, student passive, teacher model, determination of student success (written exam, blackboard, information source book, competitive learning, targets at the level of knowledge and comprehension, teaching strategy through presentation, one-way communication, questions and answers) were included. In the behavioural theory theme, there are rewards and punishment in classroom discipline, and memorization education views. As can be seen, the participants were knowledgeable about Education 1.0. Kuru-Çetin, Nayir and Taşkın, (2020) stated in their study that school administrators do not have knowledge about the changes in the historical process and the industry concepts of industry 1.0, 2.0, 3.0 and 4.0 and society 5.0. This result shows that new generations have access to a lot of information thanks to technology, organize the information and structure the information instead of memorizing it. According to Demir, İlhan and Kalaycı (2019), in Education 1.0, teachers mostly prefer the narrative method. In other words, a traditional education approach is used extensively. It is possible to see this situation from basic education to every stage of higher education. For example, there is the concept of university 1.0 in higher education. In this concept, universities are seen as a social institution that is

responsible for educational services and first emerged in the Middle Ages. Universities with this understanding, convey information to students, prepare students for professional life in line with current conditions, and contribute to the development of students' abilities. At the same time, educational institutions mainly gave importance to religious education. An approach to education that included memorization and classroom discipline prevailed during this period.

When looking at Education 2.0, there are two themes. These are education for transition to industrial society and teacher-centered education. While the theme of transition to industrial society education includes production-oriented education, factory and applied education, in the teacher-centered education theme, the views of student passive, blackboard, narrative method, rote learning, written exam, reward and punishment in classroom discipline are in the majority. As it is known, in the education of industrial societies, students are mentally passive. In this understanding of education in business life, human labor is needed to provide production in factories. According to Akıncı Çötök (2006), there is a large amount of manpower in blue-collar workers. Factories are seen as symbols of society. Here, information becomes a public identity. In the educational approach, a single type of individual is raised. Individual goals are kept in the background. Schools are seen as places where cultural heritage is transmitted. For this reason, schools are autonomous and have a hierarchical structure with strict rules. Gültekin (2020) states that in societies where this understanding of education is adopted, the education of the masses is not taken into consideration and repetition and memorization are included in education.

In the research, three themes were created based on the participants' opinions on Education 3.0. These are the increase in the use of social media, the transition to student-centered education and evaluation: traditional measurement tools. It has been concluded that there is virtual learning, transition to student-centered education, teacher guide, self-learning, knowledge production and computerized education views in the theme of social media use. In the theme of evaluation: traditional measurement tools, there are opinions about oral exam, multiple choice exam and written exam. In other words, participants in the research see Education 3.0 as a phase of the transition from traditional education to contemporary education. Unlike Education 1.0 and Education 2.0, in this approach to education, the student gradually becomes the center of education. There is learning by doing instead of trial and error. According to Demir, İlhan and Kalaycı (2019), the use of technology increases with this education and learning environments diversify with the influence of technology. For example, universities are seen as entrepreneurship and technology transfer centers in this education.

When we look at Education 4.0, it can be seen that there are three themes in line with the participant opinions: information society education, teacher profile and artificial intelligence applications. In the theme of information society education, emphasis is placed on applied knowledge, individual learning, lifelong learning, constructivist education, out-of-school learning, multifaceted evaluation and learning by doing. In teacher profile theme, It has been concluded that there is individual-based education, a flexible learning environment is created, the teacher is a guide, two-way communication is provided, there is openness to developments and innovations, learning takes place with the student, different methods-techniques and new models are used, technology skills are developed and the teacher is not the only source of information. In the theme of artificial intelligence applications, it is seen that there are e-learning tools, educational robots are used, unmanned vehicles are used, blended learning is used, there are education concepts such as cloud computing and mobile learning is preferred.

Looking at Education 4.0, it is seen that there is information society education. There are also artificial intelligence applications here. There are studies that support this view. According to Akben and Avşar (2018), Industry 4.0 effects are seen in Education 4.0. Components such as learning robots, data diversity, virtual reality, three-dimensional printers, smart factories, internet of things and internet services have come to the fore with Industry 4.0. Today, these components are used by individuals at different rates in Society 5.0. For example, 66.6% of the world's population uses mobile phones, 59.5% uses the internet and 53.6% uses social media. In Türkiye, this situation does not change much. While 79% of individuals between the ages of 16-74 use the internet, this rate is 90.7% when internet access is taken into account from home. When these ratios are considered, it is seen that it is not possible to gain behaviors away from technology in the education understanding of Society 5.0 (Yaraş and Kanatli-Ozturk, 2022).

In the research, it is seen that the teacher profile in Education 4.0 is different in Education 1.0, Education 2.0 and Education 3.0. Since it is a learner-centered understanding of education, teachers are in the position of guides. Although he/she is not the only source of information, the teacher carries out some learning in the process together with the student. The main reason for this is “technology”. Because, as in Education 5.0, technology appears as an “indispensable” element in Education 4.0 as well. Education 3.0 has some differences and similarities from Education 5.0 and Education 4.0. There are reflections of student-centered education in both Education 4.0 and Education 3.0. However, the student-centered approach in Education 3.0 is undergoing a transition period. There are still traces of traditional education. Traditional measurement tools are used in the evaluations. Similar features are also seen in Education 2.0. Contrary to Education 4.0, the educational understanding of the industrial society is dominant. There is a teacher-centered education here. The teacher is an important source of information. The student is in a passive position in the education and education process. Education 1.0 is agricultural society education. Here, the reward is punishment and the teacher is an important source of information too. Türkiye has encountered and implemented many of these educational approaches. For example, as in every country, Education 4.0 is one of the issues on Turkey's agenda. It is emphasized that although children in Turkey have high-level skills in using digital technology, they are not ready to develop information literacy and digital competence. However, the building block of Education 4.0 is technology. Equipping Z and future generations with the skills to use technology ensures the formation of “Super Intelligent Societies”. Here, scientists and other stakeholders related to education have great responsibilities. The work of scientists in universities, the technological inventions of new generations, their work on projects are seen as important steps for the future of society. For this reason, the basic components of University 4.0 are innovative management and leadership (international, industry cooperation, research and development, digital literacy, accreditation, etc.), lifelong learning (flexibility and openness, talent, personal development, social learning, guidance, measurement and assessment, digital pedagogy, etc.), support services (data security, big data, accessibility, learning material production, etc.). Council of Higher Education (CoHE) has made some applications in order to implement the components and to plan the education in this direction. One of them is the opening of doctoral programs in the fields of artificial intelligence, data mining, big data and robotics. In 2019 Higher Education Institutions Exam (YKS) preferences, students were admitted to the departments that focus on “technology” (artificial intelligence engineering, software development, information security technology, agriculture and trade management, etc.). On the other hand, in line with the objectives of Education 4.0 in the 2023 Education Vision, Ministry of National Education

(MEB) drew attention to 21st century skills, competence-based education, educational data warehouse, data-based management, e-portfolio, experience-based learning, design-based workshops, etc. (Konca, 2021). As can be seen, not every society is fully ready for Education 5.0. Education systems and practices have not taken advanced steps in this regard. The effects and applications of Education 4.0 are still visible.

Based on participant opinions about Education 5.0, five themes were reached. These are the education in developed countries, program features, negative thoughts, student profile and artificial intelligence applications. In the theme of education in developed countries, it is seen that emphasis is placed on education in which creative thinking is supported, education in which health-related studies are intensively carried out, the teacher who learns, education in which many intelligences are used, technological solutions to individual and social problems, education in the world of imagination, education in which the teacher is the guide, and the education of future generations. In the theme of program features, it was concluded that technology and education were used together, new values emerged, applied information was included, and new, original thoughts were formed. In the research, there are both positive and negative opinions about Education 5.0. According to the participants, some moral values are lost in Education 5.0. Considering the general structure of society, it is seen as an education that is difficult to implement. With the development of technology, privacy is not protected in this education. A competitive understanding is emerging among individuals. Social media addiction is among the general profiles of individuals who receive education with this understanding. On the other hand, individuals raised with Education 5.0 use their high-level skills a lot. At the same time, He/she uses contemporary models (such as the project-based learning model). He/she prefers artificial intelligence applications in the educational environment. In other words, Education 5.0 advocates a human-centered society. In Education 5.0, which is the educational approach of Society 5.0, which offers advanced technology to the use of the individual, change of opinion, geopolitical change, economic change and technological change occur (Alvarez-Cedillo, Aguilar-Fernandez, Sandoval-Gomez and Alvarez-Sanchez, 2019). According to Köksal (2021), technology is the indicator of the development level of societies. With the use of Web 5.0 tools, technology is no longer a threat but is seen as a process that makes the individual's life easier.

As a result, teacher candidates mostly have positive opinions about Education 5.0. When comparing Education 5.0 with other education approaches, different perspectives attract attention. In other words, the practices and characteristics of each educational concept in its period were emphasized by the prospective teachers.

## **SUGGESTIONS**

Qualitative method was used in the research. It can be done in mixed studies.

Student profiles and technological tools usage skills of Education 5.0 can be researched.

The contribution of technological tools in Education 5.0 to student success can be investigated.

Research can be conducted to identify teacher profiles in Education 5.0.

Teachers' opinions about Education 5.0 can be consulted.

Teacher and student opinions regarding the suitability of curriculum for Education 5.0 can be discussed comparatively.

Teacher opinions can be consulted regarding the suitability of the technologies included

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Sevda Koç AKRAN

in Education 5.0 for classroom application conditions.

### **Ethics Committee Permission Information**

Name of the committee that made the ethical evaluation: Siirt University Ethics Committee

Date of ethical evaluation decision: 03.05.2023

Ethics assessment document issue number: 602

### **Disclosure statement**

No potential conflict of interest was reported by the author(s).

### **Statement of Researchers' Contribution Rates**

The entire study was conducted by the sole author of the study.

### **REFERENCES**

- Akben, İ., & Avşar, İ. İ. (2018). Industry 4.0 and light out manufacturing: An overview. *Türk Sosyal Bilimler Araştırmaları Dergisi*, 3(1), 26-37.
- Akıncı Çötök, N. (2006). *Sanayi toplumundan bilgi toplumuna geçiş sürecinde eğitim olgusu*. (Yayınlanmamış Yüksek Lisans Tezi). Sakarya Üniversitesi, Sosyal Bilimler Enstitüsü, Sakarya.
- Alvarez-Cedillo, J., Aguilar-Fernandez, M., Sandoval-Gomez, R.J. & Alvarez-Sanchez, T. (2019). Actions to be taken in Mexico towards education 4.0 and society 5.0. *International Journal of Evaluation and Research in Education (IJERE)*, 8(4), 693-698.
- Arı, E. S. (2021). Süper akıllı toplum: Toplum 5.0. *Dokuz Eylül Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 23 (1), 455-479.
- Bilim, Y. (2015). Görüşme tekniği. (Eds. A. Yüksel, A. Yanık, , R. A. Ayazlar). *Bilimsel araştırma yöntemleri: kavramlar, analizler, araştırmalar* (içinden: 235, 237). Ankara: Seçkin Yayıncılık.
- Bölükbaşı, F. (2021). Revolution and Society 5.0: Japanese Human Centric Approach and Sectoral Changes . *Toplumsal Politika Dergisi*, 2 (2), 1-28.
- Büyükuslu, A.R. (2020). *Toplum 5.0 süper akıllı toplum. Yeni dünya düzenin yeni sosyal gelişim manifestosu*. İstanbul: Der Yayınevi.
- Dede, Y. (2017). Nitel Yöntemler. (Eds: S.B.Demir). *Araştırma deseni. Nitel, nicel ve karma yöntem yaklaşımları* (içinden 197-198). Ankara: Eğiten Kitap Yayıncılık.
- Demir, A. (2018). Endüstri 4.0'dan Eğitim 4.0'a değişen eğitim-öğretim paradigmaları. *Journal of Turkish Studies*, 13(15), 147-171.
- Demir, F., İlhan, E., & Kalaycı, N. (2019). Yükseköğretimde hedeflenen dönüşümü gerçekleştirme araçlarından eğitim programı 4.0. *Bayburt Eğitim Fakültesi Dergisi*, 14(28), 432-466. <https://doi.org/10.35675/befdergi.643291>.
- Dziwa, D.D. & Postma, L. (2020). Building creative capacities through art teacher education in Zimbabwe. *Educational Reforms Worldwide BCES Conference Books*, 2020, Volume 18. Sofia: Bulgarian Comparative Education Society.
- Gültekin, M. (2020). Değişen Toplumda eğitim ve öğretmen nitelikleri. *Anadolu Journal of Educational Sciences International*, 10(1), 654-700. <https://doi.org/10.18039/ajesi.682130>
- Anadolu Eğitim Liderliği ve Öğretim Dergisi [Anatolian Journal of Educational Leadership and Instruction] 2024– 12(1), 16-37

- Kocaman Karoğlu, A., Bal, K. & Çimşir, E. (2020). Toplum 5.0 sürecinde Türkiye’de eğitimde dijital dönüşüm. *Üniversite Araştırmaları Dergisi*, 3 (3), 147-158.
- Konca, F. (2021). *Eğitim 4.0: Eğitimin geleceği tartışmalarının neresindeyiz?*. (2. Baskı). Ankara: Pegem Yayınevi.
- Köksal, T. (2021). Dijital dünya’da ‘suretsiz toplum’. *Atatürk Üniversitesi Sosyal Bilimler Enstitüsü Dergisi*, 25(3), 1249-1259.
- Kuru-Çetin, S., Nayir, F. & Taşkın, P. (2020). Okul yöneticilerin eğitimde değişime ilişkin görüşleri. *Muğla Sıtkı Koçman Üniversitesi Eğitim Fakültesi Dergisi [MSKU Journal of Education]*, 7(1), 12-23. DOI: 10.21666/muefd.675122.
- Miles, M. B. & Huberman, A. M. (1994). *Qualitative data analysis: An expanded sourcebook* (2nd ed.). Sage Publications, Inc.
- Muzira, D. R. Bondai, B.M. (2020). Perception of educators towards the adoption of Education 5.0: A case of a State University in Zimbabwe. *East African Journal of Education and Social Sciences EAJESS* 1(2), 43-53.
- Onat Kocabıyık, O. (2015). Olgubilim ve gömülü kuram: bazı özellikler açısından karşılaştırma. *Trakya Üniversitesi Eğitim Fakültesi Dergisi* 6(1), 55-66.
- Salgues, B. (2018). Society 5.0 Industry of the Future, Technologies, Methods and Tools. Volume 1. ISTE Ltd and John Wiley & Sons, Inc.
- Songkram, N., Chootongchai, S., Khlaisang, J. & Koraneekij, P. (2021). Education 3.0 system to enhance twenty-first century skills for higher education learners in Thailand. *Interactive Learning Environments*, 29(4), 566-582.
- Tutar, H. (2022). Nitel araştırmalarda geçerlilik ve güvenilirlik: Bir model önerisi. *Anadolu Üniversitesi Sosyal Bilimler Dergisi*, 22(Özel Sayı 2), 117-140.
- Watson, W.R., Watson, S.L. & Reigeluth, C.M. (2013). Education 3.0: breaking the mold with technology. *Interactive Learning Environments*, DOI:10.1080/10494820.2013.764322
- Yaraş, Z. & Kanatli-Ozturk, F. (2022). Society 5.0 in Human Technology Integration: Digital Transformation in Educational Organizations. *International Journal of Progressive Education*, 18(1), 458-474. doi: 10.29329/ijpe.2022.426.26.



## Social Media Perception on Invasive Parents' Attitudes in Education

Ejder GÜVEN<sup>1</sup> ve Yavuz Selim BALCIOĞLU<sup>2</sup>

### Eğitimde İşgalci Ebeveyn Tutumlarına İlişkin Sosyal Medya Algısı

#### Abstract

This study explores public perceptions of invasive parenting through an analysis of 12,249 user-generated comments from Facebook groups and pages. Using sentiment analysis conducted with the VADER sentiment analysis tool, comments were categorized into positive, neutral, and negative sentiments. The analysis revealed a polarized view: while a significant portion of the comments praised the structured and disciplined aspects of invasive parenting for fostering children's academic success and responsibility, a substantial number criticized it for adversely affecting children's emotional and psychological development. Peaks in sentiment shifts correlated with media coverage, suggesting the influence of media on public perceptions of parenting. The balanced presence of neutral comments indicates an engaged and reflective public discourse. This study highlights the need for nuanced public education and interventions that can bridge the gap between different perceptions of parenting. By providing a contemporary understanding of public sentiment, this research contributes to the broader dialogue on how parenting styles influence child development and educational outcomes.

**Keywords:** Invasive parenting, sentiment analysis, social media, parenting styles, media influence.

#### Özet

Bu çalışma ile Facebook grup ve sayfalarındaki kullanıcılar tarafından oluşturulan 12.249 yorumun analizi yoluyla halkın işgalci ebeveynlik algısının ortaya konulması amaçlanmıştır. Mevcut araştırmada VADER duygu analizi kullanılarak; yorumlar olumlu, nötr ve olumsuz duygular olarak kategorize edilmiştir. Analiz, kutuplaşmış bir görüşü ortaya çıkarmıştır: Yorumların önemli bir kısmı, çocukların akademik başarısını ve sorumluluğunu teşvik etmek için işgalci ebeveynliğin yapılandırılmış ve disiplinli yönlerini överken; önemli bir kısmı çocukların duygusal ve psikolojik gelişimini olumsuz etkilemesi nedeniyle eleştirmektedir. Duygu değişimindeki artışlar medyadaki haberlerle bağlantılıdır. Bu durum ise medyanın halkın ebeveynlik algısı üzerindeki etkisini ortaya koymaktadır. Tarafsız yorumların dengeli varlığı, katılımcı ve yansıtıcı bir kamusal söylemi göstermektedir. Dolayısıyla bu çalışma, farklı ebeveynlik algıları arasındaki boşluğu doldurabilecek detaylı toplum eğitime ve müdahalelere duyulan ihtiyacı vurgulamaktadır. Aynı zamanda bu araştırma, kamuoyunun duyarlılığına ilişkin çağdaş bir anlayış sunarak ebeveynlik tarzlarının çocuk gelişimini ve eğitim sonuçlarını nasıl etkilediğine ilişkin daha geniş bir diyaloga katkıda bulunmaktadır.

**Anahtar Kelimeler:** İşgalci ebeveynlik, duygu analizi, sosyal medya, ebeveynlik tarzları, medya etkisi.

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## Genişletilmiş Özet

Eğitimin temel direği olan paydaşlardan biri de ailedir. Toplumsal bir yapı olan aile, bireyin ilk farkındalığının oluştuğu ortam olup aynı zamanda bireyin akademik başarısını, davranış ve tutumlarını da etkilemektedir (Kim, 2015). Öyle ki ebeveynler çocuklarını farklı idealler doğrultusunda yetiştirirken; buna bağlı olarak onlara karşı farklı tutum ve davranışlar sergileyebilmektedirler (Mussen, 1984). Bu sebeptir ki olumlu aile davranışları bireysel gelişimi olumlu yönde etkilerken, olumsuz aile davranışları bu gelişime zarar vererek, gelişim sürecini olumsuz etkilemektedir. Dolayısıyla ailenin en önemli görevi sosyalleşme sürecinde çocuğun bakım ve eğitim işlevini yerine getirerek, çocuğun çeşitli davranış ve inanç normlarını öğrenip bir kimlik oluşturmaya yardımcı olmaktır (Özada ve Duyan, 2017).

Ebeveynlerin çocuklarına yönelik tutumları çocuğun kişiliğini, davranışlarını, akademik başarısını, problem çözme becerilerini ve güven duygusunu etkilemektedir (Blisset ve Haycraft, 2008). Meisels ve Shonkoff (2000) ebeveynlerin sergilediği tutum ve davranışların, küçük yaşlardan itibaren çocuk gelişiminde değişiklikler yaratarak, çocuklarının gelişimsel sorunlarına yardımcı olabileceğini belirtmektedir. Özellikle ebeveynlerin çocuklara yönelik tutum ve davranışları, çocukların eğitim performansını da büyük ölçüde etkilemektedir (Alfaro ve Taylor, 2015). Başka bir deyişle çocukların eğitim performansı çoğunlukla ebeveyn tutumlarıyla ilişkilidir denilebilir.

Eğitim örgütlerine bakıldığında ebeveynlerin yani velilerin en çok öğrenci başarısına odaklandıkları anlaşılmaktadır. Olumlu ebeveyn iletişimi öğrenci başarısını ve performansını artırırken, tam tersi bir tutum ise süreci tersine çevirmektedir (Bempechat vd., 1999). Okul dışındaki ebeveyn tutumlarının çocukların öğrenmesinde oldukça etkili olduğu, akademik başarı düzeyini arttırdığı ve olumlu ebeveyn davranışlarının olumlu öğrenci davranışlarını geliştirdiği görülmektedir (Gutman, 2006). Yani uyumlu ve özgür bir aile ortamında, tutarlı ve sağlıklı ilişkiler içinde büyüyen bir çocuk, özerk ve yaratıcı bir birey olarak yetişkinliğe ulaşırken; baskıcı ve huzursuz bir aile ortamının çocuk üzerinde olumsuz etkileri olduğu bilinmektedir (Öztunç, 1999). Dolayısıyla aile ve çocuk arasındaki sorunların başlangıç noktası doğal olarak anne ve babadır denilebilir.

Olumsuz ebeveyn tutumlarına bakıldığında ebeveyn-çocuk ilişkisinde en önemli bileşenin ebeveynin çocuğa verdiği destek olduğu görülmektedir. Otoriter ve kontrolcü aile yapısına sahip bireylerin ebeveynleri tarafından doğrudan ve dolaylı mobbinge maruz kaldıkları anlaşılmaktadır (Yerger ve Gehret, 2011). Bu durumda çocukların sorgulamaması ve kurallara uyması beklenir. Doğrudan mobbing durumunda dahi disiplin kuralları sıkı bir şekilde uygulanabilmektedir. Bu tür bir yaklaşımda ebeveyn-çocuk arasında samimi bir etkileşim kurulamamaktadır.

Anne-babanın talepleri çocuğun taleplerinden önce gelebilir ve buna ilişkin bir ebeveyn tutumu sergilenebilir. Bu tür ebeveynlere ise işgalci denir. Öyle ki bu tür ebeveynler, kendilerini çaresiz ve mağdur olarak göstererek, çocuklarına istediklerini yaptırabilme çabası içerisinde (Yabancı, 2023). Bu ebeveynler çocuğun sınırlarını aşarak, kontrolcü, baskıcı ve çıkarıcı davranabilmektedirler (Sökmez, 2024). Aynı zamanda istedikleri yapılmadığında hakkını helal etmeme gibi duygusal yöntemlere başvurarak etrafındakilere çocuklarını şikâyet edebilmektedirler (Yabancı, 2023). Böyle bir ortamda büyüyen bireylerin kaygı düzeyleri yüksek, özsayıları düşük olmakla birlikte; bu bireyler sosyal hayata ayak uydurmada güçlük çekmektedir (Hart vd., 2003).

İşgalci ebeveyn olgusunu anlamamanın en kolay ve hızlı yolu, ebeveynlerin bu olguya ilişkin sahip oldukları duygunun geniş çapta ve küresel olarak ulaşılabileceği alanlardan geçmektedir. Bu bağlamda sosyal medya platformları ilgili duygunun kamuoyuna açıklandığı alanların başında gelmektedir. Özellikle sosyal medya, ebeveynlerin istilaya yönelik tutumlarını ortaya çıkarmak için en etkili platformlardan biridir (Latiff ve Safiee, 2015). Ulusal ve uluslararası alayazın incelendiğinde işgalci ebeveyn kavramına ilişkin kısıtlı araştırmanın bulunduğu görülmektedir. Aynı zamanda işgalci ebeveynlik olgusuna ilişkin literatür de oldukça sınırlıdır. Bunun temel nedeni ise olgunun yeni bir kavram olarak ortaya çıkmasıdır. Bu durum mevcut çalışmayı literatüre ışık tutan önemli bir çalışma haline getirmektedir.

Bu çalışmanın verisi, halka açık Facebook gruplarından ve sayfalarından alınan ve kullanıcılar tarafından oluşturulan 12.249 yorumdan oluşmaktadır. Toplanan yorumların zaman dilimi 2023 yılı Ocak ayından Mayıs ayına kadar uzanmakta ve bu zaman dilimi kamuoyunun güncel bir görüntüsünü yansıtmaktadır. Bu yorumlar, özellikle eğitim ve psikolojik bağlamda "işgalci ebeveynlere" odaklanarak, ebeveynlik stilleri etrafındaki tartışmalara olan ilgilerine göre özel olarak seçilmiştir. Etik standartlara ve Facebook'un veri kullanım politikalarına uymak için tüm veriler anonim olarak toplanılmış ve analizden önce kişisel tanımlayıcıların kaldırılması sağlanmıştır.

Duygu analizinde, VADER duygu analiz aracı kullanılmıştır. VADER, özellikle çevrimiçi iletişimin nüanslarına uyum sağlayan bir sözlük ve kural tabanlı çerçeveyi bir araya getirerek, özellikle sosyal medya metinlerindeki duygu analizi için uygundur. Öyle ki bu analiz aracı metnin birikmiş duygusunu toplamakta ve

“olumlu, tarafsız veya olumsuz” olarak üç kategoriden biriyle sınıflandırarak bileşik puan sağlamaktadır. Dolayısıyla veri seti içerisinde işgalci ebeveynliğe yönelik hâkim tutumları belirlemek için duygu kategorileri ölçülmüştür. Her duyarlılık kategorisindeki yorumların oranını belirlemek ve genel duyarlılık eğilimini değerlendirmek için istatistiksel teknikler uygulanmıştır. Ayrıca, duyarlılıktaki herhangi bir dalgalanmayı gözlemlemek için zamansal analiz yapılarak bu eğilimler, uygunluğuna göre dış olaylar veya haberlerle ilişkilendirilmiştir.

İşgalci ebeveynliğe ilişkin 12.249 Facebook yorumunun duygu analizi, bu konudaki kamuoyunun karmaşık bir resmini ortaya çıkarmıştır. Veri etkili bir şekilde “pozitif, nötr ve negatif” olarak üç ana duygu başlığı altında şu şekilde sınıflandırılmıştır:

- **Olumlu Duygular:** Bulgular doğrultusunda yorumların %34,3'ünün olumlu olarak sınıflandırıldığı açığa çıkmıştır. Bu yorumlar genellikle katı ebeveynliğin belirli yönlerini överek çocuklarda daha iyi disiplin ve akademik performansla ilişkilendirmiştir. Bu kategorideki yorumlarda, yapılandırılmış ortamların çocukların şekil l'de gösterilen sorumluluk ve hesap verebilirlik duygusunu geliştirmelerine yardımcı olduğu sıklıkla dile getirilmiştir.
- **Nötr Duygular:** Bulgular doğrultusunda yorumların %27,2'si nötr kategorisine girmektedir. Bu yorumlar genellikle net olumlu veya olumsuz duruş ifade etmeden ebeveynlik tarzlarını ortaya koymaktadır. Bu yorumların çoğu bilgilendirici nitelikte veya açık bir duygusal içerik olmaksızın farklı ebeveynlik uygulamaları hakkında tartışmalar içermektedir.
- **Olumsuz Duygular:** Bulgular doğrultusunda yorumların %38,5'inin olumsuz olduğu görülmektedir. Bu yorumlar, işgalci ebeveynlik tarzlarını aşırı kısıtlayıcı ve çocukların duygusal gelişimine zarar verici olmakla eleştirmektedir. Bu yorumlardaki temalar arasında çocukların ruh sağlığına ilişkin endişeler, özerklik eksikliği ve aşırı kontrolcü ebeveyn davranışları nedeniyle yaratıcılığın bastırılması öne çıkmaktadır.

Araştırma bulguları, işgalci ebeveynlik algılarında önemli bir ayrılığa işaret etmektedir. Bazı araştırmacılar bunun disiplin ve başarıya ilişkin sonuçlarını överken; bazıları bunun çocukların duygusal ve psikolojik sağlığı üzerindeki etkisini eleştirmektedir. Bu ikilik, Baumrind'in ebeveynlik stilleri tipolojisi kapsamında bağlamsallaştırılabilir. Bu noktada otoriter ebeveynlik (yüksek talepler ve düşük yanıt verme) genellikle çocuklar için olumsuz duygusal sonuçlarla ilişkilendirilir (Baumrind, 1991). Steinberg vd. (1994) çalışmalarında, otoriter ebeveynliğin bazen akademik başarıya yol açabildiğini, aynı zamanda çocuklarda duygusal bozukluklara, sosyal yeterliliğin azalmasına ve zayıf stres yönetimine neden olabileceğini göstermiştir.

Genel olarak, işgalci ebeveynlik hakkındaki tartışma basit sınıflandırmaların ötesine geçmeli ve bu uygulamaların çocuk gelişimi ve toplumsal normlar üzerindeki çeşitli ve derin etkileri kabul edilmelidir. Daha da önemlisi, mevcut araştırmanın analizi, toplumun bir kısmı kutuplaşmaya devam ederken, kayda değer bir kesiminin daha dengeli ve gerçeklere dayalı tartışmalarla meşgul olduğunu göstermektedir. Bu da, eğitimcilerin, politika yapıcıların ve psikologların ebeveynlik tarzları ve etkilerine ilişkin incelikli bir anlayışı teşvik eden programlara müdahale etme fırsatını ortaya koymaktadır. Bu tür programlar, dengeli bilgi sağlayarak ve ebeveynlerin çocukların bütünsel gelişimini teşvik eden uygulamaları benimsemelerini destekleyerek kutuplaşmış görüşler arasındaki boşluğu doldurmayı amaçlamalıdır.

Gelecekteki araştırmalar, müdahaleleri daha etkili bir şekilde uyarlamak için farklı sosyo-ekonomik ve kültürel arka plan genelinde farklı ebeveynlik tarzlarının etkilerini keşfetmeye odaklanabilir. Ayrıca çeşitli ebeveynlik uygulamalarının çocukların duygusal zekâsı, sosyal becerileri ve akademik başarıları üzerindeki uzun vadeli etkilerini değerlendiren çalışmalara da ihtiyaç vardır. Sonuçta toplum, ebeveynlik tarzları hakkında daha bilgili ve dengeli bir tartışmaya teşvik edilerek, çocukların çok yönlü gelişimini teşvik eden ortamlar oluşturma konusunda ebeveynler desteklenebilir. Böylece toplumun dokusuna olumlu katkıda bulunulabilir.

## 1. Introduction

One of the stakeholders that forms the pillar of education is the family. Family, which is a social structure, is the environment in which the individual's first awareness occurs, and also affects the individual's academic success, behavior and attitude (Kim, 2015). So much so that parents raise their children in line with different ideals and exhibit different and diverse attitudes and behaviors towards their children accordingly (Mussen, 1984). While positive family behaviors affect individual development positively, negative family behaviors damage this development and negatively affect the development process. Therefore, the most important duty of the family is to perform the care and education function of the child during the socialization process and to help the child form

an identity by learning various behavioral and belief norms (Özada and Duyan, 2017). In this context, the first identity formation takes place in the family.

The attitudes of parents towards their children affect the child's personality, behavior, academic achievement, problem-solving skills and feelings of confidence (Blisset and Haycraft, 2008). Meisels and Shonkoff (2000) point out that the attitudes and behaviors exhibited by parents can help them with their children's developmental problems by creating changes in child development starting from a young age. Parents' attitudes and behaviors towards children greatly affect children's educational performance (Alfaro and Taylor, 2015). In other words, children's educational performance is directly related to parental attitudes.

When we look at educational organizations, it is understood that families, in other words parents, focus most on student success. While positive parental communication increases student success and performance, the opposite attitude reverses the process (Bempechat et al., 1999). It is seen that parental attitudes outside of school are very effective in children's learning, increase the level of academic success and develop positive student behaviors (Gutman, 2006). In other words, a child who grows up in a harmonious and free environment in family and consistent and healthy relationships reaches adulthood as an autonomous and creative individual; an oppressive and uneasy family environment has negative effects on the child (Öztunç, 1999). Naturally, the starting point of the problems between the family and the child may be the mother and father (parents).

It is possible to collect the negative parental attitudes that form the basis of the problems that arise between the family and the child under certain headings. Negative parental attitudes can be classified as overly oppressive and authoritarian, unbalanced and indecisive, overly tolerant, overprotective, doting, neglectful and protective attitudes (Hibbard and Walton, 2014; Öztunç, 1999). While authoritarian parents' acceptance levels are low and their demand levels are high; Overly permissive parents have high levels of acceptance and low levels of control. On the other hand, neglectful parents have low levels of both acceptance and control (Bakhla et al., 2013). As it can be seen, every negative parental attitude can have a negative impact on children.

Negative parental attitudes, the most important component of the parent-child relationship is the parent's support for the child. It is understood that individuals with an authoritarian and controlling family structure, especially during the attachment period, are exposed to direct and indirect mobbing by their parents (Yerger and Gehret, 2011). In this case, children are expected not to question and to obey the rules. Even in direct mobbing, disciplinary rules can be strictly enforced. In this type of approach, a sincere interaction between parent and child cannot be expected.

There is a parental attitude in which the demands of the parents take precedence over the demands of the child. Such parents are called invaders. The invasive parent is the parent who makes himself/herself do what he/she wants by showing himself/herself as helpless and victimized (Yabancı, 2023). At the same time, the invasive parent refers to a type of parent who exceeds the child's limits and acts controlling, oppressive and manipulative (Sökmez, 2024). These families don't forgive their milk and labor if you do not do what they want. They complain about you to everyone and they gave birth to their children for themselves (Yabancı, 2023). Individuals growing up in such an environment have high anxiety levels, low self-esteem, and have difficulty keeping up with social life (Hart et al., 2003). Yabancı (2023) draws attention to the negative aspects of invasive parents and expresses the characteristics of this type of parent as follows:

- They intervene too much.
- They are focused on controlling everything.
- They want to manipulate.
- They impose their own ideas and solutions on every issue.
- There is no tolerance for mistakes.
- They are perfectionists and expect their children to meet their own standards.
- They have difficulty empathizing.

Sökmez (2024) explains the characteristics of invasive parents under five main headings as follows:

- They are overly controlling: They often try to control their children's every move and restrict their freedom.
- They are manipulative: They may use manipulative tactics to manipulate their children into behaving the way they want.
- They cross boundaries: They may violate children's personal boundaries and not respect their private spaces.
- They are emotional abusers: They can be emotionally abusive towards their children. This may take the form of constant criticism, belittling, resentment, or excessive demands.
- They are indifferent or overly interested: They may either show excessive interest in their children and try to control their lives, or, on the contrary, they may remain indifferent and ignore their emotional needs.

Being exposed to the attitudes of an abusive family can reveal many different negative consequences for the child. These results can negatively affect the child's development. Sökmez (2024) and Yabancı (2023) explain the consequences of growing up with parents who have an invasive attitude as follows:

- They can negatively affect children's emotional, social and academic development.
- Because these children are constantly criticized and controlled, they have self-confidence problems in making presentations and speaking at school. So they have difficulty expressing themselves.
- Children carry the stress and pressure at home to school and have difficulty acting comfortably in the classroom. They are constantly seeking approval.
- These children, who have not learned open communication at home, may have problems communicating with their teachers or peers at school. Or, on the contrary, they may be highly compatible.
- Because children are raised dependent on their parents, they have difficulty making decisions at school and fulfilling their responsibilities on their own. In other words, with their dependent personality, they blame themselves when they make mistakes.

The attitudes that children receive from their families affect their personalities, self-perceptions and relationships with the people around them (Aydoğdu and Dilekmen, 2016). Therefore, children who grow up in families with an invasive attitude may have problems expressing themselves, setting boundaries, and gaining approval throughout their lives. In addition, their communication skills and emotional intelligence often remain weak, and as a result, this may negatively affect children's academic success in the long term (Sökmez, 2024). So much so that the quality and attitudes of the parent affect the child's sociability and socialization in the educational environment, positively or negatively (Ilgar and Ilgar, 2018). Feeling under constant pressure can hinder children's learning processes and reduce their motivation, causing them to grow up as children who do not know how to enjoy learning, even if their grades are high (Sökmez, 2024).

Sentiment is the most important component that reflects the parents' psychology and attitude towards the invasive thoughts and behaviors. So, sentiment that emerges as a result of the subjective experiences of individuals and groups gives clues about how the phenomenon is formed and how the process of the phenomenon continues (Kafle, 2011; Welman and Kruger, 1999). The easiest and fastest way to understand the phenomenon of invasive parents is through areas where parents' emotions regarding this phenomenon can be widely and globally reached. Social media platforms are one of the primary areas where sentiments about consumption are publicly revealed. Especially social media is among the most effective platform to emerge parents' attitudes towards invasion (Latiff and Safiee, 2015). When the national and international literature is examined, it is seen that there is almost no research on the concept of invasive parents. At the same time, the literature on the phenomenon of invasive parenting is also quite limited. The main reason for this is that the phenomenon emerged as a new concept. This situation makes the current study a pioneering and important study that sheds light on the literature.

## 2. Method

### 2.1. Data Collection

The data for this study consists of 12,249 user-generated comments extracted from public Facebook groups and pages. These comments were specifically chosen based on their relevance to discussions around parenting styles, particularly focusing on "invasive parents" as described in educational and psychological

contexts. To comply with ethical standards and Facebook's data use policies, all data were collected anonymously, ensuring that personal identifiers were removed prior to analysis.

The collection process was facilitated by the use of Facebook's Graph API, which allows for programmatically accessing public posts and comments. Keywords such as "invasive parenting," "authoritarian parents," "parental control," and similar phrases were used as filters to gather relevant discussions from various parenting and educational groups. The timeframe for the collected comments spanned from January 2023 to May 2023, providing a contemporary snapshot of public opinion.

## 2.2. Data Preprocessing

Prior to conducting sentiment analysis, the data underwent several preprocessing steps to ensure the quality and accuracy of the results:

1. **Cleaning:** Removal of URLs, special characters, and non-alphanumeric symbols.
2. **Normalization:** Converting all text to lower case to maintain consistency.
3. **Tokenization:** Breaking down complex data into manageable pieces or tokens.
4. **Stop Words Removal:** Filtering out common words that add no significant value to sentiment analysis.
5. **Lemmatization:** Reducing words to their base or root form.

These preprocessing steps were executed using the Natural Language Toolkit (NLTK) and spaCy, two comprehensive libraries designed for natural language processing in Python.

## 2.3. Sentiment Analysis

Sentiment analysis was performed using the VADER (Valence Aware Dictionary and sEntiment Reasoner) sentiment analysis tool. VADER is particularly well-suited for sentiment analysis on social media texts, incorporating a lexicon and rule-based framework specifically attuned to the nuances of online communication. It provides a compound score that aggregates the cumulative sentiment of the text, classifying it into one of three categories: positive, neutral, or negative.

Each comment was processed through VADER to obtain sentiment scores, which were subsequently categorized based on the aforementioned thresholds:

- **Positive sentiment:** Compound score  $> 0.05$
- **Neutral sentiment:** Compound score between  $-0.05$  and  $0.05$
- **Negative sentiment:** Compound score  $< -0.05$

## 2.4. Data Analysis

The analysis involved quantifying the sentiment categories to identify prevailing attitudes towards invasive parenting within the data set. Statistical techniques were applied to determine the proportion of comments within each sentiment category and to assess the overall sentiment trend. Further, temporal analysis was performed to observe any fluctuations in sentiment over the collection period, correlating these trends with relevant external events or news stories when applicable.

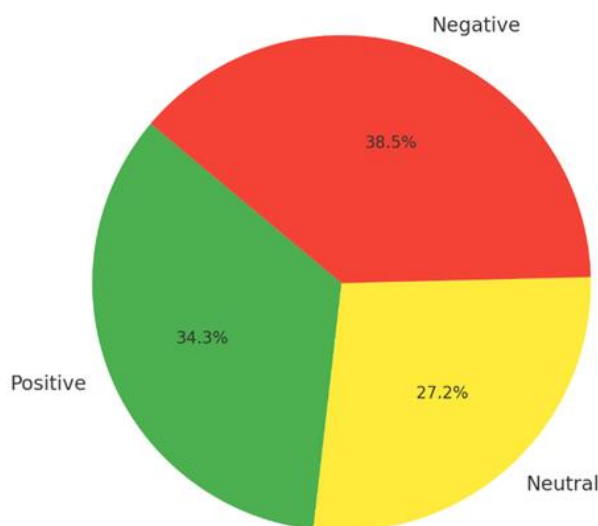
The results from this sentiment analysis are expected to provide insights into public perception of invasive parenting on social media, contributing to a deeper understanding of how these attitudes might influence or reflect societal norms and practices in education.

### 3. Results

The sentiment analysis of 12,249 Facebook comments regarding invasive parenting revealed a complex picture of public opinion on this issue. The data was effectively categorized into three primary sentiment classes: positive, neutral, and negative.

#### 3.1. Sentiment Distribution

- **Positive Sentiments:** 34,3% of the comments were classified as positive. These comments generally praised certain aspects of strict parenting, linking them with better discipline and academic performance in children. Comments in this category often mentioned that structured environments helped children develop a sense of responsibility and accountability shown in figure 1.
- **Neutral Sentiments:** 27,2% of the comments fell into the neutral category. These comments typically discussed parenting styles without expressing a clear positive or negative stance. Many of these comments were informational or included discussions about different parenting practices without clear emotional content.
- **Negative Sentiments:** 38,5% of comments were negative. These comments criticized invasive parenting styles as being overly restrictive and detrimental to children's emotional development. Themes in these comments included concerns over children's mental health, lack of autonomy, and suppressed creativity due to overly controlling parental behaviors.



**Figure 1.** Distribution of Sentiments on Invasive Parenting from Facebook Comments

#### 3.2. Temporal Trends

The sentiment analysis also indicated temporal variations in the sentiments expressed. Negative sentiments peaked during discussions following popular media coverage of incidents related to strict parenting practices. Similarly, positive sentiments saw a slight increase around the time of publications of studies or articles highlighting the benefits of disciplined upbringing.

#### Key Themes from Positive Comments

From the positive comments (table 1), themes such as "discipline," "success," and "safety" were frequently mentioned. One typical comment noted, "Strict parenting ensures kids stay out of trouble and focus on their studies, which is crucial for their future."

### Key Themes from Negative Comments

In contrast, negative comments often contained words like "pressure," "stress," "anxiety," and "depression." A representative comment stated, "Overbearing parents can stifle growth and make children anxious and afraid of making mistakes, which is harmful in the long run."

**Table 1.** Key themes and representative comments from positive and negative sentiments

Sentiment	Themes	Representative Comment
Positive	Discipline, Success, Safety	"Strict parenting ensures kids stay out of trouble and focus on their studies, which is crucial for their future."
Positive	Discipline, Success, Safety	"Structured parenting leads to well-behaved children who excel in their academics."
Positive	Discipline, Success, Safety	"Discipline taught early in life pays off as children grow into disciplined adults."
Positive	Discipline, Success, Safety	"A safe environment at home leads to a secure, confident child ready to face the world."
Positive	Discipline, Success, Safety	"Success isn't just about academics; disciplined upbringing instills lifelong values."
Positive	Discipline, Success, Safety	"Safety protocols at home teach children the importance of boundaries and respect."
Negative	Pressure, Stress, Anxiety, Depression	"Overbearing parents can stifle growth and make children anxious and afraid of making mistakes, which is harmful in the long run."
Negative	Pressure, Stress, Anxiety, Depression	"Too much control leads to a lack of independence in kids as they grow."
Negative	Pressure, Stress, Anxiety, Depression	"Constant stress from high expectations can damage a child's self-esteem."
Negative	Pressure, Stress, Anxiety, Depression	"Anxiety from parental pressure can hinder a child's social development."
Negative	Pressure, Stress, Anxiety, Depression	"Depression in children can often stem from excessive criticism and lack of support."
Negative	Pressure, Stress, Anxiety, Depression	"Fear of making mistakes can paralyze a child's ability to learn from errors."

### 3.3. Statistical Analysis

A chi-square test was conducted to determine if there was a statistically significant difference in the frequency of positive, neutral, and negative sentiments over the data collection period. The results indicated a significant variation ( $\chi^2(2, N = 12,249) = 6.84, p < 0.05$ ), suggesting that external factors likely influenced public opinion on invasive parenting.

## 4. Discussion

The sentiment analysis conducted on Facebook comments reveals a complex landscape of public opinion regarding invasive parenting. This discourse is not merely polarized but reflects a nuanced interplay of cultural, psychological, and social dynamics that influence parenting practices.



Our findings indicate a significant divide in perceptions of invasive parenting, with some praising its outcomes on discipline and success, while others criticize its impact on children's emotional and psychological health. This dichotomy can be contextualized within Baumrind's typology of parenting styles, where authoritarian parenting—characterized by high demands and low responsiveness—is often associated with negative emotional outcomes for children (Baumrind, 1991). Studies like those by Steinberg et al. (1994) have shown that while authoritarian parenting can sometimes lead to academic success, it may also engender emotional disorders, reduced social competence, and poor stress management in children.

Moreover, our study underscores the role of external media in shaping public perceptions of parenting. Peaks in negative sentiments following media coverage of strict parenting practices suggest a reactive public discourse influenced by contemporary events. This is in line with the cultivation theory, which proposes that media shapes users' perceptions of social realities (Gerbner and Gross, 1976). Thus, the portrayal of parenting styles in media can significantly affect public attitudes, potentially stigmatizing or validating certain practices.

The balanced discourse, including a substantial proportion of neutral, fact-based comments, suggests that many individuals are engaged in reflective rather than reactive discussions about parenting. This could indicate a public awareness of the complexity of parenting styles and their diverse impacts, which may not be fully captured by dichotomous sentiments of approval or disapproval.

The implications of these insights are profound for educators, psychologists, and policymakers. It is evident that there is a need for more comprehensive educational programs that not only address the controversies surrounding various parenting styles but also promote parenting practices that are known to support children's holistic development. Programs that emphasize emotional intelligence, resilience, and autonomy could help mitigate the negative effects of invasive parenting. Furthermore, public health campaigns and parenting workshops that provide balanced information on the consequences of different parenting styles could help in fostering environments that nurture children's well-being and development.

In light of these findings, future research should explore the longitudinal effects of different parenting styles on children's well-being, considering the influence of cultural, economic, and individual factors. It is also crucial to investigate the efficacy of interventions aimed at moderating the extremes of parenting styles and promoting more adaptive strategies that support the diverse needs of children.

Overall, the discussion around invasive parenting must move beyond simple classifications and acknowledge the varied and profound impacts these practices have on child development and societal norms.

## 5. Conclusions

This study's analysis of sentiments expressed in social media comments offers a revealing glimpse into public perceptions of invasive parenting styles. The results reflect a broad spectrum of opinions, from strong endorsements of strict parenting as a means to instill discipline and success, to profound criticisms highlighting the psychological and emotional damage such approaches can inflict on children. The significant variance in sentiment, influenced by external media coverage, suggests that public opinion on parenting is susceptible to societal narratives and current events. This underscores the role of media in shaping and sometimes polarizing views on what constitutes effective parenting.

Importantly, analysis of existing findings indicate that while a portion of the community remains polarized, there is a notable segment engaged in more balanced, fact-based discussions. This reveals an opportunity for educators, policymakers, and psychologists to intervene with programs that promote a nuanced understanding of parenting styles and their impacts. Such programs should aim to bridge the gap between polarized views by providing balanced information and supporting parents in adopting practices that foster the holistic development of children.

Future research should focus on exploring the effects of different parenting styles across diverse socio-economic and cultural backgrounds to tailor interventions more effectively. Additionally, there is a need for studies that assess the long-term impacts of various parenting practices on children's emotional intelligence, social skills, and academic success. Ultimately, by fostering a more informed and balanced discussion on parenting styles,

society can better support parents in nurturing environments that promote the well-rounded development of children, thus contributing positively to the fabric of the community.

### Declarations

**Ethical disclosure:** It is frankly declared that the procedures used in this study comply with the principles of the Declaration of Helsinki. Since the data is not collected directly from individuals, and it is publicly accessible and usable in social media platform, ethical permission is not required.

**Informed consent statement:** Since the data is not collected directly from individuals, and it is publicly accessible and usable in social media platform, informed consent statement is not required.

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### References

- Alfaro, E. C. and Taylor, A. J. U. (2015). The longitudinal relation between academic support and Latino adolescents' academic motivation. *Hispanic Journal of Behavioral Sciens*, 37(3), 319-341.
- Aydođdu, F. ve Dilekmen, M. (2016). Ebeveyn tutumlarının çeşitli deđişkenler açısından deđerlendirilmesi. *Bayburt Eğitim Fakültesi Dergisi*, 11(2), 569-585.
- Bakhla, A. K., Sinha, P., Sharan, R., Binay, Y., Verma, V. and Chaudhury, S. (2013). Anxiety in school students: Role of parenting and gender. *Indian Psychiatry Journal*, 22(2), 131–137.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The journal of early adolescence*, 11(1), 56-95.
- Bempechat, J., Graham, S. E. and Jimenez, N. V. (1999). The socialization of achievement in poor and minority students: A comparative study. *Journal of Cross-Cultural Psychology*, 30, 139-158.
- Blisset, J. and Haycraft, E. (2008). Are parenting style and controlling feeding practices related?. *Appetite*, 50, 477-485.
- Gerbner, G., Gross, L., Morgan, M. and Signorielli, N. (1986). Living with television: The dynamics of the cultivation process. *Perspectives on media effects*, 1986, 17-40.
- Gutman, L. M. (2006). How student and parent goal orientations and classroom goal structures influence the math achievement of African Americans during the high school transition. *Contemporary Educational Psychology*, 31(1), 44-63.
- Hart, C. H., Newell, L. D. and Olsen, S. F. (2003). Parenting skills and social-communicative competence in childhood. Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Hibbard, D. R. and Walton, G. E. (2014). Exploring the development of perfectionism: The influence of parenting style and gender. *Social Behavior and Personality*, 42(2), 269-278.
- [https://www.hurriyet.com.tr/yazarlar/nuran-cakmakci/ebeveynlere-en-kritik-soru-ilgili-misin-isgalci-mi-\(2024\)](https://www.hurriyet.com.tr/yazarlar/nuran-cakmakci/ebeveynlere-en-kritik-soru-ilgili-misin-isgalci-mi-(2024))
- İlgar, M. Z. ve İlgar, S. (2018). Eğitime aile olarak yaklaşmak. *International Journal of Social Sciences*, 3(4), 33-49.
- Kafle, N. P. (2011). Hermeneutic phenomenological research method simplified. *An Interdisciplinary Journal*, 5, 181-200.

- Kim, J. (2015). American high school student from different ethnic backgrounds: The role of parents and the classroom in achievement motivation. *Social Psychology of Education, 18*, 411-430.
- Latiff, Z. A. and Safiee, N. A. (2015). New business set up for branding strategies on social media – Instagram. *Procedia Computer Science, 72*, 13-23.
- Meisels, S. J. And Shonkoff, J. P. (2000). *Early childhood intervention: A continuing evolution*, In Shonkoff, J. , and Meisels, S. J. (eds.) “Handbook of early childhood intervention”. Cambridge: Cambridge University Press.
- Mussen, P. H. (1984). Child development and personality. New York: Harper & Row.
- Özada, A. ve Duyan, V. (2017). Ebeveyn-çocuk ilişkisi ve zorbalık. *Turkish Journal of Family Medicine and Primary Care, 12*(1): 49-55.
- Öztunç, M. (1999). *Yaratıcı düşünce üzerinde ailenin etkisi* (Yayınlanmış yüksek lisans tezi). Sakarya Üniversitesi.
- Steinberg, L., Lamborn, S. D., Darling, N., Mounts, N. S. and Dornbusch, S. M. (1994). Over-time changes in adjustment and competence among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child development, 65*(3), 754-770.
- Welman, J. C. and Kruger, S. J. (1999). *Research methodology for the business and administrative sciences*. Johannesburg: International Thompson.
- Yabancı, S. (2023). *Zihin tuzakları: Kendine yardım kitabı*. İstanbul: Mona Kitap.
- Yerger W. and Gehret C. (2011). Understanding and dealing with bullying in schools. *The Educational Forum, 75*(4), 315-326.

## DAYANIKLILIK İÇİN TEORİK BİR ANALİZ: OKULLARDA KARMAŞIK UYUM SAĞLAYICI LİDERLİK MODELİ GELİŞTİRİLMESİ

### A THEORETICAL ANALYSIS FOR RESILIENCE: DEVELOPING A COMPLEX ADAPTIVE LEADERSHIP MODEL IN SCHOOLS

Hamit ÖZEN<sup>1</sup> & Pınar YAVUZ<sup>2</sup>

#### Özet

Karmaşık Uyum Sağlayıcı Liderlik, okulların sürekli değişim ve gelişim süreçlerini anlamayı hedefleyen bir liderlik biçimidir. Bu liderlik tarzı, esneklik, iş birliği ve yeni zorluklara uyum sağlama üzerine odaklanır. Karmaşık Uyum Sağlayıcı Liderliği benimseyen liderler, okulları iç ve dış faktörlerden etkilenen dinamik sistemler olarak görür ve bu sistemlerde sürekli bir öğrenme kültürünü teşvik eder, yenilikçi düşünceleri destekler. Ayrıca, hem personeli hem de öğrencileri aktif çözüm süreçlerine dahil ederler. Bu liderlik yaklaşımı, okulların eğitim ihtiyaçlarına daha etkin yanıt vermesini sağlar ve öğrencilerin dayanıklılık kapasitelerini artırır. Karmaşık Uyum Sağlayıcı Liderlik, öğrenci dayanıklılığını öne çıkararak, öğrencilerin zorluklarla başa çıkma yeteneklerini geliştirir ve bu süreçte hem akademik hem de kişisel gelişimlerini destekler. Aynı zamanda, bu liderler her bireyin kendini değerli hissettiği destekleyici ve kapsayıcı bir okul kültürü oluşturur. Karmaşık Uyum Sağlayıcı Liderliği benimseyen liderler, uzun vadeli başarılar için sağlam temeller atar ve eğitim çıktılarını iyileştirirken daha uyumlu bir okul topluluğunun gelişmesini sağlar. Bu araştırma, karmaşık uyum sağlayıcı okul liderlerinin, öğrenci dayanıklılığını artırma sürecindeki rolünü ve liderlik uygulamalarının okul topluluğunun gelişimine katkısını incelemektedir. Artan akademik ve sosyal baskılar ışığında, bu çalışma, dayanıklılığı destekleme ve sınıf içi öğrenme pratiklerine entegrasyonu kapsayan geniş çaplı bir yaklaşımın önemini vurgulamaktadır. Bu çalışmada, Karmaşık Uyum Sağlayıcı Liderlik teorik bağlamda ele alınmıştır. Araştırmanın bulguları bu çerçevede analiz edilmiştir. Temel amacı, karmaşık adaptif okul liderlerinin öğrenciler ve personel arasında dayanıklılığı nasıl teşvik ettiğini ortaya koymak ve böylece genel okul ortamını ve eğitim çıktılarını nasıl iyileştirdiğini incelemek olan bu çalışmada bulgular önceden yapılan çalışmalar ile karşılaştırılarak yorumlanmıştır. Teorik analiz yöntemiyle yürütülen bu araştırma, okul liderliği uygulamaları ile öğrenci dayanıklılığını teşvik eden stratejilerin uygulanması arasındaki ilişkileri ortaya koymaktadır. Araştırmada ortaya konan model, dayanıklılık odaklı bir okul kültürünün yaratılmasının, öğretmenlere destek sunmanın, destekleyici ve kapsayıcı bir öğrenme ortamının oluşturulmasının ve öğretmenler için sürekli mesleki gelişimin sağlanmasının, okulun esnek ve destekleyici bir öğrenme ortamını sürdürmesine katkıda bulunacağını öne sürmektedir.

**Anahtar kelimeler:** Karmaşık uyum sağlayıcı liderlik, okul müdürü, dayanıklılık, okul iklimi

#### Abstract

The Complex Adaptive Leadership (CAL) is a type of leadership that seeks to capture the ongoing change processes of schools. This type of leadership entails flexibility, teamwork and the ability to address new problems. Complex Adaptive Leadership leaders consider schools to be systems that are open and complex, bounded by internal and external conditions, promote learning and support creativity. They also engage both the staff and the students in the problem solving process. This kind of leadership helps schools to meet educational needs better and enhances the students' ability to cope with challenges. Through the focus on student resilience, Complex Adaptive Leadership enhances the students' capacity to navigate through adversity and fosters both academic success and personal development. At the same time, these leaders foster a school climate that embraces all students and makes them feel that they belong and are useful members of the school.

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Applying the principles of Complex Adaptive Leadership helps build a strong foundation for the future and enhances unity within the school community, thereby increasing academic achievement. The study explores the part played by complex adaptive school leaders in developing student resilience and the part that their leadership styles play in the development of the school community. Thus, this research suggests that there is need to adopt a wider approach that includes resilience support and ensure that it is incorporated into classroom learning. In this study, Complex Adaptive Leadership is based on theory. The results of the study were discussed in the light of the above framework. The overall goal of this study is to understand how CASLs build resilience among students and staff to enhance the school environment and achievement. Through the application of theoretical frameworks, this work seeks to establish the link between leadership practices in schools and the application of strategies for enhancing student resilience. The model presented in the study indicates that developing a culture of resilience at school, promoting support for teachers, fostering a supportive and inclusive learning environment, and offering professional development for teachers will help the school to continue to support resilience and student well-being.

**Key words:** *Complex adaptive leadership, school principal, resilience, school climate*

## **EXPANDED ABSTRACT**

### **Theoretical Framework**

The theoretical framework holds that actions of school leaders affect the formation of a healthy school community. The elements of this framework are the adaptive leadership, the students' centered learning, and the whole school approach to supporting resilience. In this context, it is proposed to consider the complex adaptive leadership theory. Complex Adaptive Leadership (CAL) was introduced in late 1980s and early 1990s in the context of system thinking and sciences of complexity which are characterised by self-organisation and reactivity. This leadership strategy can be related to the works of Nick Obolensky, the author of the book that covers the principles of CAL known as Complex Adaptive Leadership (Obolensky, 2010). CAL challenges the vertical structural and the dictatorial leadership styles and advocates for the transformational, participative, flexible, and resilient leadership. According to the theory, organizations are chaotic systems that consist of a large number of links that are not always clear and can be changed at any time, so the leader should create conditions for self-organization. CAL has been applied in many sectors and contexts such as education, health and public administrations and has helped in addressing the problems that are typical of the contemporary organizations.

Thus, the selection of resilience as the main concept for the study is justified because it is an essential factor in education. It is important for the students to be resilient because it builds their capacity to face the challenges that are evident in the current learning environment and social relations. It enhances the element of fighting adverse situations in the society and still be able to survive and even thrive. Moreover, understanding the concept of resilience and its cultivation within a school setting can result in positive academic and psychological results and, consequently, contribute to students' achievements in and out of the school environment. The purpose of this study is to identify the role of Complex Adaptive School Leaders in building a student population that can cope with stress in today's society by enhancing their resilience.

### **Purpose or Problem Statement**

Even today's educational systems are slowly evolving, students are exposed to a lot of stress that impacts both their academic performance and mental well-being. These stressors include academic performance and exams, peer relations, a fast increase in the rates of mental health disorders among young people. This potential to succeed in the context of the challenges lies in resilience: A repertoire of strategies whose aim is to assist the students in dealing with the challenges. This study is concerned with the characteristics of complex adaptive school leaders in developing a resilient student population in the midst of such challenging educational environments. Hereby, the organization is both proactive and reactive at the same time and is based

on the principles of adaptability, teamwork, and system thinking within schools. The purpose of this study is to establish how the complex adaptive school leaders manage to build resilience among the learners and faculty within the school in order to enhance the overall environment and achievement. This involves:

1. Identifying the impacts of the complex adaptive leadership practices on the academic achievement, students' perseverance, and psychological well-being.
2. In order to consider how these practices could be applied to the creation of supportive and inclusive classrooms and schools.
3. Examining the characteristics of the complex adaptive leaders and the characteristics of resilience in schools.
4. Drawing on the ways in which these leadership styles affect the student's psychological and academic outcomes.

Thus, the research will aim at finding concrete suggestions for school leaders on how these practices could be effectively introduced and sustained in order to prepare students for the challenges of the future generations. Thus, this study seeks to contribute to the understanding of educational leadership by revealing how adaptive leadership can positively impact student resilience, thereby fostering learning environments in all parts of students' lives.

### Method

The study used theoretical analysis, a rigorous method that entails a systematic examination and explanation of the existing theories, concepts, and viewpoints relevant to the research problem (Northouse, 2018). This method involves reviewing and evaluating theories that are available in the literature, relating the theories to the research question, and developing new theory (Thomas & Hodges, 2010). Theoretical analysis is crucial since it underpins several aspects of the research process, including the identification of the research area, the choice of methodology, and the interpretation of the findings (Swanson & Chermack, 2013). It allows scholars to explore the epistemological, ontological, and methodological foundations of particular research paradigms (Corley & Gioia, 2011). Through theoretical analysis, the researchers can find theoretical voids and challenge the prevailing paradigms and contribute to the development of knowledge (Punch, 2014). In this research, we selected resilience and complex adaptive leadership as the guiding framework and the overall worldview and way of knowing (Uhl-Bien, Marion, & McKelvey, 2007). Theoretical analysis is particularly helpful in situations that require a more detailed assessment of ideas and prior information. It is most useful for building a systematic understanding of a particular subject and for evaluating current theoretical paradigms. Therefore, in our research, we employed a literature review where we used documents, prior works, and publications to gather information, thus providing a comprehensive and critical analysis of the literature relevant to our study objectives.

### Findings

The findings of the study show some of the characteristics and practices of complex adaptive leaders that are useful for student success. These are flexibility, teamwork, and the capacity to foster a healthy school climate.

*Adaptability:* School heads should be able to handle different issues that come with the school or learning institution. This is why they are flexible and can bend in order to cover the needs of their students and staff.

*Collaborative Skills:* These leaders encourage team work and foster an organizational culture that supports team work. They bring togetherness among the teachers and staff so that they can support one another and build the school fraternity.

*Commitment to Positive School Culture:* The complex adaptive leaders are concerned with the creation of a good environment in school. They provide an environment that ensures that the students feel safe, wanted, and important.

Another key finding of the study is that *Learner-Centered Leadership* is crucial for building up resilience. This approach focuses on the student and their well-being, which are the key aspects in learning according to the study. Learner-centered

leaders provide physical and psychological access, social and emotional safety, and positive regard and growth perspective in learning environments.

The study confirms the centrality of *Professional Development* of the school leaders that is, a continuous process. For this reason, training programs that equip leaders in terms of how to support resilience enhancing interventions are required. It is for this reason that such programs should focus on the development of leadership, cooperation, and culture within the school. This means that when the school leaders enhance their leadership competencies in these areas, they will be in a position to assist the learners and create the environment that supports the development of the resilience skills. The second significant contribution of the study is that *Resilience Integration* across learning activities in the school is a whole-school approach. This involves developing a shared goal for resilience, implementing organizational structures, and creating a network. The concept of the shared vision of resilience helps in the alignment of the actions of the members of the school and provides a clear idea of what resilience is and how it can be developed. The formation of a network of support involves the development of positive relationships with students, teachers, other staff members and the society in general in order to form a support system for students to deal with the challenges they encounter.

### **Conclusion**

The findings of the study have implications for practice and policy in education. Therefore, the research provides valuable suggestions on how schools can promote resilience and enhance the students' quality of life and academic achievements, based on the application of adaptive leadership and a whole-school approach to resilience. Effective school management plays a very significant role in enhancing the psychological well-being of students in their everyday life and in school. This research aids in enhancing the understanding of the dynamic nature of school leaders in creating a conducive environment in school for students to excel despite all the odds. The study offers the foundation for the subsequent research on leadership behavior to enhance the coping strategies of the students. In conclusion, this study highlights the importance of complex adaptive school leaders in improving the student resilience in school. Hence, by supporting learner-centered leadership and the establishment of the environment that enables learning, school leaders can enhance the student's coping capacity. It is imperative for the school leaders to undertake professional development that is continuous since through such the leaders can be equipped with knowledge and skills that would enable them support the resilience-building initiatives. The study also reveals that for resilience to be implemented in the school it has to be done systematically and must be supported by relational structures. In conclusion, this study provides valuable insights to the existing literature on how the school leaders may build and enhance student resilience. This paper has sought to demonstrate that by the application of the adaptive leadership approach and cultivation of a school culture students will be enabled to excel in their academic endeavors and lead healthy lifestyles. This approach not only assists the students in performing well academically but also assists them in solving problems in various facets of life. The findings of the study offer the foundation for future research on leadership behaviors that can foster students' resilience and practical approaches to enhancing resilience in schools.

### **INTRODUCTION**

Thanks to the increasing awareness of the importance of student well-being, educators and educational administrators across the country have been seeking ways to enhance students' coping resources for academic and social stress (Lam & Cheng, 2024). Within our current culture of standards, expectations, and academic performance, it appears that nurturing student resilience may be a somewhat neglected concept (Antony & Schaps, 2021). Nevertheless, it is crucial; the most important personal quality should be appropriate in schools nowadays. Student resilience is currently one of the most discussed issues in many schools across the country (Beatty & Campbell-Evans, 2020).

Student resilience is a multifaceted and challenging process that incorporates numerous actors in the learning context. Different studies have emphasized the importance of strengthening students' resilience to enable them to deal with various problems and succeed in their academic endeavors. This process is facilitated by teachers and instructors by creating a positive environment (Frenzel et al., 2016), nurturing positive relations, and shaping community perception (Keung et al., 2019). In addition, studies have found that teachers' emotional support can boost students' academic resilience, school motivation, and achievement (Romano et al., 2021).

Furthermore, teachers' emotions and their interactions with students have been reported to affect students' attitudes, behaviours, and motivation (Prosen et al., 2018). Thus, the role of teachers in providing emotional support is associated with developing a positive learning environment, helping the children to adapt to the school environment, increasing their motivation, and promoting creativity (Siu & Wong, 2014).

The personal qualities of the teachers are also important in the development of resilience in students as they help in the development of the students' skills (Ayala & Manzano, 2018). Furthermore, the research has established that teacher support activities have a positive relationship with academic resilience and this decreases the chances of students developing psychological problems. Also, self-compassion has been found to be a key element in academic resilience especially during tough times like the pandemic (Yustika & Widayari, 2021).

While most studies in the past have been focused on student resilience, our research instead shifts the focus to a different but just as important topic: The role of school leaders, especially Complex Adaptive System leaders, in promoting sustainable resilience in schools. This is because school leaders are key in enhancing and sustaining student resilience despite the fact that there is scant literature on the leadership of resilience in schools. Also, it is important to identify the resilient leaders in schools because school leaders are the first to help in providing the ongoing understanding of what success means in a school and how the moral purpose strengthens the resilience. From this article, it becomes possible to identify the various aspects of resilience and be able to name the actual leadership characteristics that result in a successful student government.

### **Aim and Importance of the Study**

The paper also analyzes the importance of the school leaders in the process of building resilience among students. Resilience is the concept that refers to the process of being able to recover from, or to be protected from, the negative effects of stressors, and it has been conceptualized as a positive developmental construct in children and adolescents (Eaton et al., 2022). This viewpoint conforms to the positive psychology approach which underscores the importance of developing the capacity and enhancing the quality of life as opposed to focusing on the negative aspects and attempting to fix them. Within a school setting, resilience indicates that the student has positive outlook on learning, good relationships with teachers and peers, and being willing to help the others (Wang et al., 2021).

Over the last few years, enhancing students' resilience has emerged as one of the critical agendas in many schools and educational policies. But it is also crucial to understand that the enhancement of student resilience is not the responsibility only of teachers and school administrators (Koçak, 2021). Thus, to impose students to become more resilient in the current and future classroom environments is rather unlikely when the only method of teaching used in the classroom is direct instruction. However, what is clear now is that there is a growing need to build resilience at the system and school level in the way that learning takes place for students. This approach is rather close to the idea that the development of the school culture, especially the formation of a positive climate favorable for learning can be viewed as the most effective way to unleash students' potential for developing resilience.

School administrators, who hold the responsibility for defining the culture of the school and charting the course of the school's growth, are thus in the most appropriate position to coordinate such efforts in resilience enhancement (Galloway & Ishimaru, 2020). Nevertheless, the current literature contains only a few research articles that focus on this issue. Thus, this study seeks



to provide answers to this question by analyzing the connections between the leadership behaviors of school directors and whole-school approach in the development of resilience among students.

It is expected that the findings of this study will assist the school leaders to have a comprehension of the potential impact of leadership practices on the formation of a resilient community in schools. Consequently, this will help in the improvement of leadership professional development and training for enhancing student resilience in schools. This study will help in the establishment of more and better leadership programs in enhancing the resilience of students and schools.

## Method

The study is mainly indigenous in nature and can be considered as an exploratory study in the field of education as it aims at testing the theoretical concept of complex adaptive school leaders. Such leaders know that change is a vital element of any successful organization and that they can quickly transform the organization to learn from people who are able to succeed in the world of constant change (Marion, 2008; McKelvey, et al. , 1999; Uhl-Bien, 2021). This is particularly important given that it is impossible to learn effectively without some degree of resilience.

It is increasingly being understood that the establishment of a strong learning culture in schools can empower children to face failure as a way to success. However, the idea of resilience in teaching and learning seems to be rather underdeveloped, and the part of the headteacher in promoting resilience in their schools has not been discussed at all in the literature reviewed so far.

The study will therefore aim at adding knowledge on student resilience and at the same time generate some important early findings on how school leaders can enhance student resilience. Therefore, the following research questions have been developed to guide the study: How do school leaders foster resilience in students? What leadership behaviors and strategies are most effective in promoting resilience among school leaders? What effect do leadership behaviors have on students' well-being and academic achievements? How can resilience be incorporated into students' daily routines? What training and professional development should be given to school leaders in order to effectively foster resilience among students? In this regard, previous related studies were analyzed and the results of these studies were discussed. First, the research aims at defining what student resilience means. Subsequently, it identifies the factors that influence student resilience, the significance of student resilience in the school context, the part played by adaptive school leadership in promoting resilience, building resilience as a school culture, enhancing teachers' ability to foster resilience, developing learning environments that support resilience, integrating SEL initiatives, guaranteeing teachers' professional learning, and partnering with community organizations. These themes are discussed in detail under the following headings.

We used theoretical analysis which is a type of research that involves a critical evaluation of theories, concepts, and paradigms that are relevant to the research area in question. It involves the assessment of current theories, their relevance to the study, and the generation of new theoretical frameworks. The process of theoretical analysis is significant since theoretical frameworks inform different stages of the research, including choosing a topic, developing methodology, and interpreting findings (Li, 2022). Furthermore, theoretical assessment is employed by researchers in order to explore the postulates, axioms, and operations associated with a particular line of inquiry (Culver et al., 2012). Through theoretical analysis, the scholars can reveal the holes in the current theories, question the dominant paradigms, and contribute to the development of knowledge in the field (López-Deflory et al., 2023). Theoretical analysis was highly important in the research where the concepts of resilience and complex adaptive leadership as theory, paradigm, and epistemology were employed to explain the theoretical foundations of the study (Collins & Stockton, 2018).

### **Understanding Resilience in Students**

Currently, there is much controversy among psychological researchers regarding the definition of resilience and how it can be assessed. This is mainly because the construct in question is one that is quite broad and has many different aspects. Different definitions of resilience have been put forward by various scholars, and most of them concur that resilience is not a solitary characteristic but rather a dynamic process that takes place between an individual and their environment (Denckla et al., 2020).

In other words, resilience is defined as the capacity to exhibit normal and adaptive behaviour in the context of serious hardship. But identifying the concept of student resilience in the research context is even more problematic. School resilience researchers still differ in the definition of resilience and in the context of school resilience more than one hundred definitions can be found in a vast range of attributes characterising a school as a self-resilient organism. This means that we need to determine the sources and ways of resilience in students so that we can have a measure of change in the level of resilience in students. Although the concept of resilience in students is not easy to define and measure, identifying the factors that affect resilience in students can help to understand it better. These also assist in determining what student resilience is not and can, therefore, be used as a guide towards understanding resilience in schools.

Another factor that is known as the level of fortitude and coping skills has been identified as another factor that may influence the level of student resilience in their social and academic lives (Sarcia, 2020). Current studies have established that students' levels of hope and self- efficacy determine their level of resilience (Peck et al., 2019).

Defining and assessing student resilience is not a straightforward process and may differ between studies. This variability can further obscure the understanding of resilience by allowing for the assignment of numerous and even contradictory meanings to the term. This critical matter has not received the attention it deserves from policy-makers and school administrators. Therefore, as student resilience becomes more valued in schools, research in this area can help in identifying strategies and ways of improving and measuring student resilience in schools. As the importance of student resilience in school settings starts to be acknowledged, this area of study may slowly develop evidence-based change and efficacy in responding to the calls for enhancing and assessing student resilience in schools.

Another definition of resilience in students which is often cited can be found in the branch of psychology referred to as positive psychology. From this definition, resilience is the ability to cope optimally when faced with adversity, trauma, tragedy, stressors or threats (Yu et al., 2022). This definition underlines the fact that resilience is not a state that some children simply possess and others do not; rather, resilience is a process of positive adjustment to life conditions and the ability to sustain this positive adjustment. This means that the students who have been able to bounce back and adapt positively to the challenge or difficulty that they face in this school year are the resilient students, but for one to be resilient they should also be able to develop new and better strategies of handling challenges in the following school years (Bryan et al., 2020).

Another important concept embedded in this definition is that resilience is not an inherent characteristic that a student possesses or lacks; rather, resilience is a quality that can be nurtured and enhanced gradually. In this way, resilience is able to be developed and sustained through the various contexts of a student's life, including family, school, and community; it is a resource that must be developed and nurtured, much like other resources such as nutrition and physical health (Feldman, 2020). This view of resilience as a developmental process that can be fostered has significant implications for understanding student behavior and action in school. Through the lens of resilience, teachers and other school leaders can learn what students are likely to do in school and how they can help students build their capacity for coping, interpersonal relations, and seeking help. This focus on resilience shifts educators away from thinking about how to control or eliminate negative student behaviour and towards understanding what has led to the behaviour and how the student can be helped to make better decisions.

### **Factors Influencing Student Resilience**

There are therefore numerous factors that enhance the resilience of an individual. In general, factors such as practicing a healthy lifestyle, establishing proper nutrition, and engaging in physical activities regularly are included among these factors (Mukoma et al., 2023). Furthermore, problem solving skills, goal setting and self-regulation skills are also crucial as noted by Güven and Babayiğit (2020). As for intrapersonal factors, boosting self-esteem, accepting oneself, enhancing self-identity, developing humor, and adopting a positive outlook are factors that foster resilience (Azizah, 2021).

In addition, positive interpersonal relationships and support from family and peers, as well as maintaining these relationships and managing their expectations also have an influence on resilience (Iacoviello & Charney, 2014). Cultural and religious practices, norms, and values are acknowledged to influence the resilience of an individual. These factors can be treated by adopting a more integrated model in order to enhance the resilience of the person.

This is not an exhaustive list of factors that can enhance resilience; more research is ongoing to establish other means of improving the ability to cope with stress. They identified that students who are resilient, that is those who are able to cope well after adversity, are less likely to find themselves in a bad place because they employ multiple strategies of resilience (Perkins & Borden, 2003). The evidence is still not well established as to whether these strategies are effective on their own or in combination and how they contribute to building resilience is not fully understood. Not all of these strategies can be implemented in schools, however, identifying and fostering resilience in students is a challenging process. It entails examining and enhancing means of safeguarding them at different stages of their lives. According to Sylvester (2015), it is possible to adapt and build resilient behaviors. Zolkoski and Bullock (2012) posit that the process of helping students develop resilience is not clear and encompasses various aspects of the students' lives. It is important that young people learn how to become resilient in order to counter the undesirable aspects of education. This way we can make students feel that they are not alone, that someone cares for them and they will do better in school and beyond. The actions of the school leaders in enhancing student resilience are shaped by the societal, political, and cultural meanings of resilience.

### **Importance of Student Resilience in School Settings**

Altogether, it can be stated that student resilience affects their learning process and their behavior at school in a positive manner (Skinner et al., 2020). Given the fact that these children are expected to cope with the day-to-day demands of the contemporary school setting, it is only reasonable to assume that they are likely to encounter various difficulties at one point or the other; these may include academic difficulties or social relationship issues with fellow students in some cases. The ability to cope and excel in such challenges can assist students in better regulating their conduct, feelings, and social relationships in academic settings, as well as in other aspects of their lives, including at home. This is significant in preserving the positive learning culture in schools, thus, the significance of nurturing and sustaining student resilience should not be overlooked (Ferreira et al., 2020).

This is recognized by the United Kingdom government, for example: The 'Every Child Matters' policy framework for children and young people in the UK includes the goal of early identification and early intervention of children's needs and pressures on their resilience regarding mental and emotional well-being (Paolini, 2020). For any kind of effective support rooted and located within a school environment, it is essential - first and foremost - that a school culture is developed and maintained in which building and maintaining student resilience is viewed as a priority and as something that is properly shared and owned by all staff: In leadership, in teaching, and in support roles alike. This is not an easy feat given the commodification and performativity of contemporary schooling, although it is even more important given their negative impact on student well-being and the creation of a more supportive culture.

This section explores how school leaders can actively build and sustain such a culture of resilience in terms of students and the school itself and its pressures. On the other hand, in schools where maybe academic results and league tables are given more

consideration than the wellbeing of the students and their social needs, it is quite likely that student resilience is not given much thought and only becomes a concern when problems appear.

### **The Role of Complex Adaptive School in Fostering Resilience**

The complex adaptive school leaders have a significant responsibility in developing a resilience oriented school and in ensuring that teachers encourage student resilience (Kershner & McQuillan, 2016). This is why the paper is suggesting an evolutionary, flexible, and readiness-based model to explain how resilience is maintained throughout different educational contexts. A study has indicated that the learner-centered leadership in the development of student resilience is crucial for a good school leader (Alam, 2022). This is in line with the findings of other studies that have identified the transformative leadership, including the adaptive and enabling change, as a key factor that defines the effectiveness of an educational institution in producing resilient students (Shvindina et al., 2022; Lin et al., 2022).

1. *Learner-Centered Leadership*: Uhl-Bien, Marion, & McKelvey (2007) explain how adaptive leadership helps to build student's resilience by creating flexible environments that can change to meet the needs of students. This enhances an environment that empowers the students and makes them the focal point in the learning process.

2. *Organizational Flexibility*: According to Fullan (2007), there is no doubt that flexibility is an important aspect of educational leadership that enhances innovation and adaptability in schools, which are elements of resilience.

3. *Emotional Support and Engagement*: Spillane (2006) elaborates on the benefits of leadership that is directed towards interactions and emotional support within schools to enhance the learning and coping outcomes of students.

4. *Collaborative Practices*: Bryk and Schneider (2002) elaborate the importance of relational trust between school principals and their communities, as such structures enhance collective efforts to address difficulties.

5. *Professional Development*: Leithwood and Sun (2012) explain that teacher development specifically on adaptability and coping strategies can positively affect student achievement. When put together, it can be seen that the strategies that school leaders should employ are congruent with a learner-centred approach and that there needs to be a systematic plan for how these principles will be enacted.

This integration of relevant theories emphasizes the importance of adaptive management that can support the development of student resilience and their learning achievements. This supports the notion that school leaders should harness the participatory notion of promoting student resilience and the creation of pedagogical interventions rather than adopting a more managerial approach. It can be done more effectively through a cooperative, ongoing, continuous improvement initiative. The findings indicate that more active learning and initiative aspects may be expressed and shared across a resilient system in schools (Masten, 2007). Secondly, the research also showed that the team approach ability can also promote the propagation of resilience (Sharma & Sharma, 2016). In other words, a school leader who has the quality of dynamic, polycentric compounds that reinforce the flexible network and, therefore, the sharing of the risks within the system. It may represent a consistent and adaptable, 'propagating type' that not only involves the teachers but also the society as a whole.



**Figure 1.** Complex Adaptive School Leadership (CAS-L) fostering resilience

The main components and strategies to build resilience in the educational setting are elaborated in Figure 1 and are all encompassed under the concept of “CAS-L Fostering Resilience”.

One of the major section, *Resilience-focused School Culture*, emphasizes the need for a clear and strong vision for schools and the culture of resilience. This involves the involvement of the community as well as the use of promotional and educational tools in support of these duties. It recognizes that the culture within schools with regard to leadership plays a crucial role in fostering resilience among learners.

The part of the document that deals with *Support for Teachers in Student Resilience* emphasizes that more and more professional development programs should be offered to the teachers to equip them with the skills to support student resilience. This means that the professional development of teachers is an organizational process by which the teachers are able to engage the learners in a way that will help them develop resilience.

Likewise, the *Supportive-Inclusive Learning Environment* part also supports the adoption of the modern, learner-centered approaches to leadership which includes technological and curricular shifts that meet the needs of every learner. This is crucial in the creation of a learners' environment that is not only sensitive to the learners' needs but also one that can address those needs.

*Professional Development for Teachers* is recognized as a key element, noting that teachers' professional growth in areas like SEL and resilience can have a significant impact on education outcomes. This is helpful in facilitating the teachers to implement resilience based strategies into their teaching practice.

Moreover, the *SEL Programs* section provides information on other areas such as self- and social-emotional learning which are useful in the development of student's coping skills. These are the fundamental aspects of SEL and are essential in the overall development of the student's personality.

Finally, the *Collaboration with Partners* section emphasizes that leadership involves not only school leaders and teachers but also the partners. This partnership is helpful in enhancing the resilience frameworks in educational setting and foster sharing of information and knowledge and experience. In conclusion, the infographic offers a step by step approach to show how CASL can be integrated into the educational management systems to foster a strong student community. The approach therefore emphasizes the importance of cooperation, having a partner, and preparing for the future, offering a clear roadmap to enhancing resilience in educational settings. Therefore, complex adaptive leaders are often cognizant of the needs of their school in relation to student learning and the success of the school (Özen, 2015; Fidan, 2017). They aim at modifying the existing characteristics to some extent or they come up with new characteristics that can help in preparing the students for resilience. Regarding the areas of personal and career success, the school leaders should help the students with career counseling and help them in identifying and selecting the right career and its progression. These programs help the students to prepare for the future, identify themselves, and become the best they can be. Such leaders also ensure that social-emotional learning programs are implemented in schools to address the well-being of individuals and help them in their interpersonal relationships (Oplatka & Arar, 2018) as complex adaptive leaders with other students and teachers.

School principals understand the social and emotional aspects that teachers and students face from the moment they come to school until the last moment, and from the start of the school year to the end of it. From such understanding, they can build an organizational culture that fosters professionals' learning and support (Admiraal et al., 2021). Such leaders are able to take the teachers through the changes and at the same time, create an environment where the teachers and students can be creative. The characteristics of complex adaptive systems are also seen in the qualities of complex adaptive school leaders. It means they love learning and not just for their own sake but for the sake of the entire school (Malik & Garg, 2020).

They accept the notion that teachers and students are stakeholders who can contribute to the improvement of the school by sharing their perceptions. They are very much people oriented leaders who manage their organizations in a very effective and fair manner. As noted by Leithwood and Louis (2021), the organization is always in pursuit of excellence and strives to build on the current systems in the organization. They are always on the lookout for new ideas and make sure that the organization embraces risk taking and any mishap that occurs is viewed as a lesson learned. They support team learning to understand the complex entities that are schools as organizations where no one has all the answers. These leaders appreciate listening, people's willingness to express themselves, and lack of communication (Pettersson, 2021). They adhere to the principles of effective communication to ensure that information is appropriately disseminated and thus promote the growth of their own and other teachers within the school.

### **Building a Resilience-focused School Culture**

After setting the tone of resilience in the school, the next task for complex adaptive school leaders is to build a resilience-focused school culture. A resilience-focused school culture is one in which the environment and practices work in cohesion to promote student resilience, not only by supporting students in developing their personal resilience, but by fostering and celebrating a whole of community approach to resilience (Burns, 2020). There are several key components of a resilience-focused school culture that serve as a guide for the development of resilience across the entire school community. The first component is having a shared school vision and common language of resilience (Parkhill et al., 2015). A shared vision of resilience is aspirational, describing what the school community is collectively working towards. It needs to be articulated in a way that assists in motivating and engaging all members of the school community. The school leaders develop this collective school culture through ongoing communication and collaboration vision and empower the staff to contribute and steer its direction (Afifi et al., 2016), ensuring that there is ownership and investment in the lives of the staff in fostering resilience. A common motivational language also helps to promote a shared understanding of the concept of resilience and what it means to the community. By developing a language that is inclusive and customized to the different contexts of the various community compared with a generic or adult-driven language, leaders can help to build a greater sense of commonality and connectedness among the schools, families, and post-answer summarizes the purpose, components, and benefits of developing a resilience-focused school culture (Özen, 2013). Then provide explanations for whole of community approaches to resilience. A resilience poster is a visual depiction of the key components of a resilience-focused school culture. It assists the school community to visually.

### **Supporting Teachers in Promoting Student Resilience**

Complex adaptive school leaders can also contribute to student resilience by helping teachers develop appropriate strategies for nurturing student resilience. Teachers also have a very vital part to play in ensuring that students are able to learn and demonstrate the various characteristics of resilience. Despite this, teachers continue to feel unprepared to nurture student resilience within the classroom environment (Chanana, 2021).

Studies have provided explanations on how school leaders may support teachers in building and enhancing resilience in students. First, teachers can be supported by providing them with adequate training and development in order to increase their awareness and knowledge of resilience in students. For instance, an assessment of a social emotional learning program for an entire city which teachers were provided professional development in the implementation of social emotional learning strategies and may also have access to a school mental health consultant. It assessed students' social and emotional learning and well-being and noted some advancement in teacher's pedagogy to foster students' psychosocial health (Mahoney et al., 2021).

Additionally, school leaders can contribute to the development of a culture of collaboration and collective responsibility for student well-being (Admiraal et al., 2021). These leaders can do this by ensuring and encouraging teachers to collaborate to share their experiences and knowledge on how to build resilience. Such shared leadership frameworks can help teachers to

learn from each other and encourage each other in enhancing their practice whilst promoting student resilience. Thus, by implementing the concept of resilience within the staff and engaging students, teachers can start building a whole-school approach to students' well-being in which the entire school community is involved in supporting and fostering students' resilience.

This is in accordance with the literature that substantiates the idea that there are favorable correlations between the implementation of a whole school approach to building resilience and academic achievement. School leaders can also offer direct support to the staff through the aspects of instructional leadership (Bellibaş et al., 2021a). This theory of leadership entails the leader offering support and guidance to the teaching personnel with an aim of enhancing teacher performance. These leadership practices can result in a rapid and sustained improvement in student performance by finding out where the staff require support and then mobilising the staff to use these initiatives to build student coping skills. Thus, such support is helpful for school leaders to guarantee that there is a continuous and progressive effort to enhance resilience in all students and the whole school population. Last but not least, school leaders can ensure that teachers have a chance to reflect on their practice and to consider the literature on student resilience.

In this way, school leaders can foster a culture of professional practice that is underpinned by critical thinking and research that has the potential to enhance student resilience. This means that school leaders should be prepared to apply their understanding, practices, and approaches to address both the immediate and future requirements of students and the school community. According to Freund and Carmeli (2003), school leaders ensure and coordinate human resource of the whole school in order to meet certain goals. The authors also argue that the attributes which used to define successful school leadership are important but insufficient to sustain a good school in the future (Leithwood & Sun, 2012).

Adaptive leaders meet the conflicting demands by generating new solutions (Chughtai et al., 2023) and effectively manage the challenges of educational contexts by appreciating the complexity (Akbar et al., 2024). They are, therefore, willing to change, ready to let go of ineffective practices, and have the creativity to look beyond conventional wisdom. Adaptive leaders use a cyclical approach, implementing possible solutions, assessing the results, and modifying them if necessary (Holden et al., 2021). In their leadership, they ensure that they have a proper communication channel in order to ensure that all the members are in agreement with the intended goals and objectives even if they seem to be conflicting. They know that resilience is key, and they ensure that the team members are well prepared to handle frustration and see the challenges as something positive that can be turned into learning experiences.

Also, adaptive leaders effectively manage competing demands by assessing their relevance to school goals and use delegation to ensure that others engage actively in the problem-solving process (Pak et al., 2020). They are also good in negotiations and diplomacy to ensure that the conflicting demands are met and that everyone is informed of the decisions that are made. By employing these effective strategies, adaptive school leaders turn the possible conflict of multiple expectations into a catalyst for change and school improvement, illustrating their capacity to understand the multifaceted nature of school leadership (Fernandes et al., 2023). Therefore, if an educational system is built on the principles of shared leadership and adaptive culture, the end product is a strong, active learning community that can meet the needs of the wider society as well as the particular needs of its members.

### **Creating a Supportive and Inclusive Learning Environment**

To foster a positive and non-discriminatory learning culture, leaders have to use contemporary strategic leadership approaches that are preventive. This change is important to make sure that everyone can do well in today's society and education system (DeMatthews et al., 2021).



Leaders should purposefully work towards the adoption of person-centered strategic leadership whereby a clear plan of how to transition from the autocratic leadership type that is steeped in discipline and instruction in a traditional setting is put in place (Masimula et al., 2020).

However, there are other strategies which should also be put in place to ensure that learning environment is supportive and inclusive such as distributed leadership. The use of this approach fosters active leadership, teamwork, and shifts the leadership style to the transformational leadership (Bellibaş et al., 2021b).

This type of leadership directs the transformation of educational contexts in accordance with the visions and policies of leaders, guaranteeing that people have access to an accepting and welcoming educational environment. The measures that have been used in the process of facilitating these changes are very important in the development of this culture. In the scientific context, an up-to-date, supportive, and open-minded learning environment entails embracing technology such as an adaptable curriculum and teaching plan and a real-life approach to resource sharing among teaching staff. These changes are crucial to transform the leadership practices in the educational societies across the globe.

### **Implementing Social-Emotional Learning Programs**

In schools, for instance, Social-Emotional Learning (SEL) programs act as a crucial asset in strengthening the students to deal with different problems in life (Parker, 2020). First of all, these programs foster the development of self-identity among students and this makes it easier for the students to identify their moods, abilities and failures. This aspect of self-awareness is important since the students should be able to identify areas that they need to improve on and how to do so.

Another key component of SEL is self-management skills where students are empowered on how to manage their feelings and conduct (Gimbert et al., 2023). This includes the acquisition of coping strategies such as: coping skills, self-regulation, and inherent drive that are necessary for overcoming the obstacles of life. Students also become more socially sensitive as they learn how to appreciate other people's opinions and emotions (Paolini, 2020). It is also important to note that such relationships can be of great benefit to the students emotionally and physically in times of need thus being a safety net to the students. SEL also improves students' interpersonal skills, thus enabling them to form good relationships when faced with difficulties. SEL programs in the domain of decision-making assist learners to make right decisions with regard to ethical and safety measures as well as social standards to address any challenge that may arise (Ramirez et al., 2021).

Students are required to set their goals, both personal and academic, and strive to achieve them no matter the circumstances. The identification of the main characteristics of resilience as the ability to develop perseverance and focus on distant goals. SEL also involves problem solving, which is a process for which students can be taught systematic strategies to address challenges and overcome them creatively and assertively (Ballon, 2022). Another element of SEL is the students' beliefs which include the notion that failure should be regarded as a temporary annoyance rather than a long-term problem. This paper has also noted that while some students are naturally resilient, others can be empowered through coping strategies that are learned through SEL and thus, resilience is not an innate characteristic. Last but not least, SEL contributes to the creation of a positive school climate where students are appreciated and encouraged to grow and develop, and therefore they are more likely to take risks and fail.

### **Providing Professional Development for Teachers**

Providing educators with the necessary skills to promote resilience in students is a complex undertaking that requires a focused approach to professional development and support. The first step is to give them a deep understanding of SEL so that they can effortlessly integrate resilience-building skills into their everyday teaching (Puza, 2021).

Teachers should also paint the picture of resilience by coping and coming up with ways of solving difficulties, flexibility and positive attitudes when faced with challenges to the students. Some of the workshops that are used in teacher training to enable them address issues to do with the management of the class can assist in creating a safe space for the students to practice and learn from their mistakes and this is crucial in the process of building resilience. However, teachers are not given guidance on how to adopt and integrate the concepts of resilience and SEL into their teaching plans and practice, therefore it is vital to do so. Therefore, it is necessary to paid attention to the development of listening skills and the ways of communication of a teacher, because these skills are essential for the support of the students' mood and the development of their problem-solving skills (Qobilovna, 2023).

Building empathy is also important as it will help the teachers to have a good relationship with their students, which will create a good environment for the students to share their problems with their teachers (Warren, 2017). Informing the teachers on ways to cope such as mindfulness, stress management, etc. provides the teachers with more tools that they can pass on to their students. In addition, problem solving is something that can be explained by how one can break down various activities and reflection which is the process of learning from all the solutions that are generated. However, it is also crucial to consider the element of self-empowerment of students as another factor that can be cultivated through giving the students the ability to manage their learning, choices, and decisions, which are all part of the resilience building process. One more factor is the collaboration among teachers and what is more, when teachers are working in one team, they can exchange their experience, their ideas and, which is more important, they can learn from each other.

This paper also reveals that, lifelong learning plays a significant role in ensuring that educators are conversant with current literature on resilience, teaching and child development. Lastly, teachers should also know how to assess the level of resilience in learners as well as how to provide feedback to the learners without undermining their morale. It thus means that teachers are the architects of resilience who create classrooms that not only impart knowledge but also shape the character of students for the better to face any challenges that life may present to them.

### **Collaborating with Community Partners**

The most important outcome of ensuring collaboration with community partners is the establishment of a collaborative leadership model between the school, families, and the community partners (Jung & Sheldon, 2020). This assures the connection between involved individuals and the community is strengthened and provides a platform for common aspiration. School leaders and the teacher resilience initiative are the key components in the success of developing a collaborative nature of student resilience (Kangas-Dick & O'Shaughnessy, 2020). These leaders provide the fundamental impetus and direction of the program by steering student affairs towards proposed resilience and protection programs.

The teachers assist in formulating the strategies stipulated by the leaders within a more focused and elaborate plan to target the student population. The concept of identifying 'resilience partners' who focus on contributing to knowledge and innovation can only be achieved through visible and effective collaboration. Essentially, this role involves creating a consented environment for program implementation through regular dialogue with the identified partners. These leaders help in galvanizing community support from the partners and link their practices and experience with changes and innovation strategies. A continuous performance improvement strategy is used to evaluate the effectiveness of the staff and resilience programs.

Community partners mainly focus on focusing and enhancing knowledge and innovative aspects in promoting resilience in students. Such knowledge is disseminated to the respective schools and families for the improvement of the students and to engage the community towards resilience programs. However, the leader provides stewardship in developing these partnerships by setting out a well-defined plan on cooperation and designating responsibilities (Groulx et al., 2021). A monitoring and evaluation framework helps leaders in understanding the success of the collaboration with the resilience partners and identifying the areas that may require change and investment. Such continuous cycle for improvements consolidates the efforts and helps in maintaining a community of knowledge through research, innovation, and resilience improvement. This involves

gathering information from different sources and engaging in feedback for sharing it with the leaders, teachers, and the community at large. This is a prerequisite to ensure that knowledge and practices are disseminated effectively so that it gives impetus to resilience in students along the chain of development.

Well-documented assessments and reports regarding the progress of resilience programs and studies associated with fostering resilience to school-going children (Siu et al., 2014). All the community partners' knowledge and experience are systematically documented to help in knowledge creation and later, dissemination to other pending partners. Through the use of up-to-date documentation and presentations, leaders are able to improve on fostering continued and valuable collaboration with the resilience partners. Such evidence-based practices and experiences from the community partners lead to the creation of a shared pool of knowledge which can be used by varying leaders to promote innovation and resilience in students.

## Findings

In this study, we examine how school leaders can enhance student resilience through complex adaptive leadership approaches. In Table 1, the results of this study are presented in comparison with previous studies and the related literature is included for each finding:

**Table 1.** Findings of the Study

Aspect	This Study's Findings	Previous Research	Theoretical Connection
<b>Adaptability</b>	School leaders swiftly adapt to changing educational needs, enhancing student success and school climate.	Gu and Day (2013) emphasize adaptability in school leadership roles in enhancing educational outcomes. Marzano, Waters, and McNulty (2005) show how leadership flexibility correlates with student achievement.	Meadows (2009) and Holland (1998) both emphasize the adaptability and flexibility inherent in complex systems, noting that such systems are dynamically capable of self-organization and responding to changes in their environment. This conceptualization is central to understanding how complex adaptive systems operate, making adaptability a key attribute that allows systems to evolve and thrive in varying conditions.
<b>Collaboration</b>	Leaders promote teamwork and collaboration, creating a supportive school environment where staff and students thrive.	Bryk and Schneider (2002) highlight the importance of relational trust and collaborative practices in schools. Sergiovanni (1994) underscores the importance of building community through shared values.	Collaboration is supported by adaptive leadership to enhance systemic interactions and collective capacity (Heifetz, Grashow, & Linsky, 2009).
<b>Positive School Culture</b>	Leaders create environments where students feel safe and valued, supporting resilience development.	Steward (2014) discusses how emotional resilience in school leadership contributes to a positive school culture. Schein (2010) discusses how leadership can shape and sustain positive organizational cultures. Deal and Peterson (2009) focus on how leaders can cultivate positive cultures through symbolic leadership.	A positive school culture is central to complex adaptive leadership, facilitating ongoing development (Cameron & Quinn, 2011).
<b>Learner-Centered Leadership</b>	Focuses on the well-being and needs of students, promoting their independence, confidence, and self-efficacy.	Leithwood and Beatty (2008) argue for putting student needs at the forefront of educational leadership. Mulford (2003) shows how leadership that involves students in decision-making processes enhances educational outcomes.	Lewis, Perry, and Murata (2006) offers a detailed view of how adaptive practices in educational leadership can foster an environment that prioritizes student learning and teacher development, resonating with the learner-centered leadership approach.
<b>Professional Development</b>	Continuous training for leaders to enhance their ability to support resilience-building interventions.	Darling-Hammond et al. (2007) underscore the impact of ongoing professional development on effective leadership. Spillane, Diamond, and Burch (2004) discuss the importance of professional development in building leadership capacity.	Professional development is crucial in complex adaptive systems for maintaining flexibility and growth of leadership competencies (Fullan, 2007).

Aspect	This Study's Findings	Previous Research	Theoretical Connection
<b>Integration of Resilience</b>	Developing a shared vision and supportive structures to foster resilience across all school activities.	Kowalski and Loretto (2007) discuss the integration of resilience strategies into school policies and practices. Hargreaves and Fink (2006) discuss sustainable leadership that embeds resilience practices.	Systemic integration of resilience practices is a hallmark of complex adaptive systems, enhancing the school's capacity to manage challenges (Holland, 2006).

This research confirms that CAS theory is applicable and valid within the field of educational leadership. It outlines how principals can develop proactive and adaptable strategies to address the challenges that they encounter.

*Adaptability:* Good school leaders are therefore in a position to be able to manage the various facets within a school system because the school system is a system. That is why they are able to meet the needs of students and employees prior to their occurrence. This should assist in the development of organizational culture of change and increase organizational agility, in addition to preparing the students for the same.

*Collaborative Skills:* These leaders ensure that there is a focus on the aspect of team work and make sure that there is the building of the organizational culture that promotes team work. Therefore, they create the spirit of unity among the teachers and other staff members and everyone has someone they can run to. This creates a good culture in the school and leads to a stable school community.

*Commitment to Positive School Culture:* The complex adaptive leaders are committed to ensuring that learning institutions remain safe for the learners. This is because they ensure that the learners are appreciated and safe, which is the foundation of the development of resilience. Therefore, a positive school culture is crucial as it provides a good environment where students can learn from their errors and progress with the experiences they undergo.

*Learner-Centered Leadership:* The third important finding of the study is that learner-centered leadership is effective in improving resilience. This is due to the fact that the strategy applied in this approach focuses on the welfare of the learners as the prime consideration in the learning process. The learner-centered leaders foster safety on the physical and psychological levels, positive social and emotional status, and positive attitude. These leaders help them to be more self-reliant by encouraging the students to participate actively in the learning process and make them responsible for their learning which are aspects of resilience.

*Professional development:* The study also found out that professional learning of school leaders is an ongoing process. This clearly means that leaders should be trained from time to time in order to equip them with knowledge on how to provide support in promoting resilience. These programs should seek to enhance leadership skills, group cohesiveness and unity within the school. Therefore, school leaders can improve students' resilience skills by improving their leadership skills.

*Integration of Resilience:* The study also reveals the need to ensure that resilience is integrated in all the learning activities through a whole school approach. This is the identification of the goals that are necessary for building the organizational resilience, the structures that have been put in place to support these goals and the development of a network of support. It unifies all the stakeholders and their activities within the school and also provides a working definition of resilience and how it can be nurtured. The different facets of the school, including the teaching-learning process, curriculum, and policy, also have systemic supports that strengthen the school's ability to handle the challenges. It involves the development of healthy interpersonal relationships between students, teachers, other staff and the community to foster a support system to help students in their challenges.

## Discussion and Conclusion

The use of CES in schools can also enhance the delivery of Evidence-Based Interventions (EBI) such teacher training programs and resilience classes. The current paper has therefore aimed at presenting a synthesis of the current literature on the concept of complex adaptive systems and how it is being employed to build the effectiveness and results of psycho-social interventions in schools. In the present, education is characterized by reason as the foundation for decision-making and actions within organizations (Cheung, 2021).

This view is grounded on the tenets of the knowledge-based view of the firm and the knowledge management process. It is recommended that further work be done within the framework of the presented concept based on the CAS theory to enhance the current understanding of schools as learning organizations and to design a strategy for change with the introduction of new practices. But as noted by Harris in 2008, there is still a question on how the leaders such as the head teachers or principals and the teachers themselves can get the right knowledge and training to support the use of evidence based strategies in their practice. Thus, without such expertise and leadership, there is a risk that ‘top-down’ policy directed measures will erode teacher professionalism and can prevent the possibility of successful reform and improved pupil achievement. This leads to further important questions that could be discussed in relation to this and these could be usefully located within the framework of complex adaptive systems.

Specifically, what can be done to support educational leaders to enable the transfer of knowledge and thus create a truly bottom-up and emergent process of positive change within the school as an organization? This knowledge will mean that excellent training has to be given to the educational leaders but also to the teachers as change agents and for those people involved in the delivery and assessment of evidence based practices. Therefore, this paper should be viewed as a useful contribution to the current body of knowledge and research in this area. Owoeye et al. (2020) has also noted that there seems to be a lack of theoretical studies on how EBP can be effectively implemented in schools. Hence, integrating the theoretical framework of psychological intervention with the theory of complex adaptive systems, the ways of enhancing the coherence and integration of the process of how the potentialization of psychological intervention can enhance the student’s well-being and learning outcomes are presented. Our findings, therefore, validate the propositions about the role of complex adaptive leadership in increasing resilience in schools. Therefore, the flexibility of leaders influences the processes occurring in schools and prompts immediate responses to the challenges that education faces, which is in line with the principles of resilience in students and teachers.

Thus, it is crucial in designing an environment that would assist students to overcome the challenges and as pointed out by Gu and Day (2013) adaptability is crucial in educational leadership to enhance student performance. While flexibility is generally viewed as a desirable attribute, there are some studies that show some drawbacks of it. According to Waters, Marzano, and McNulty (2003), while flexibility is desirable, it leads to frequent changes in leadership, which in turn does not foster the development of resilience in school communities in the long run. Another factor that was found was collaboration. Therefore, principals and teachers who support collaboration and collective accountability foster trust and positive results in their schools, which positively impact students’ self-organisation and academic achievement. This is in agreement with Bryk and Schneider’s (2002) observation of the impact of relational trust in schools. Instead, as affirmed by Harris and Jones (2017), overemphasizing teamwork may lead to undermining such principles as accountability and role confusion in decision making, especially in situations that require immediate intervention.

Another finding was the positive school culture that emerged as a result of the application of complex adaptive leadership. This is in agreement with Leithwood and Beatty (2008) who argue that leadership that is based on character strengths enhances the school climate. Nevertheless, some scholars, including Johnson (2011), note that focusing on the positive culture may lead people to overlook other issues in schools that need to be addressed by more stringent written policies. In conclusion, the current research adds to the body of knowledge on complex adaptive leadership in educational resilience by elaborating on the leadership behaviors and their multiple outcomes.

**Limitations**

It's crucial to recognize the study's limitations, despite the insights provided by the exploratory method. The focus on a specific group and the use of different sampling with qualitative and quantitative could have produced much better outputs. Artificial intelligence (AI) was utilized for the academic editing of this study, to ensure that it is written in a scientific tone, and to increase fluency and comprehensibility. "DeepL" was used in the translation of the article.

**Suggestions**

Longitudinal research can be carried out to monitor the impact of adaptive leadership practices on the resilience of students in the long-term. The purpose of this research is to examine how cultural differences influence the delivery and success of resilience interventions. It aims at exploring how cultural contexts influence the feasibility and effectiveness of interventions aimed at increasing resilience in different populations. The analysis will explore aspects of culture and culture's influence on resilience strategies to enhance understanding of customization and localization of resilience. Research can be done with the help of psychology, education and social sciences to obtain more specific information about resilience and leadership practices.

**Declarations**

Ethics committee permission is not required.

**Conflicts of interest/competing interests**

There is no conflict of interest that would affect the publication of this article. This research did not receive any specific grants from funding agencies in the public, commercial, or not for profit sectors.

**Author contributions**

Both authors took equal and joint responsibility for conducting the research, writing the chapters and preparing the research for publication.

**REFERENCES**

- Admiraal, W., Schenke, W., De Jong, L., Emmelot, Y., & Sligte, H. (2021). Schools as professional learning communities: what can schools do to support professional development of their teachers? *Professional Development in Education*, 47(4), 684-698.
- Afifi, T. D., Merrill, A. F., & Davis, S. M. (2016). The theory of resilience and relational load. *Personal Relationships*, 23(4), 663-683. <https://doi.org/10.1111/per.12159>
- Akbar, S., Pranajaya, S. A., Nurkadarwati, N., Hoesny, R., & Mutmainnah, I. (2024). Leadership dynamics in the era of educational transformation: integrating the concept of adaptable leadership in sustainable educational administration. *International Journal of Teaching and Learning*, 2(1), 223-235.
- Alam, A. (2022). *Resilience and transformation in global restructuring*. Ethics Press.
- Antony, J. S., & Schaps, T. L. (2021). The more things change, the more they stay the same: the persistence, and impact, of the congruence and assimilation orientation in doctoral student socialization and professional development. *Higher Education: Handbook of Theory and Research*, 36, 383-417.

- Ayala, J. C., & Manzano, G. (2018). Academic performance of first-year university students: the influence of resilience and engagement. *Higher Education Research and Development*, 37(7), 1321-1335. <https://doi.org/10.1080/07294360.2018.1502258>.
- Azizah, P. N. (2021). The concept of resilience in adults. *International Journal of Social Science and Human Research*, 4(04), 755-760. <https://doi.org/10.47191/ijsshr/v4-i4-27>
- Ballon, M. P. (2022). *Educators' perspectives on the practices and implementation of social emotional learning programs* [Unpublished doctoral dissertation]. University of Denver.
- Beatty, L., & Campbell-Evans, G. (2020). School leaders and a culture of support: fostering student social emotional development. *Issues in Educational Research*, 30(2), 435-451.
- Bellibaş, M. Ş., Gümüş, S., & Liu, Y. (2021a). Does school leadership matter for teachers' classroom practice? The influence of instructional leadership and distributed leadership on instructional quality. *School Effectiveness and School Improvement*, 32(3), 387-412.
- Bellibaş, M. Ş., Kılınc, A. Ç., & Polatcan, M. (2021b). The moderation role of transformational leadership in the effect of instructional leadership on teacher professional learning and instructional practice: an integrated leadership perspective. *Educational Administration Quarterly*, 57(5), 776-814.
- Bryan, J., Williams, J. M., & Griffin, D. (2020). Fostering educational resilience and opportunities in urban schools through equity-focused school-family-community partnerships. *Professional School Counseling*, 23(1\_part\_2), 1-14. <https://doi.org/10.1177/2156759X19899179>
- Bryk, A. S., & Schneider, B. (2002). *Trust in schools: A core resource for improvement*. Russell Sage Foundation.
- Burns, R. (2020). *Adult learner at work: the challenges of lifelong education in the new millenium*. Routledge.
- Cameron, K. S., & Quinn, R. E. (2011). *Diagnosing and changing organizational culture: Based on the competing values framework*. Jossey-Bass.
- Chanana, N., & Sangeeta. (2021). Employee engagement practices during covid-19 lockdown. *Journal of Public Affairs*, 21(4), e2508. <https://doi.org/10.1002/pa.2508>
- Cheung, A. (2021). Teachers' roles in evidence-based educational reform in china. *Best Evidence of Chinese Education*, 9(2), 1223-1225. <https://doi.org/10.15354/bece.21.co027>
- Chughtai, M. S., Syed, F., Naseer, S., & Chinchilla, N. (2023). Role of adaptive leadership in learning organizations to boost organizational innovations with change self-efficacy. *Current Psychology*, 1-20. <https://doi.org/10.1007/s12144-023-04669-z>
- Collins, C., & Stockton, C. (2018). The central role of theory in qualitative research. *International Journal of Qualitative Methods*, 17(1), 160940691879747. <https://doi.org/10.1177/1609406918797475>
- Corley, K. G., & Gioia, D. A. (2011). Building theory about theory building: What constitutes a theoretical contribution? *Academy of Management Review*, 36(1), 12-32.
- Culver, D., Gilbert, W., & Sparkes, A. (2012). Qualitative research in sport psychology journals: the next decade 2000-2009 and beyond. *The Sport Psychologist*, 26(2), 261-281. <https://doi.org/10.1123/tsp.26.2.261>
- Darling-Hammond, L., LaPointe, M., Meyerson, D., Orr, M. T., & Cohen, C. (2007). *Preparing school leaders for a changing world: Lessons from exemplary leadership development programs*. Stanford University, Stanford Educational Leadership Institute.
- Deal, T. E., & Peterson, K. D. (2009). *Shaping school culture: Pitfalls, paradoxes, and promises*. Jossey-Bass.
- DeMatthews, D. E., Serafini, A., & Watson, T. N. (2021). Leading inclusive schools: principal perceptions, practices, and challenges to meaningful change. *Educational Administration Quarterly*, 57(1), 3-48.
- Denckla, C. A., Cicchetti, D., Kubzansky, L. D., Seedat, S., Teicher, M. H., Williams, D. R., & Koenen, K. C. (2020). Psychological resilience: an update on definitions, a critical appraisal, and research recommendations. *European Journal of Psychotraumatology*, 11(1), 1-18. <https://doi.org/10.1080/20008198.2020.1822064>
- Eaton, S., Cornwell, H., Hamilton-Giachritsis, C., & Fairchild, G. (2022). Resilience and young people's brain structure, function and connectivity: a systematic review. *Neuroscience & Biobehavioral Reviews*, 132, 936-956.
- Feldman, R. (2020). What is resilience: an affiliative neuroscience approach. *World Psychiatry*, 19(2), 132-152.
- Fernandes, V., Wong, W., & Noonan, M. (2023). Developing adaptability and agility in leadership amidst the covid-19 crisis: experiences of early-career school principals. *International Journal of Educational Management*, 37(2), 483-506. <https://doi.org/10.1108/ijem-02-2022-0076>
- Ferreira, M., Martinsone, B., & Talić, S. (2020). Promoting sustainable social emotional learning at school through relationship-centered learning environment, teaching methods and formative assessment. *Journal of Teacher Education for Sustainability*, 22(1), 21-36.

- Fidan, T. (2017). Managing schools as complex adaptive systems: a strategic perspective. *International Electronic Journal of Elementary Education*, 10(1), 11-26.
- Frenzel, A., Pekrun, R., Goetz, T., Daniels, L., Durksen, T., Becker-Kurz, B., ... & Klassen, R. (2016). Measuring teachers' enjoyment, anger, and anxiety: the teacher emotions scales (tes). *Contemporary Educational Psychology*, 46, 148-163. <https://doi.org/10.1016/j.cedpsych.2016.05.003>
- Freund, A., & Carmeli, A. (2003). An empirical assessment: reconstructed model for five universal forms of work commitment. *Journal of Managerial Psychology*, 18(7), 708-725. <https://doi.org/10.1108/02683940310502403>
- Fullan, M. (2007). *The new meaning of educational change* (4th ed.). Teachers College Press.
- Galloway, M. K., & Ishimaru, A. M. (2020). Leading equity teams: the role of formal leaders in building organizational capacity for equity. *Journal of Education for Students Placed at Risk (JESPAR)*, 25(2), 107-125.
- Gimbert, B. G., Miller, D., Herman, E., Breedlove, M., & Molina, C. E. (2023). Social emotional learning in schools: the importance of educator competence. *Journal of Research on Leadership Education*, 18(1), 3-39.
- Groulx, M., Nowak, N., Levy, K., & Booth, A. (2021). Community needs and interests in university–community partnerships for sustainable development. *International Journal of Sustainability in Higher Education*, 22(2), 274-290.
- Gu, Q., & Day, C. (2013). Challenges to teacher resilience: Conditions count. *British Educational Research Journal*, 39(1), 22-44.
- Güven, M., & Babayigit, B. B. (2020). Self-regulated learning skills of undergraduate students and the role of higher education in promoting self-regulation. *Eurasian Journal of Educational Research*, 20(89), 47-70.
- Hargreaves, A., & Fink, D. (2006). *Sustainable leadership*. Jossey-Bass.
- Harris, A. (2008). Distributed leadership: according to the evidence. *Journal of Educational Administration*, 46(2), 172-188. <https://doi.org/10.1108/09578230810863253>
- Harris, A., & Jones, M. (2017). *Professional learning communities in action*. Learning Matters.
- Heifetz, R., Grashow, A., & Linsky, M. (2009). *The practice of adaptive leadership: Tools and tactics for changing your organization and the world*. Harvard Business Press.
- Holden, R. J., Boustani, M. A., & Azar, J. (2021). Agile innovation to transform healthcare: innovating in complex adaptive systems is an everyday process, not a light bulb event. *BMJ Innovations*, 7, 499–505. <https://doi.org/6/bmjinnov-2020-000574>
- Holland, J. H. (1998). *Emergence: From chaos to order*. Addison-Wesley.
- Holland, J. H. (2006). *Complex adaptive systems theory*. In Oxford Research Encyclopedia of Education.
- Iacoviello, B. M., & Charney, D. S. (2014). Psychosocial facets of resilience: implications for preventing post trauma psychopathology, treating trauma survivors, and enhancing community resilience. *European Journal of Psychotraumatology*, 5(s4), 1-10 <https://doi.org/10.3402/ejpt.v5.23970@zept20.2014.5.issue-s4>
- Johnson, B. (2011). *Leading change in turbulent times*. Oxford University Press.
- Jung, S. B., & Sheldon, S. (2020). Connecting dimensions of school leadership for partnerships with school and teacher practices of family engagement. *School Community Journal*, 30(1), 9-32.
- Kangas-Dick, K., & O'Shaughnessy, E. (2020). Interventions that promote resilience among teachers: a systematic review of the literature. *International Journal of School & Educational Psychology*, 8(2), 131-146.
- Kershner, B., & McQuillan, P. (2016). Complex adaptive schools: educational leadership and school change. *Complicity: An International Journal of Complexity and Education*, 13(1), 4-29.
- Keung, C. P. C., Yin, H., Tam, W. W. Y., Chai, C. S., & Ng, C. K. K. (2019). Kindergarten teachers' perceptions of whole-child development: the roles of leadership practices and professional learning communities. *Educational Management Administration & Leadership*, 48(5), 875-892. <https://doi.org/10.1177/1741143219864941>
- Koçak, S. (2021). Does social justice leadership in education improve the school belonging and resilience of students? *Educational Administration: Theory and Practice*, 27(1), 1061-1084. <https://doi.org/10.14527/kuey.2021.005>
- Kowalski, T. J., & Loretto, A. (2007). *The business of leadership: An introduction*. Routledge.
- Lam, C. C., & Cheng, N. Y. I. (2024). Hong Kong secondary geography teachers' resilience in the testing time of the covid-19: challenges and adaptations. *International Research in Geographical and Environmental Education*, 33(1), 24-38.
- Leithwood, K., & Beatty, B. (2008). *Leading with teacher emotions in mind*. Corwin Press.
- Leithwood, K., & Louis, K. S. (2021). Organizational learning in schools: an introduction. In K. Leithwood & L. K. Seashore (Eds.), *Organizational learning in schools* (pp 1-17). Routledge: New York.
- Leithwood, K., & Sun, J. (2012). The nature and effects of transformational school leadership. *Educational Administration Quarterly*, 48(3), 387-423. <https://doi.org/10.1177/0013161X11436268>



- Lewis, C., Perry, R., & Murata, A. (2006). How Should Research Contribute to Instructional Improvement? The Case of Lesson Study. *Educational Researcher*, 35(3), 3-14. DOI: 10.3102/0013189X035003003.
- Li, K. (2022). Learning how to be theoretical: a critical analysis of understanding and applying theoretical perspectives in academic research. *Journal of Humanities and Social Sciences Studies*, 4(3), 08-12. <https://doi.org/10.32996/jhsss.2022.4.3.2>
- Lin, W., Yin, H., & Liu, Z. (2022). The roles of transformational leadership and growth mindset in teacher professional development: the mediation of teacher self-efficacy. *Sustainability*, 14(11), 64-89. <https://doi.org/10.3390/su14116489>
- López-Deflory, C., Perron, A., & Miró-Bonet, M. (2023). Linguistic characteristics of texts: methodological notes on a missed step in critical discourse analysis. *International Journal of Qualitative Methods*, 22, 160940692311563. <https://doi.org/10.1177/16094069231156343>
- Mahoney, J. L., Weissberg, R. P., Greenberg, M. T., Dusenbury, L., Jagers, R. J., Niemi, K., ... & Yoder, N. (2021). Systemic social and emotional learning: promoting educational success for all preschool to high school students. *American Psychologist*, 76(7), 11-28.
- Malik, P., & Garg, P. (2020). Learning organization and work engagement: the mediating role of employee resilience. *The International Journal of Human Resource Management*, 31(8), 1071-1094.
- Marion, R. (2008). Complexity theory for organizations and organizational leadership. In M. Uhl-Bien & R. Marion (Eds.), *Complexity leadership, Part I: conceptual foundations* (pp. 1-15). Information Age Publishing
- Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: From research to results*. ASCD.
- Masimula, Q., Coetzee, I., & van der Wath, A. (2020). Transforming workplace culture using person-centered leadership in a nursing education institution in South Africa. *Gender & Behaviour*, 18(3), 16492-16500.
- Masten, A. S. (2007). Resilience in developing systems: progress and promise as the fourth wave rises. *Development and Psychopathology*, 19(3), 921-930. <https://doi.org/10.1017/s0954579407000442>
- McKelvey, B., Mintzberg, H., Petzinger, T., Prusak, L., Senge, P., & Shultz, R. (1999). The gurus speak: complexity and organizations. *Emergence: A Journal of Complexity Issues in Organizations and Management*, 1(1), 73-91.
- Meadows, D. H. (2009). *Thinking in systems: A primer*. Chelsea Green Publishing.
- Mukoma, G., Bosire, E. N., Klingberg, S., & Norris, S. A. (2023). Healthy eating and physical activity: analysing Soweto's young adults' perspectives with an intersectionality lens. *PLOS Global Public Health*, 3(7), e0001429.
- Mulford, B. (2003). *School leaders: Changing roles and impact on teacher and school effectiveness*. Organisation for Economic Cooperation and Development.
- Northouse, P. G. (2018). *Leadership: Theory and Practice* (8th ed.). Sage Publications.
- Obolensky, N. (2010). *Complex adaptive leadership: Embracing paradox and uncertainty*. Gower.
- Oplatka, I., & Arar, K. (2018). Increasing teacher and leader professionalism through emotion management and engagement. *Journal of Professional Capital and Community*, 3(3), 138-141. <https://doi.org/10.1108/jpcc-07-2018-036>
- Owoeye, O., Rauvola, R. S., & Brownson, R. C. (2020). Dissemination and implementation research in sports and exercise medicine and sports physical therapy: translating evidence to practice and policy. *BMJ Open Sport & Exercise Medicine*, 6(1), e000974. <https://doi.org/10.1136/bmjsem-2020-000974>
- Özen, H. (2013). Motivational language scale for school principals: adaptation for Turkish culture, language validity, and examination of factor structure. *Journal of Educational Science Research*, 3(1), 87-103.
- Özen, H. (2015). *The effect of motivational language used by school principals upon characteristics of complex adaptive leadership* (Unpublished doctoral thesis). Eskişehir Osmangazi University: Eskişehir.
- Pak, K., Polikoff, M. S., Desimone, L. M., & Saldívar García, E. (2020). The adaptive challenges of curriculum implementation: insights for educational leaders driving standards-based reform. *Aera Open*, 6(2), 1-15. <https://doi.org/10.1177/2332858420932828>
- Paolini, A. C. (2020). Social emotional learning: key to career readiness. *Anatolian Journal of Education*, 5(1), 125-134.
- Parker, M. N. (2020). *The resilience and wellbeing toolbox: building character and competence through life's ups and downs*. Boston: Routledge.
- Parkhill, K., Shirani, F., Butler, C., Henwood, K., Groves, C., & Pidgeon, N. (2015). We are a community [but] that takes a certain amount of energy: exploring shared visions, social action, and resilience in place-based community-led energy initiatives. *Environmental Science & Policy*, 53, 60-69. <https://doi.org/10.1016/j.envsci.2015.05.014>
- Peck, B., Smith, A., & Nguyen, H. (2019). Occupational self-efficacy and psychological capital amongst nursing students: a cross sectional study understanding the malleable attributes for success. *European Journal of Investigation in Health Psychology and Education*, 10(1), 159-172.

- Perkins, D. F., & Borden, L. M. (2003). Positive behaviors, problem behaviors, and resiliency in adolescence. *Handbook of Psychology*, 6, 373-394.
- Pettersson, F. (2021). Understanding digitalization and educational change in school by means of activity theory and the levels of learning concept. *Education and Information Technologies*, 26, 187-204. <https://doi.org/10.1007/s10639-020-10239-8>
- Prosen, S., Vitulić, H. S., & Škraban, O. P. (2018). Teachers' emotional expression in interaction with students of different ages. *Center for Educational Policy Studies Journal*, 1(3), 141-157. <https://doi.org/10.26529/cepsj.419>
- Punch, K. F. (2014). *Introduction to social research: Quantitative and qualitative approaches*. Sage.
- Puza, K. M. (2021). *Life experiences of general k-12 teachers teaching social and emotional learning skills* (Doctoral dissertation). Wilkes University: USA.
- Qobilovna, A. M. (2023). Communicative competence as a factor of teacher's professional competency. *American Journal of Social Sciences and Humanity Research*, 3(09), 32-44.
- Ramirez, T., Brush, K., Raisch, N., Bailey, R., & Jones, S. M. (2021). Equity in social emotional learning programs: a content analysis of equitable practices in PreK-5 SEL Programs. *Frontiers in Education*, 6, 1-14. <https://doi.org/10.3389/educ.2021.679467>
- Romano, L., Angelini, G., Consiglio, P., & Fiorilli, C. (2021). Academic resilience and engagement in high school students: the mediating role of perceived teacher emotional support. *European Journal of Investigation in Health, Psychology and Education*, 11(2), 334-344. <https://doi.org/10.3390/ejihpe11020025>
- Sarcia, N. L. (2020). *The relationship between professional quality life, coping mechanisms, and mental fortitude* (Unpublished doctoral dissertation). Walden University: USA.
- Schein, E. H. (2010). *Organizational culture and leadership* (4th ed.). Jossey-Bass.
- Sergiovanni, T. J. (1994). *Building community in schools*. Jossey-Bass.
- Sharma, S., & Sharma, S. K. (2016). Team resilience: scale development and validation. *Vision: The Journal of Business Perspective*, 20(1), 37-53. <https://doi.org/10.1177/0972262916628952>
- Siu, K. W. M., & Wong, Y. L. (2014). Fostering creativity from an emotional perspective: do teachers recognise and handle students' emotions? *International Journal of Technology and Design Education*, 26(1), 105-121. <https://doi.org/10.1007/s10798-014-9298-4>
- Shvindina, H., Petrusenko, Y., & Balahurovska, I. (2022). Resilient management as an effective management tool for transformational changes in society. *The Journal of VN Karazin Kharkiv National University*, 15, 54-59. <https://doi.org/10.26565/2310-9513-2022-15-06>
- Skinner, E. A., Graham, J. P., Brule, H., Rickert, N., & Kindermann, T. A. (2020). I get knocked down but I get up again: integrative frameworks for studying the development of motivational resilience in school. *International Journal of Behavioral Development*, 44(4), 290-300.
- Spillane, J. P. (2006). *Distributed leadership*. Jossey-Bass.
- Spillane, J. P., Diamond, J. B., & Burch, P. (2004). *Leading in a culture of change*. Jossey-Bass.
- Steward, J. (2014). Sustaining emotional resilience for school leadership. *School Leadership & Management*, 34(1), 52-68. Holland.
- Swanson, R. A., & Chermack, T. J. (2013). *Theory building in applied disciplines*. Berrett-Koehler Publishers.
- Sylvester, M. (2015). The impact of resilience to change on the transformational leadership behaviors demonstrated by frontline sales professionals. *Journal of Management Research*, 7(1), 107-129. <https://doi.org/10.5296/jmr.v7i1.6997>
- Thomas, G., & Hodges, D. (2010). *Designing and managing your research project: Core skills for social and health research*. Sage.
- Uhl-Bien, M., Marion, R., & McKelvey, B. (2007). Complexity leadership theory: Shifting leadership from the industrial age to the knowledge era. *The Leadership Quarterly*, 18(4), 298-318. <https://doi.org/10.1016/j.leaqua.2007.04.002>
- Uhl-Bien, M. (2021). Complexity leadership and followership: changed leadership in a changed world. *Journal of Change Management*, 21(2), 144-162. <https://doi.org/10.1080/14697017.2021.1917490>
- Wang, C., Li, B., Zhang, L., Liu, Y., & Xu, P. (2021). Prosocial behavior and teachers' attitudes towards bullying on peer victimization among middle school students: examining the cross-level moderating effect of classroom climate. *School Psychology Review, Special Series*, 1-14. <https://doi.org/10.1080/2372966X.2021.2009313>
- Warren, C. A. (2017). Empathy, teacher dispositions, and preparation for culturally responsive pedagogy. *Journal of Teacher Education*, 69(2), 169-183. <https://doi.org/10.1177/0022487117712487>
- Waters, J. T., Marzano, R. J., & McNulty, B. A. (2003). Balanced leadership: What 30 years of research tells us about the effect of leadership on student achievement. *McREL International*.

- Yu, M., Wang, H., & Xia, G. (2022). The review on the role of ambiguity of tolerance and resilience on students' engagement. *Frontiers in Psychology, 12*, 1-7. <https://doi.org/10.3389/fpsyg.2021.828894>
- Yustika, P. W., & Widayarsi, P. (2021). Students' self-compassion and academic resilience in pandemic era. *International Journal of Research in Counseling and Education, 5*(2), 195-205.
- Zolkoski, S. M., & Bullock, L. M. (2012). Resilience in children and youth: a review. *Children and Youth Services Review, 34*(12), 2295-2303.

## School Principals' Emotion Inventory: Validity and Reliability in the Turkish Context

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### Abstract

The purpose of this study is to adapt the Principal Emotion Inventory (PEI) developed by Junjun Chen, which measures the emotions experienced by school administrators in various situations, to Turkish culture and to assess the scale's psychometric qualities. There were 305 school principals in the research group, representing various school levels (preschool, primary school, secondary school and high school). Various analyses were conducted to provide evidence for the validity and reliability of the measurement tool. In line with the findings of the construct validity confirmatory factor analysis, it was determined that eight of the goodness-of-fit indices showed acceptable fit and three of them revealed excellent fit. It was confirmed that the Turkish form validated the five-dimensional structure of the original 25-item PEI. Factor loadings ranged from 0.32 to 0.72 in the Enjoyment sub-dimension; 0.42 to 0.69 in the Pride sub-dimension; 0.59 to 0.79 in the Frustration sub-dimension; 0.55 to 0.69 in the Anxiety sub-dimension; and 0.49 to 0.77 in the Hopelessness sub-dimension. In order to provide evidence of reliability, McDonald Omega was calculated utilizing factor loadings and specific variances in addition to Cronbach Alpha coefficient. The Omega coefficients calculated for the five sub-dimensions were 0.45 (Enjoyment), 0.72 (Pride), 0.82 (Frustration), 0.77 (Anxiety) and 0.83 (Hopelessness), respectively. The Cronbach Alpha coefficients calculated for the five sub-dimensions were 0.54, 0.71, 0.82, 0.77 and 0.83, respectively. The scale is a valid and reliable measuring tool that may be used to ascertain school principals' feelings regarding the situations they encounter, as demonstrated by all of these analysis findings.

**Keywords:** school administrators, school principals' emotions, scale adaptation, confirmatory factor analysis

### Okul Yöneticisi Duygu Envanterinin Türkçeye Uyarlanması: Bir Güvenirlik ve Geçerlilik Çalışması

#### Öz

Bu çalışmanın amacı; okul yöneticilerinin çeşitli durumlarda deneyimledikleri duyguları ölçen, Junjun Chen tarafından geliştirilen "Principal Emotion Inventory (Okul Yöneticileri Duygu Envanteri (OYDE))"nin Türkiye kültürüne uyarlanması ve ölçme aracının psikometrik özelliklerinin incelenmesidir. Araştırmanın katılımcı grubunu farklı okul kademelerinde (okulöncesi, ilkokul, ortaokul ve lise) çalışan 305 okul yöneticisi oluşturmaktadır. Ölçme aracının geçerlik ve güvenilirliğine kanıt oluşturmak için çeşitli analizler yapılmıştır. Yapı geçerliğine ilişkin yapılan Doğrulayıcı Faktör Analizi sonuçlarına göre; uyum iyiliği indekslerinden sekizinin kabul edilebilir, üçünün ise mükemmel uyum gösterdiği tespit edilmiştir. Türkçe formun, 25 maddelik OYDE'nin orijinalindeki beş boyutlu yapıyı doğruladığı görülmüştür. Faktör yük değerleri ise; Keyif Alma alt boyutunda 0,32 ile 0,72; Gurur Duyma alt boyutunda 0,42 ile 0,69; Hayal Kırıklığı alt boyutunda 0,59 ile 0,79; Kaygı alt boyutundan 0,55 ile 0,69 ve Umutsuzluk alt boyutunda ise 0,49 ile 0,77 arasında değiştiği gözlenmiştir. Güvenilirliğe ilişkin kanıt sunmak amacıyla, Cronbach Alpha katsayısının yanı sıra faktör yük değerleri ve özgül varyanslar kullanılarak elde edilen McDonald Omega hesaplanmıştır. Beş alt boyut için elde edilen Omega katsayısı sırasıyla 0,45 (Keyif alma), 0,72 (Gurur duyma), 0,82 (Hayal kırıklığı), 0,77 (Kaygı) ve 0,83 (Umutsuzluk) olarak belirlenmiştir. Beş alt boyut için hesaplanan Cronbach Alpha katsayıları ise sırasıyla 0,54, 0,71, 0,82, 0,77 ve 0,83'tür. Tüm bu analiz sonuçları; ölçeğin okul yöneticilerin deneyimledikleri durumlara yönelik duygularını belirlemede kullanılabilir, geçerli ve güvenilir bir ölçme aracı olduğunu göstermektedir.

**Anahtar Sözcükler:** okul yöneticileri, yönetici duyguları, ölçek uyarlama, doğrulayıcı faktör analizi

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## INTRODUCTION

The act of management, which is seen as the action of planning organizational structures and processes and influencing people, was dealt with independently of emotions with a mechanistic approach at the beginning of the scientificization process of management. Later, with the theories emphasizing human relations, group dynamics and psycho-social structure in organizations, the view that management cannot be free from emotions has been strengthened. School administrators, as educational leaders who both influence and are influenced by the processes in their organizations, cannot be expected not to be affected by the intense and complex emotions they experience in schools, which are social structures, while taking responsibility for the organizations in acting together with the group and moving forward for common goals. Indeed, leadership is a normative, collective and relational social practice (Blackmore, 1999). The process of developing within a social context, influencing followers and being influenced by followers creates a complex ground for leadership that includes emotions. The tendency of classical management approaches to treat the individual objectively and to see him/her as a part of business activities has fostered an attitude that has pushed the understanding of the emotions of employees and organizational leaders into the background. Therefore, for a long time, the act of managing was considered by scholars as a technical and rational dimension and the emotional aspect of the leadership role was mostly ignored (Crawford, 2011).

The stress of making quick and effective decisions, the expectations of pressure groups, the uncertainty in achieving goals, and the unpredictability arising from the fact that the human factor is the basic input and output of the system provide valid reasons for the idea that leaders should be examined from an emotional perspective. Today, there are many deep emotional and social problems that affect the managerial activities of leaders. Dizzying changes and transformations such as access to information, increasing competition, demands for the purchase of goods and services, social and organizational changes, the acceleration of worker qualifications and socio-cultural interactions beyond predictions form the basis of many social and emotional problems such as future anxiety, uncertainty, unhealthy competition, ambition, insecurity, emotional dissatisfaction, social loneliness, alienation, etc. (Töremen & Çaykaya, 2008). Considering that school administrators are organizational leaders, these emotional and social problems create similar problems and contradictions for educational organizations. This is because school administrators are increasingly held responsible for the implementation of changes adopted by policy makers at higher levels of the education system (Hallinger, 2018). In this respect, Hargreaves (1997) warns that ignoring the emotional dimensions of educational change in educational reforms may negatively affect the change process. In this context, it can be said that the emotional states of school administrators, who are leaders, are vital for organizational existence and school development.

### **The Organic Link Between Management and Experienced Emotions**

Organizations, where social structure is a necessity, have micro-culture and micro-society characteristics within themselves. Leaders are responsible for the management of these communities and their organizational journey. Since leadership is considered to be a people-oriented art (Marzano et al., 2021), a social practice that depends on satisfying relationships and effective communication skills (Blackmore, 1996, 1999), leaders also carry a heavy emotional burden. This situation requires leaders to be aware of both their own and their staff's emotions. Schools, which are educational organizations, are social structures with leaders and followers. Administrators, who are an important component of schools, are considered as leaders who are the architects of school climate and culture. Since educational leadership is seen as an emotional practice that involves intense personal interactions displayed in front of everyone (Berkovich & Eyal, 2015; Yamamoto et al., 2014), there is a need to explore the

emotions of school administrators and the implications and consequences of these emotions within the organization. Thus, school leaders take emotional responsibility for a social structure that affects teachers and students. Moreover, school administrators not only carry the intellectual and physical burden of leadership, but also experience heavy emotions such as fear of failure, pain, exhaustion and stress (Thomson, 2009). This situation reveals the importance of emotional labor that school leaders spend in managerial activities and the fact that school administrators, as human beings, will not be independent from emotions and can be affected by emotions.

Leadership can be characterized as an intense process of follower-leader interaction with mutual emotional exchange. However, although leaders are responsible for achieving the goals of a team or an organization, most of the existing leadership research is limited to discussing the impact of individual leaders on their subordinates (Cole et al., 2013; Ellemers et al., 2004; Kozlowski & Bell, 2013). This suggests that the emotions experienced by leaders have not been sufficiently explored and that the fact that emotions and the resulting actions are present wherever there are human beings has not been emphasized in terms of leader effectiveness. Therefore, deep examination of individuals' emotions can be seen as important resources for empowering individuals as well as leading them to better understanding (Grosland & Roberts, 2020). In addition, changes in the emotional states of educational leaders can directly or indirectly affect organizational behaviors, school development and student performance. These behaviors need to be made positive and managed correctly (Demir, 2021). Therefore, it is important for school leaders to be aware of their own emotions and to have the necessary experience and self-control in managing emotions for effective management.

Since the word emotion has a wide range of meanings, it can be said that there is no consensus on an absolute or limited definition in the literature. For example, Lopes et al. (2012) describe a hierarchy of emotional control that includes the stage of learning to express and understand emotions. However, the general consensus recently is that emotion has a multicomponent structure (Chen, 2021). Emotions are emotional experiences, such as fear or joy, that occur when a person perceives events or situations as having personal significance because they harm or promote him or her or their goals (Lazarus, 1991). Most scientists define emotion as a temporary and variable phenomenon (Hargreaves, 2005). Emotions are important for the individual as they can positively or negatively affect the perspective on life, morale and performance, and if they can be managed well, they can increase the morale and performance of the individual (Akin, 2004; Kervancı, 2008). This complicated structure of emotions is a valuable area to be researched in terms of management and leadership.

Interpersonal communication is significantly influenced by emotions (Demetriou et al., 2009). Research has examined how emotions affect learning, how to maintain discipline throughout learning, and how emotional development and cognitive learning are related (Lopes et al., 2012). In addition, research on management and emotions is relatively new. Previous studies have found that emotions are an important psychological aspect in determining perceptions, motivations and behaviors in the workplace (Ashforth & Humphrey, 1995; Fineman, 2000; George, 2000). Likewise, there has been a lot of research done recently on the function of emotions in education (Ashkanasy and Daus, 2002; Demetriou et al, 2009; Oplatka, 2004; Grosland and Roberts, 2020; Chiang et al, 2021). While Crawford (2018) emphasizes that the emotional aspect of leadership is a topic that needs to be further researched, Demir (2021) states that human beings exist with emotions and that emotions should be understood and evaluated instead of being an obstacle for management and development in the individual-organization context. However, since research on leaders' emotions is relatively new, this leads to a limited understanding of the emotional aspect of leadership (Berkovich & Eyal, 2017). It is thought that leaders develop

a more holistic approach to problems by integrating their cognitive and emotional aspects and end the leadership process with better decision making (Rajah, Song, & Arvey, 2011). Based on the inferences obtained from the researches, it is emphasized that administrators should understand their emotional states in depth, be aware of the emotional states they experience and manage these emotions for organizational development.

Educational leaders who seek to influence the motivation, knowledge and practices of educational dynamics to facilitate the teaching and learning process (Spillane & Diamond, 2007) experience positive and negative emotions in their administrative activities. Crawford (2009) focused on how an administrator's personal identity is shaped by the emotional reality of the school, and how this affects how they interact with those around them. It is necessary to know and be aware of emotions both to develop the right ways of communication and to strengthen social relationships. Crawford (2007) emphasized that in times of accountability, standardization and competition, administrators regulate their emotions. According to Hargreaves (2005), the administration's style and the school atmosphere have an impact on teachers' emotions and are mutually reinforcing. When emotions are suppressed or ignored, physiological and psychological difficulties may be inevitable among organizational workers and social and organizational cohesion may become a reality that can be sacrificed.

Administrators indicate that they are dealing with a difficult and complicated situation and that there are too many demands asked from them (Leithwood & Beatty, 2009). School administrators' understanding of leadership is influenced by the emotions they experience, and the basic dynamics of the school and the emotions they experience interact with each other. The essence of a school lies in relationships; emotions are the language of these relationships. Important indices of the effectiveness of school management include teachers' feelings and the atmosphere in the classroom (Day, 2011; Hargreaves, 2005). This directly affects the quality of schools, classrooms, teachers' practices and students' learning. The literature on efficient school administration highlighted the need of building strong interpersonal connections and the necessity of monitoring the evolving requirements of personnel in order to steer the institution towards prosperity (Blackmore, 2004; Day, 2004; Gronn, 2003; Oplatka, 2011). Therefore, examining and addressing emotions in administrator-teacher relationships holds a vital role in this field of study (Day, 2004; Gallant & Riley, 2013).

In terms of educational administration, emotions have been examined by focusing on emotional relationships between administrators and teachers (Blackmore, 2004; Cliffe, 2011; Day, 2011; Hargreaves, 2005; Oplatka, 2011). Emotions have been considered valuable in the context of leadership (Gallant & Riley, 2013), and it has been argued that they have an impact on the organization's interpersonal relationships and logical decision-making process (Lopes et al., 2012). Studies have revealed different forms and dimensions of the emotional states reflected by school leaders during their administrative decisions and actions, and these have been categorized in various ways. In some studies, the emotions that leaders predominantly experience are; fear of failure (Gronn, 2003), emotional injury (Hargreaves, 2005), disempowerment, threat perception, frustration (Betty, 2000; Shirley, 2016), while in some studies, it has been stated that they tend to experience emotional states dimensioned as compassion, empathy, excitement, anger, doubt, relief, joy, trust, adrenaline, anxiety, fear, pain, frustration, hopelessness, distress, demoralization (Oplatka, 2011; Beatty, 2000; Blackmore, 2004; Cliff, 2011; James & Vince, 2001; Yamamoto et al. 2014; Zembylas, 2016). Chen's (2021) dimensioning of leaders' moods, which is referenced in this study, is enjoyment, pride, frustration, anxiety, and hopelessness.

Every stage of the process of educational organizations, including their inputs, outputs, employees and the people they address, is focused on human beings and human labor. This situation requires school administrators

to constantly meet and interact with multiple stakeholders at different levels of development. Gronn (2003) claims that the requirement to live up to the expectations of numerous stakeholders and the frequency of educational innovations have put pressure on school administrators lately. For administrators, the demands and expectations are stressful and necessitate greater emotional effort. According to Oplatka (2011), school administrators are the only leaders who can inspire teachers to work toward objectives by modeling leadership behavior and conducting themselves consistently every day, including expressing a range of emotions. Blackmore (2004), however, asserted that emotional emergence and expression in organizational interactions is necessary for efficient management of schools. In this sense, the interactions that a school administrator has with teachers, parents, and school staff are laced with interpersonal relationships and interpersonal emotional expressions, which together form the fundamental components of educational organizations as social systems. It is crucial for school administrators to be conscious of this circumstance while carrying out their responsibilities and to take these emotional expressions into consideration when they wish to influence those around them. For these reasons, administrators are at the center of a mechanism where professional emotions are intensified and controlled (Crawford, 2009). School administrators, who undertake the responsibility of management with a dominant character of influence and interaction, are under a heavy emotional burden, especially due to the emotion-intensive nature of educational organizations. Therefore, examining the emotional states of school leaders who fulfill this task is considered to be important in this respect.

## **METHOD**

This study aims to culturally adapt the Principal Emotion Inventory developed by Chen (2021) into Turkish. The inventory is structured for school administrators.

### **Research Design**

School administrators lead within a social context and take responsibility for achieving organizational goals. Since achieving educational goals and developing balanced relationships among the stakeholders of the school require psychological and physical activity, the emotions experienced by administrators during these activities and the emotional labor they expend have an important place in understanding administrators. In the literature review, it is seen that there are studies on emotions, but the emotional aspect of leadership is not sufficiently focused on and studies on administrator emotions in school administration are limited. In addition, it is thought that going beyond a classical understanding that focuses more on the technical and rational aspects of leadership and addressing leadership, which is a human-oriented art, in the context of emotions will help to understand the individual who is a complex being. The Principal Emotion Inventory, which was adapted into Turkish, aims to reveal the emotions that school administrators experience in the face of certain situations and under which conditions and at what level they experience these emotions. Thus, this inventory adaptation will serve to take a picture of the emotions of educational administrators.

This adaptation study is designed with the survey model, which is frequently used in quantitative research. The survey model provides a description of an existing situation, in other words, taking a picture of it, and reveals what the ideas, thoughts and attitudes of a group or participants are about any subject (Büyüköztürk, Çakmak, Akgün, Karadeniz, & Demirel, 2017).

### **Study Group**

The data of the study were collected in the 2022-2023 academic year. The data were collected from a total of 305 school administrators working at pre-school, primary, secondary and high school levels in different



provinces of Türkiye after obtaining permission to adapt the inventory from the researcher who developed. Since there was no missing or missing data in the data collected online through Google forms, all of the participants' answers were included in the study. There are various criteria in the literature on sample size, which may vary according to the purpose and type of the study. In factor analysis studies, despite Bryman and Cramer's (2002) view that a sample size of 5-10 times the number of items should be reached, Comrey and Lee (1992) put forward more precise/absolute sample size values (200-suitable, 300-good, 500-very good, 1000-excellent). When these are taken into consideration, it can be said that adequate sample size was reached in this study.

Simple random method was used to select the participants. In addition, in order for the measurement tool to represent a more comprehensive sample group, data were collected from school administrators working at different school levels and with different titles and years of experience by paying attention to the high level of diversity of the participants. Information about the participants is presented in Table 1.

**Table 1.** Participants' Information

Variable	Group	%	f
Title	Principal	46,2	141
	Deputy Principal	53,8	164
School Level	Preschool	12,5	38
	Primary school	34,4	105
	Secondary school	30,1	92
	High school	23	70
	<b>Total</b>	<b>%100</b>	<b>305</b>

When the table is analyzed, it is understood that 46.2% of the participants are principals and 53.8% are deputy principals. 12.5% of the administrators were from preschool, 34.4% from primary school, 30.1% from secondary school and 23% from high school.

#### **Data Collection Tool**

The Principal Emotion Inventory is a measurement tool developed by Chen (2021) to measure the various emotions that school administrators experience in situations they encounter while conducting administrative processes. The original form of the scale consists of a 5-factor structure with 25 items, and the items are scored on a 6-point Likert-type scale (6=Strongly Agree, 1=Strongly Disagree). In the original form of the scale, a score of 1 represents the minimum level of agreement and a score of 6 represents the maximum level of agreement. The researcher (Chen, 2021) applied Exploratory Factor Analysis (EFA) to reveal the original structure of the scale. According to the results of this analysis, it was determined that the original structure of the scale consisted of five sub-dimensions and the scale scores were determined by averaging the items in each dimension. These sub-dimensions are "Enjoyment", "Pride", "Frustration", "Anxiety" and "Hopelessness" respectively.

**Enjoyment.** This sub-dimension consists of 5 items. Two of the items of the sub-dimension are as follows: "I enjoy my work as an administrator.", "I am happy to see teachers using data to make improvements in the classroom." In this subdimension, school administrators are asked to evaluate the situations they enjoy at school. The original Cronbach's alpha value of the subdimension is .91.

**Pride.** This subdimension consists of 5 items. Sample items of the sub-dimension are as follows: "I feel proud that I am capable of doing my job", "I feel proud when my school performs better than other schools". In this sub-dimension, school administrators evaluate the sense of pride they feel in situations such as the quality of their own work, teachers' cooperation, and school success. The original Cronbach's alpha value of the sub-dimension is .81.

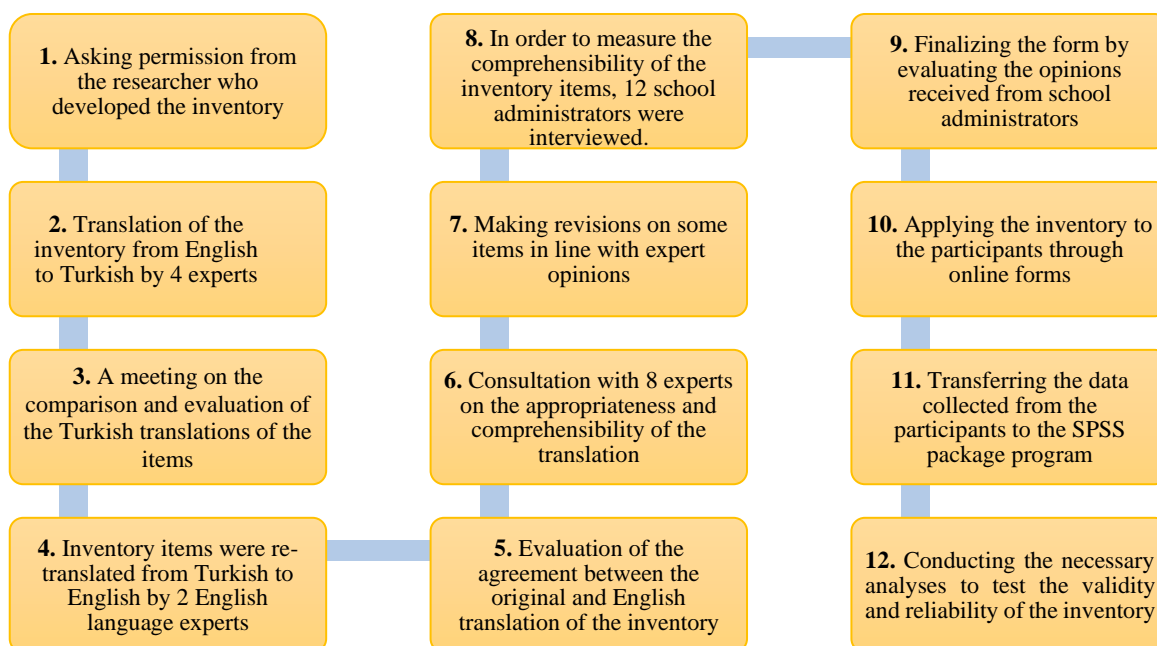
**Frustration.** This sub-dimension consists of 5 items. Sample items of the sub-dimension are as follows: "I feel frustrated when I doubt my managerial competence", "I feel frustrated when my teachers are not motivated or cooperative". In this sub-dimension, administrators are expected to evaluate the level of frustration they experience when situations such as the effectiveness of management activities, teachers' resistance to change, and recognition by the employees result in negative outcomes. The original Cronbach's alpha value of the subdimension is .83.

**Anxiety.** This sub-dimension consists of 5 items. Sample items of the sub-dimension are as follows: "I worry when my performance at school is not good", "I worry about not achieving sustainable school success". In this sub-dimension, school administrators assess their feelings about frequent situations that cause anxiety at school such as school success and managerial performance. The original Cronbach's alpha value of the subdimension is .87.

**Hopelessness.** This sub-dimension consists of 5 items. Sample items of the sub-dimension are as follows: "Having to be constantly accountable to my superiors makes me feel helpless", "I feel hopeless when I am forced to do unreasonable work in my school". In this sub-dimension, school administrators evaluate their feelings towards the situations in which they experience feelings of hopelessness against situations that they cannot resist, such as being inspected, being under constant pressure for accountability, and unreasonable expectations of superiors. The original Cronbach's alpha value of the sub-dimension is .78.

### Adaptation Process Steps

In the process of cultural adaptation of the School Administrators' Emotion Inventory into Turkish, various stages were employed. The stages are presented in Figure 1:



**Figure 1.** *Adaptation Process of the Scale*

As seen in Figure 1, in order to carry out the cultural adaptation of the School Administrators' Emotion Inventory into Turkish and Turkish culture, firstly, the researcher who developed the scale was contacted via e-mail, and permissions were obtained on the condition that the necessary ethical rules were adhered to and references were taken into consideration. The original scale was translated by four field experts with advanced English proficiency, and the items translated by the experts were compared and evaluated. After deciding which items would be most appropriate for the Turkish culture, two English Language Teaching experts translated the

items from Turkish to English again and evaluated the agreement between the original and the English translation. Afterwards, expert opinions were obtained from 8 faculty members who are fluent in Turkish and advanced level English and who have studies on school leadership and educational administration in American, British and Turkish cultures. Since this measurement tool will be completed by school administrators, 12 school administrators were asked for their opinions on the comprehensibility of the items by the administrators. The school administrators were asked to fill in the final form of the scale and write down their understanding of each item separately. The opinions of the administrators were also evaluated and the inventory was finalized. The inventory was transferred to the online platform and applied to school administrators working at different school levels. The data obtained from the participants were organized electronically and transferred to the SPSS package program and Confirmatory Factor Analysis (CFA) was applied to the scale items using the Lisrel 8.80 program. In calculating the reliability coefficient, Cronbach Alpha coefficient as well as McDonald Omega ( $\omega$ ) were calculated.

### Research Ethics

Scientific principles and ethical rules were adhered to during the adaptation process of the “School Principals’ Emotion Inventory: Validity and Reliability in the Turkish Context”. The researchers conducted the research process by obtaining the necessary ethical permission from the institution they are affiliated with. The procedures related to the research were carried out by the researchers within the permission of Siirt University Ethics Committee dated 13.05.2022 and numbered 2692.

### FINDINGS

To assess the validity of the inventory adapted for the study, the Pearson product-moment correlation coefficient was used to analyze the relationship between the item score and the overall score obtained from the scale's sub-dimension. The findings are shown in Table 2.

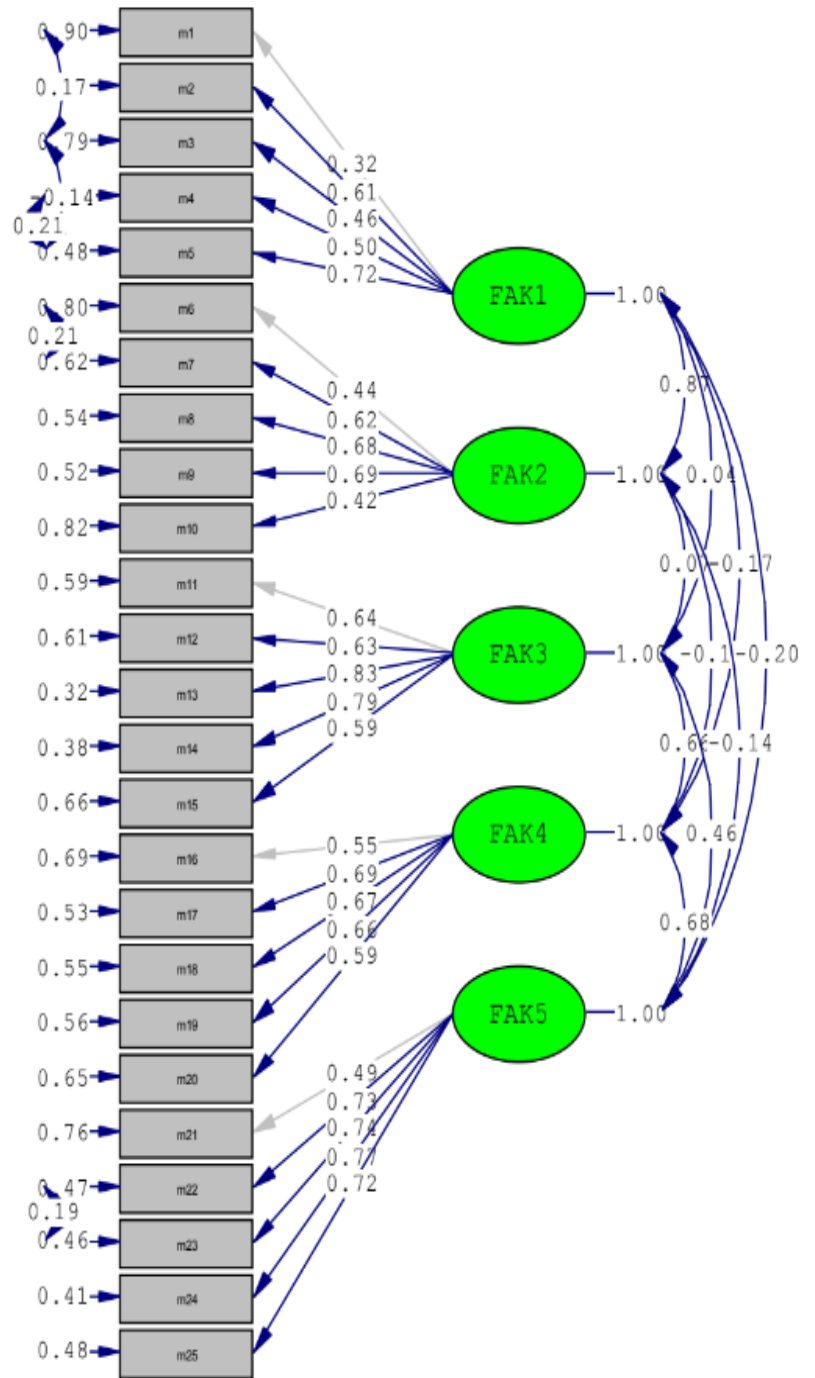
**Table 2.** Item Total Score Correlation

Dimension	Item	Correlation Value
Enjoyment	1	,31
	2	,42
	3	,41
	4	,30
	5	,40
Pride	6	,48
	7	,62
	8	,47
	9	,46
	10	,39
Frustration	11	,58
	12	,58
	13	,71
	14	,66
	15	,54
Anxiety	16	,45
	17	,58
	18	,59
	19	,56
	20	,50
Hopelessness	21	,40
	22	,70
	23	,70
	24	,70
	25	,61

When Table 2 is examined, it is understood that the correlation coefficients vary between 0.30 and 0.42 for the "Enjoyment" sub-dimension; between 0.39 and 0.62 for the "Pride" sub-dimension; between 0.71 and 0.54 for the "Frustration" sub-dimension; between 0.45 and 0.59 for the "Anxiety" sub-dimension; and between 0.40 and 0.70 for the "Hopelessness" sub-dimension. As a result of the examination of the practical significance of the obtained coefficients, it is seen that there are 3 items below 0.40. It is seen that all the remaining items are above 0.40, in other words, they are very good discriminators (Crocker & Algina, 1986).

For the purpose of verifying the Principal Emotion Inventory's construct validity, Confirmatory Factor Analysis (CFA), one of the factor analysis methods based on the correlation matrix, was used to explain the latent variable underlying the participants' responses to the items (Crocker & Algina, 1986). CFA is a primary and important tool used to obtain evidence of construct validity in social sciences (Brown, 2015). Considering the structure in the original scale developed by Chen (2021), it was aimed to confirm the five-dimensional structure. Lisrel 8.8 package program was used to conduct the CFA. Before starting the CFA, normality, linearity (multivariate normality) and extreme value assumptions (Büyüköztürk, 2002) required for factor analysis were tested. According to the KMO value (.845) and Bartlett's sphericity test results ( $X^2=2768,252$ ,  $sd=300$ ,  $p<0.05$ ), it can be said that the number of data available is sufficient, CFA can be applied to the observed variables and the necessary normality assumption is met. In addition, the minimum sample size of 200 recommended in the literature for factor analysis (Kline, 2011) was also met.

The factor loadings and goodness of fit indices obtained as a result of the analysis for CFA were analyzed. Factor loadings show the relationship of each item with the relevant factor and factor loadings are expected to be 0.32 and above (Tabachnich & Fidell, 2012). As a result of the analysis, the factor loading values obtained from the Enjoyment sub-dimension ranged between 0.32 and 0.72; the factor loading values obtained from the Pride sub-dimension ranged between 0.42 and 0.69; the factor loading values obtained from the Frustration sub-dimension ranged between 0.59 and 0.79; the factor loading values obtained from the Anxiety sub-dimension ranged between 0.55 and 0.69; and the factor loading values obtained from the Hopelessness sub-dimension ranged between 0.49 and 0.77. The factor loading values for all items are acceptable and the Path Diagram is presented in Figure 2.



Chi-Square=489.18, df=260, P-value=0.00000, RMSEA=0.054

**Figure 2.** Path Diagram

Acceptable and perfect fit values for the goodness of fit indices and the values obtained as a result of the analysis are presented in Table 3.

**Table 3.** Goodness of Fit Indices

Fit Index	Perfect Fit	Acceptable Fit	Result
$\chi^2/sd$	$0 \leq \chi^2/sd \leq 2$	$2 \leq \chi^2/sd \leq 3$	1,90
RMSEA	$0 \leq RMSEA \leq 0,05$	$0,05 \leq RMSEA \leq 0,10$	0,05
SRMR	$.00 \leq SRMR \leq .05$	$.05 \leq SRMR \leq .10$	0,06
CFI	$0,95 \leq CFI \leq 1,00$	$0,90 \leq CFI \leq 0,95$	0,96
IFI	$0,95 \leq IFI \leq 1,00$	$0,90 \leq IFI \leq 0,95$	0,96
RFI	$0,95 \leq RFI \leq 1,00$	$0,90 \leq RFI \leq 0,95$	0,90
NNFI (TLI)	$0,95 \leq TLI (NNFI) \leq 1,00$	$0,90 \leq TLI (NNFI) \leq 0,95$	0,95
PNFI	$0,95 \leq PNFI \leq 1,00$	$0,50 \leq PNFI \leq 0,95$	0,79
PGFI	$0,95 \leq PGFI \leq 1,00$	$0,50 \leq PGFI \leq 0,95$	0,71
GFI	$0,95 \leq GFI \leq 1,00$	$0,90 \leq GFI \leq 0,95$	0,90
AGFI	$0,90 \leq AGFI \leq 1,00$	$0,85 \leq AGFI \leq 0,90$	0,86

When Table 3 is examined;  $\chi^2/sd$  (Kline, 2011), IFI and RFI (Marsh, Hau, Artelt, Baumert, & Peschar, 2006) and RMSEA (Browne & Cudeck, 1993) values show excellent fit ( $\chi^2/sd = 1.90$ , IFI=0.96, RFI=0.90, RMSEA=0.05). In addition, SRMR (Browne & Cudeck, 1993), CFI, GFI, NNFI (TLI) (Marsh, Hau, Artelt, Baumert, & Peschar, 2006); AGFI (Schermelel-Engel & Moosbrugger, 2003); PNFI (Hu & Bentler, 1999) and PGFI (Meyers, Gamst, & Guarino, 2006) values are in the acceptable fit range (SRMR=0.06, CFI=0.93, NNFI (TLI)=0.95, PNFI=0.79, PGFI=0.71, GFI=0.90, AGFI=0.86). In other words, the index values acquired as a result of CFA confirm the five-dimensional structure.

While Cronbach Alpha coefficient gives accurate results for parallel or equivalent measurements (measurements with equal factor loadings), McDonald Omega coefficient gives more accurate results for congeneric measurements (measurements with different factor loadings) (Lucke, 2005; Yurdugül, 2006). Therefore, while determining the reliability coefficient, McDonald Omega ( $\omega$ ), which is acquired by utilizing factor loading values and specific variances, was calculated in addition to Cronbach Alpha coefficient. The calculated values are presented in Table 4.

**Table 4.** Reliability Coefficients for Dimensions

Dimensions	Reliability Coefficients	
	Cronbach Alpha Coefficient ( $\alpha$ )	McDonald Omega Coefficient ( $\omega$ )
Enjoyment	0,54	0,45
Pride	0,71	0,72
Frustration	0,82	0,82
Anxiety	0,77	0,77
Hopelessness	0,83	0,83

Upon a more detailed examination of Table 4, it is clear that the Omega coefficient obtained for the first sub-dimension was estimated as 0.45, for the second sub-dimension as 0.72, for the third sub-dimension as 0.82, for the fourth sub-dimension as 0.77 and for the fifth sub-dimension as 0.83. The Cronbach Alpha coefficients calculated for the five sub-dimensions were 0.54, 0.71, 0.82, 0.77 and 0.83, respectively (Table 4). It is stated that a calculated reliability coefficient of 0.70 and above is sufficient (Büyüköztürk, 2012). In this case, it can be said that the data obtained are reliable.

## DISCUSSION AND CONCLUSION

This research was carried out to culturally adapt the original version of the Principal Emotion Inventory, which is used to determine the level of emotions experienced by school administrators in various situations they encounter in the school administration process, with 5 sub-dimensions and 25 items, into Turkish. For this purpose,

the validity and reliability study of the scale was conducted and the findings were analyzed. The research results are presented on the basis of the findings obtained.

To ascertain the validity of the measurement tool, firstly, the relationship between the item score and the total score obtained from the sub-dimension of the scale was performed with Pearson product-moment correlation coefficient and it was seen that all items were above 0.30. In this case, it is possible to say that the discrimination levels of the items are high. In addition, the validity of the scale was determined by construct validity and CFA method was applied.

As a result of the CFA, factor loadings ranged between 0.32 and 0.72 for the Enjoyment sub-dimension, 0.42 and 0.69 for the Pride sub-dimension, 0.59 and 0.79 for the Frustration sub-dimension, 0.55 and 0.69 for the Anxiety sub-dimension, and 0.49 and 0.77 for the Hopelessness sub-dimension. As a result of this finding, it is possible to say that the factor loading values for all items of the scale are of acceptable values. In addition, when the goodness of fit indices were analyzed, it was found that four of the eleven fit indices were excellent and seven of them were within the acceptable range.

In the light of the fit values calculated, it was concluded that the five-dimensional structure of the original scale was confirmed. In the calculation of the reliability coefficient of the scale, in addition to Cronbach Alpha coefficient, McDonald Omega ( $\omega$ ) acquired by utilizing factor loading values and specific variances was also calculated. The Cronbach Alpha coefficients for the five sub-dimensions were 0.54, 0.72, 0.82, 0.77 and 0.83, while the Omega coefficients were 0.45, 0.72, 0.82, 0.77 and 0.83, respectively. It is seen that Cronbach Alpha and Omega coefficient values are close to each other in all five sub-dimensions and one of the values is close to the threshold value of 0.70, while the other values are above 0.70. In this case, it can be said that the measurement tool, which was linguistically and culturally adapted to Turkish, is reliable. As a result of this research; a reliable and valid scale is presented to measure the emotions that school administrators experience in the face of various situations they encounter in school administration, which is an open system.

#### **Statements of Publication Ethics**

The procedures related to the research were carried out by the researchers within the permission of S\*\*\* U\*\*\* Ethics Committee dated 13.05.2022 and numbered 2692.

#### **Researchers' Contribution Rate**

Each author contributed equally to the study.

#### **Conflict of Interest**

There is no conflict of interest in this study.

## REFERENCES

- Ashforth, B. E., & Humphrey, R. H. (1995). Emotion in the workplace: A reappraisal. *Human Relations*, 48, 97-125.
- Ashkanasy, N. M., & Daus, S. D. (2002). Emotion in the workplace: The new challenge for managers. *Academy of Management Executive*, 16(1), 76-86.
- Beatty, B.R. (2000). The emotions of educational leadership: breaking the silence. *International Journal of Leadership in Education*, 3(4), 331-357.
- Berkovich, I., & Eyal, O. (2015). Educational leaders and emotions: an international review of empirical evidence 1992-2012. *Review of Educational Research*, 85(1), 129-167.
- Berkovich, I., & Eyal, O. (2017). Methodological review of studies on educational leaders and emotions (1992-2012): Insights into the meaning of an emerging research field in educational administration. *Journal of Educational Administration* 55(5), 469-491.
- Blackmore, J. (1996). Doing emotional labour in the educational market place: stories from the field of women in management. *Discourse*, 17(3), 337-50.
- Blackmore, J. (1999). *Troubling Women: Feminism, Leadership and Educational Change*. Open University Press, Buckingham.
- Blackmore, J. (2004). Leading as emotional management work in high risk times: The counterintuitive impulses of performativity and passion. *School Leadership and Management*, 24(4), 439-459.
- Brown, T. A. (2015). *Confirmatory factor analysis for applied research*. Guilford publications.
- Bryman, A., & Cramer, D. (2002). *Quantitative data analysis with SPSS release 10 for Windows: A guide for social scientists*. New York: Routledge.
- Büyüköztürk, Ş. (2002). Faktör analizi: Temel kavramlar ve ölçek geliştirmede kullanımı [Factor analysis: Basic concepts and its use in scale development]. *Kuram ve uygulamada eğitim yönetimi*, 32(32), 470-483.
- Büyüköztürk, Ş., Kılıç-Çakmak, E., Akgün, Ö. Karadeniz, Ş., & Demirel, F. (2008). *Bilimsel araştırma yöntemleri [Scientific research methods]*. Pegem A. Press.
- Chen, J. (2021). Development and validation of the Principal Emotion Inventory: A mixed-methods approach. *Educational Management Administration & Leadership*, 49(5), 750-767. <https://doi.org/10.1177/1741143220919764>
- Chiang, J. T.-J., Chen, X.-P., Liu, H., Akutsu, S., & Wang, Z. (2021). We have emotions but can't show them! Authoritarian leadership, emotion suppression climate, and team performance. *Human Relations*, 74(7), 1082-1111. <https://doi.org/10.1177/0018726720908649>
- Cliffe, J. (2011). Emotional intelligence: A study of female secondary school headteachers. *Educational Management Administration & Leadership*, 39(2), 205-218.
- Cole MS, Carter MZ, & Zhang Z (2013). Leader-team congruence in power distance values and team effectiveness: The mediating role of procedural justice climate. *Journal of Applied Psychology*, 98(6), 962-973.
- Comrey, A. L. & Lee, H. B. (1992). *A First Course in Factor Analysis (Second Edition)*. New Jersey: Lawrence Erlbaum Associates, Publishers, Hillsdale.
- Crawford, M. (2007). Emotional coherence in primary school headship. *Educational Management, Administration and Leadership*, 35(4), 521-534.
- Crawford, M. (2009). *Getting to the Heart of Leadership*. Sage Publications, London.
- Crawford, M. (2011). Rationality and emotion in education leadership-enhancing our understanding. In: Day C and Lee JC (eds) *New Understandings of Teacher's Work*. New York: Springer, 207-217.
- Crawford, M. (2018). Personal engagement, emotion and the educational workplace. *Journal of Professional Capital and Community*, 3(3), 223-240.
- Crocker, L., & Algina, J. (1986). *Introduction to Classical and Modern Test Theory*. Harcourt Brace Jovanovich College Publishers: Philadelphia
- Day, C. (2004). The passion of successful leadership. *School Leadership & Management*, 24(4), 425-437.
- Day, C. (2011). *New understandings of Teacher's work: Emotions and educational change*. New York: Springer.



- Demir, E. K. (2021). The role of social capital for teacher professional learning and student achievement: A systematic literature review. *Educational Research Review*, 33, 100391.
- Demetriou, H., Wilson, E. & Winterbottom, M. (2009). "The role of emotion in teaching: are there differences between male and female newly qualified teachers' approaches to teaching? *Educational Studies*, 35(4), 449-473.
- Ellemers, N., De Gilder, D. & Haslam, S.A. (2004) Motivating individuals and groups at work: A social identity perspective on leadership and group performance. *Academy of Management Review*, 29(3), 459–478.
- Fineman, S. (2000). *Emotion in organizations (2nd ed.)*. London: Sage.
- Gallant, A. & Riley, P. (2013). The emotional labour of the aspirant leader: Traversing school politics. In *Emotion and school: Understanding how the hidden curriculum influences relationships, leadership, teaching, and learning* (pp. 81-97). Emerald Group Publishing Limited.
- George, I. M. (2000). Emotions and leadership: The role of emotional intelligence. *Human Relations*, 53(1), 027-1055.
- Gronn, P. (2003). *The new work of educational leaders: Changing leadership practice in an era of school reform*. London: Chapman.
- Grosland T. & Roberts L. S. (2020). Leading with/in emotion states: The criticality of political subjects and policy debates in educational leadership on emotions. *Policy Futures in Education*, 19(1), 97–110. <https://doi.org/10.1177/1478210320940136>
- Hallinger, P. (2018). Bringing context out of the shadows of leadership. *Educational Management Administration & Leadership*, 46(1): 5–24.
- Hargreaves, A. (1997). Rethinking Educational Change With Heart and Mind. Alexandria: *The Association for Supervision and Curriculum Development*, Yearbook(ASCD).
- Hargreaves, A. (2005). Educational change takes ages: Life, career and generational factors in teachers' emotional responses to educational change. *Teaching and teacher Education*, 21(8), 967-983.
- Hu, L. T. & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1-55.
- James, C. & Vince, R. (2001). Developing the leadership capability of head teachers. *Educational Management, Administration & Leadership*, 29(3), 307-317.
- Kervancı, F. (2008). Büro çalışanlarının duygu yönetimi yeterlilik düzeylerinin geliştirilmesinde duygu yönetimi eğitimi programının etkisi [The effect of emotion management training program on the development of emotion management competency levels of office workers]. *Gazi University, Institute of Educational Sciences, Department of Office Management Education, Ankara, Turkey*.
- Kline, R. B. (2011). Convergence of structural equation modeling and multilevel modeling. *The SAGE handbook of innovation in social research methods*, 562-589.
- Kozlowski, S. W. J. & Bell, B. S. (2013). Work groups and teams in organizations: Review update. In: Schmitt N, Highhouse S (eds). *Handbook of Psychology* (2nd edn). Hoboken, NJ: Wiley, 412–469.
- Lazarus, R. S. (1991). Cognition and motivation in emotion. *American Psychologist*, 46(4), 352–367. <https://doi.org/10.1037/0003-066X.46.4.352>
- Leithwood, K., & Beatty, B. (2009). Leadership for emotionally hot climates. *International Studies in Educational Administration*, 37(1), 91–103. [https://distributedleadership.northwestern.edu/files/2019/03/managing\\_2008-1twyhki.pdf](https://distributedleadership.northwestern.edu/files/2019/03/managing_2008-1twyhki.pdf)
- Lopes, P. N., Mestre, J. M., Guil, R., Kremenitzer, J. P., & Salovey, P. (2012). The Role of Knowledge and Skills for Managing Emotions in Adaptation to School: Social Behavior and Misconduct in the Classroom. *American Educational Research Journal*, 49(4), 710–742. <https://doi.org/10.3102/0002831212443077>
- Lucke, J. F. (2005). The  $\alpha$  and the  $\omega$  of congeneric test theory: An extension of reliability and internal consistency to heterogeneous tests. *Applied Psychological Measurement*, 29(1), 65-81.
- Marsh, H. W., Hau, K. T., Artelt, C., Baumert, J. & Peschar, J. L. (2006). OECD's brief self-report measure of educational psychology's most useful affective constructs: Cross-cultural, psychometric comparisons across 25 countries. *International Journal of Testing*, 6(4), 311-360.

- Marzano, R. J., Waters, T., & McNulty, B. A. (2005). *School leadership that works: from research to results*. United States: Association for Supervision and Curriculum Development.
- Meyers, L. S., Gamst, G., & Guarino, A. J. (2016). *Applied multivariate research: Design and interpretation*. Sage publications.
- Oplatka, I. (2004). Women teachers' emotional commitment and involvement: A universal professional feature and educational policy. *Education and society*, 22, 23-44.
- Oplatka, I. (2011). The dynamic nature of emotions in educational leadership: Lessons from the career stories of Israeli late-career principals. In *New Understandings of Teacher's Work: Emotions and Educational Change* (pp. 187-203). Dordrecht: Springer Netherlands. [https://doi.org/10.1007/978-94-007-0545-6\\_12](https://doi.org/10.1007/978-94-007-0545-6_12)
- Rajah, R., Song, Z., & Arvey, R. D. (2011). Emotionality and leadership: Taking stock of the past decade of research. *The Leadership Quarterly*, 22(6), 1107-1119.
- Schermelleh-Engel, K., Moosbrugger, H., & Müller, H. (2003). Evaluating the fit of structural equation models: Tests of significance and descriptive goodness-of-fit measures. *Methods of psychological research online*, 8(2), 23-74.
- Shirley, D. (2016). Three forms of professional capital: systemic, social movement, and activist. *Journal of Professional Capital and Community*, 1(4), 302-320.
- Spillane, J., P., & Diamond, J. B. (2007). *Distributed leadership in practice*. Teachers College Press
- Tabachnick, B. G., & Fidell, L. S. (2012). *Using multivariate statistics (6th ed.)*. New Jersey: Pearson.
- Thomson, P. (2009). *Heads on the Block*. Routledge, London.
- Töremen, F., & Çankaya, İ. (2008). An Effective Approach at Management: Emotional Management. *Journal of Theoretical Educational Science*, 1(1), 33-47. Retrieved from <https://dergipark.org.tr/en/pub/akukeg/issue/29336/313942>
- Yamamoto, J.K., Gardiner, M.E., & Tenuto, P.L. (2014). Emotion in leadership: Secondary school administrators' perceptions of critical incidents. *Educational Management, Administration & Leadership*, 42(2), 165-183.
- Yurdugül, H. (2006). The comparison of reliability coefficients in parallel, tau-equivalent, and congeneric measurements. *Ankara University Journal of Faculty of Educational Sciences (JFES)*, 39(1), 15-37.
- Zembylas, M. (2016). The therapisation of social justice as an emotional regime: Implications for critical education. *Journal of Professional Capital and Community*, 1(4), 286-301.

## APPENDIX

Okul Yöneticileri Duygu Envanteri	
1. Yöneticilik yapmaktan keyif alırım.	
2. Öğretmenlerin sınıfta iyileştirmeler yapmak için verileri kullandığını görmek beni mutlu eder.	
3. Meslektaşlarıma (iş arkadaşlarıma) yetki vermekten mutluluk duyarım.	
4. Okulda belirlediğimiz hedeflere ulaşıldığında mutlu olurum.	
5. Okulumu iyi yönettiğim zaman mutlu olurum.	
6. İşimi yapabilecek yeterlilikte olduğum için gurur duyuyorum.	
7. Bana duyulan güvenden gurur duyuyorum.	
8. Öğrencilerim ve/veya öğretmenlerim başarılı olduğunda kendimi kazanan gibi hissedirim.	
9. Öğretmenlerim ortak bir hedef için birlikte çalıştıklarında gurur duyarım.	
10. Okulum diğer okullardan daha iyi performans gösterdiğinde gurur duyarım.	
11. Yönetsel yeterliliğimden şüphe duyduğum durumlarda hayal kırıklığı yaşıyorum.	
12. Kararlarım onaylanmadığı zaman hüsrana uğrarım.	
13. Öğretmelerim motive olmadıklarında ya da işbirliği yapmadıklarında hayal kırıklığına uğrarım.	
14. Okul iklimi değişime dirençli olduğunda hayal kırıklığı yaşıyorum.	
15. Yeterince yetkilendirilmediğimde hayal kırıklığına uğrarım.	
16. İş gününün sonunda kendimi bitkin hissedirim.	
17. Yöneticiliğin getirdiği yalnızlık (izolasyon) ile mücadele etmek zorunda kalıyorum.	
18. Okuldaki performansım iyi olmadığında kaygılanırım.	
19. Sürdürülebilir bir okul başarısına ulaşamama endişesi taşıyorum.	
20. Okullar arasındaki sağlıksız rekabet konusunda endişeliyim.	
21. Okulumda makul olmayan (yersiz) işler yapmak zorunda bırakıldığımda umutsuz hissediyorum.	
22. Üstlerimce sürekli teftiş edilmem ve çalışanlarımı teftiş etmek zorunda bırakılmam konusunda çaresizlik yaşıyorum.	
23. Üstlerime karşı sürekli hesap vermek zorunda olmak çaresiz hissettiriyor.	
24. Üstlerimin makul olmayan beklentilerinden dolayı umutsuzluk yaşıyorum.	
25. Çevrenin yersiz suçlamaları karşısında umutsuz hissediyorum.	

In the inventory, a 6-point Likert scale was used, with 1 point representing the lowest level of participation and 6 points representing the highest level of participation. There are no reverse items in the measurement tool.