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Investigation of the Effects of School Principals' Instructional Leadership Behaviors on Teachers' Self-Efficacy According to Teachers' Views

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Abstract: The aim of this study is to determine the relationship between school administrators' instructional leadership levels and teachers' self-efficacy perception levels according to teachers' views. 334 teachers working in primary and secondary schools participated in the research carried out with the correlational survey method. In this study, the MANOVA test was used to examine the views on the sub-dimensions of the scales according to the variables and Pearson correlation was used. Also multiple regression analysis was used to determine the level of the relationship. When the results obtained from the research were evaluated in terms of teachers' self-efficacy perceptions, it was seen that there was no significant difference between the groups in terms of gender and age variables. However, it was observed that there was a significant difference between the groups in terms of school type and seniority variables ($p<.05$). When the results of the research on the instructional leadership scale were examined, it was concluded that there was no significant difference between the groups in terms of seniority variable ($p.>05$), but there was a significant difference in sub-dimensions in terms of gender, school type and age variables. When the Pearson correlation results of this study were examined, it was concluded that there were relations at different levels in terms of various variables. The results of multiple linear regression analysis also showed that there is a significant relationship ($R=.217$; $R2= .047$) between instructional leadership sub-dimensions and teacher self-efficacy. It was concluded that three sub-dimensions explained 4.7% of teachers' self-efficacy.

Keywords*:* Instructional Leadership, Self-efficacy, School Principals, Teachers.

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Introduction

One of the prerequisites for performing qualified studies in schools is that the administrators in charge of the school have the qualifications of instructional leadership. In this context, instructional leadership requires that the school administrator and school stakeholders other than himself be recruited (Şişman, 2011; Kiraz, 2022).

It has been determined that school administrators who have instructional leadership skills become a model for students, teachers and parents by guiding them, and studies show that there is a positive relationship between increasing the academic success of the school and school administrators having instructional leadership and other leadership qualities (Yılmaz & Kurşun, 2015). It is thought that there is a direct proportion between the school administrators developing their schools in accordance with their goals, managing the school with this awareness, and knowing the management concepts and processes well and instructional leadership (Bursalıoğlu, 2000). The majority of a school principal's time, it was claimed, is spent on administrative tasks rather than instructional activities. Additionally, it was claimed that school principals placed less emphasis on extracurricular activities, teacher development and training, the availability of instructional resources, and the preservation of instructional time (Marks & Printy, 2003).

Two duties of school administrators, namely administrative and cultural dimensions, are mentioned. While cultural duties, including instructional leadership, include studies aimed at improving student achievement and gaining family and community support, administrative studies cover the relations of the school with the upper units and the works related to the building and facility (Şişman, 2002). Instructional leadership, a concept that has been brought to the literature with the examination of successful schools since the 1980s, is generally defined as the ability of school administration and teachers to influence school-related stakeholders (Camgöz et al., 2022). Although school administrators have various leadership styles, it is stated that the type of leadership that contributes the most to school success is instructional leadership, thus changing the traditional role of the school principal (Oğuzer & Ozkan, 2022). Therefore, school administrators, teachers, educational goals, curricula, evaluation of instruction, etc. requires an active cooperation on issues such as (Kiraz, 2021). School administrators with instructional leadership are aware of the school mission, attach importance to professional development and strive to create a positive school climate (Tatlılıoğlu & Okyay, 2012). However, it is stated that individuals with self-efficacy have more effective leadership characteristics (Tschannen-Moran & Gareis, 2004; Ramchunder & Martins; 2014). Bandura (2001) also stated that perceived efficacy is very important on an individual's work. Paglis and Green (2002) stated that school principals with high self-efficacy strive to exert effective leadership behaviors, and at the same time, they strive to improve teachers' work success and students' academic work. In this context, the instructional leadership of school administrators and teachers' self-efficacy are of great importance. In this context, it is aimed to determine the relationship between school administrators' instructional leadership levels and teachers' self-efficacy perception levels according to teachers' opinions. For this, the following questions of the study were tried to be answered.

1. Is there a significant difference between teachers' self-efficacy levels in terms of gender, school type, seniority and age variables?
2. According to teachers' opinions, is there a significant difference between school administrators' levels of instructional leadership in terms of gender, school type, seniority and age?

3. According to teachers' opinions, what level of relationship is there between school administrators' instructional leadership and teachers' self-efficacy perception levels in terms of variables?
4. According to teachers' opinions, is the instructional leadership of school administrators a significant predictor of self-efficacy perception levels?

Methodology

Model of the Research

This study was carried out with the relational survey model, which is one of the quantitative research types. In order to reach a conclusion about a universe consisting of many elements with the general scanning model, it is aimed to determine whether the variables have changed in the relational scanning model, and if there has been a change, in what way it has taken place (Karasar, 2011).

Sample

The sample of this research consists of classroom and branch teachers in primary and secondary schools in the center of Elazig in 2022-2023. 334 teachers participated in the research. Descriptive data regarding the demographic characteristics of the sample are given in the tables below:

Table 1
Distribution by gender

Gender	**n**	**%**
Female	165	49.4
Male	169	50.6
Total	334	100

While 165 (49.4%) of the teachers participating in the research were female teachers, 169 (50.6%) were male teachers.

Table 2
Distribution by school type

School type	**n**	**%**
Elementary School	160	47.9
Secondary School	174	52.1
Total	334	100

While 160 (47.9%) of the teachers participating in the research are primary school teachers, 174 (52.1%) are secondary school teachers.

Table 3
Distribution by seniority

Seniority	**N**	**%**
1-10 years	67	20.1
11-20 years	119	35.6
21 years and elder	148	44.3
Total	334	100

While 67 (20.1%) of the teachers participating in the research were teachers with 1-10 years of seniority, 119 (35.6%) of them were teachers with 11-20 years of seniority; 148 (44.3%) were teachers. It consists of teachers with 21 years or more seniority.

Table 4
Distribution by age

Age	**N**	**%**
33-43 ages	189	56.6
44 ages and elder	145	43.4
Total	334	100

While 189 (56.6 %) of the teachers participating in the research are between the ages of 33-44, 145 (43.4 %) are teachers aged 44 and over.

Data Collection Tools

Personal data form

The personal data form developed to obtain the demographic data of the teachers participating in this research was used.

Instructional leadership scale

The scale developed by Alig-Meilcarek (2003) in its original form was translated by Şahin (2011). A 5-point Likert-type rating was used on the 23-item scale with the options "Totally Agree-Strongly Disagree". The factor loads of the scale, which has a three-dimensional structure: "Providing professional development throughout the school, defining and communicating shared goals, and providing feedback and supervising the teaching and learning process", were calculated above .50. The Cronbach Alpha reliability coefficient of the original scale was found to be .94, and this coefficient was calculated between .94 and .89 in the sub-factors. In this study, the reliability coefficient of the instructional leadership scale was found to be .95.

Self-efficacy perception scale

Teachers' self-efficacy perceptions, Tschannen-Moran, Woolfolk Hoy (2001) developed and adapted to our language by Çapa, Çakıroğlu, and Sarıkaya (2005) Teacher Self-Efficacy Scale (SES) was used. The scale, which consists of 24 items, consists of the sub-dimensions of "student participation, teaching strategies and classroom management". Each factor has 8 items with item loads ranging from .47 to .72. The reliability coefficient of the original form of the scale is .94. In this study, the reliability coefficient of the instructional leadership scale was found to be .94.

Data Collection Process

The research data started to be collected after the approval of the Ethics Committee and the permissions obtained from the Elazig Directorate of National Education. With the prepared directive, the purpose of the research was clearly stated and the teachers who filled out the voluntary consent form were asked to fill in the personal data form and two different scales and demographic data.

Analysis of Data

Percentage and frequency analyzes were used in the analysis of personal data, along with the views of teachers in terms of their perception levels of Instructional leadership and the sub-dimensions of Teachers' Self-efficacy levels. At the same time, after evaluating the normality distribution of the data, the MANOVA test was used to examine the perception levels of instructional leadership and the views of teachers on the sub-dimensions of self-efficacy scales in terms of various variables. In cases where there was a significant difference between the groups, the Schefee test, one of the post-hoc tests, was used. In order to make the MANOVA analyzes used in the research, the assumptions of sample size, normality, extreme values, linearity, homogeneity of regression, multicollinearity and singularity, and homogeneity of variance and covariance matrices were examined and it was determined that there were no serious violations. Pearson correlation was used to determine the relationship between proficiency levels. At the same time, multiple regression analysis was performed to determine the level of relationship between the two scales. Before these analyses, the assumptions were checked and it was determined that there were no serious violations. Data were made with SPSS 21.0 (Balcı & Ahi, 2017).

Findings

Findings on Teachers' Self-Efficacy Levels

Table 5
Results regarding the sub-dimensions of self-efficacy levels

Self-Efficacy Levels	**N**	**$\bar{X}$**	**SD**
Student participation	334	32.41	4.14
Instructional Strategies	334	33.65	3.89
Classroom Management	334	33.52	4.24

When the mean scores of the sub-dimensions of the self-efficacy levels of the teachers participating in the research are examined, it is seen that the highest arithmetic mean score is for the "teaching strategies" sub-dimension ($X = 33.65 \pm 3.89$), and the lowest arithmetic mean score is for the "student participation" sub-dimension ($X = 33.41 \pm 4.14$). determined.

Table 6
Results regarding Instructional Leadership sub-dimensions

Instructional Leadership	**N**	**$\bar{X}$**	**SD**
Ensuring professional development throughout the school	334	29.70	4.33
Define and communicate shared goals	334	33.86	4.79
Providing feedback and supervising the teaching and learning process	334	31.70	4.04

When the mean scores of the teachers participating in the study regarding the instructional leadership sub-dimensions are examined, the highest score average is for the "defining and communicating shared goals" sub-dimension ($X = 33.86 \pm 4.79$), and the lowest score average is for the "providing professional development throughout the school" sub-dimension ($X = 29.70$). ± 4.33).

Descriptive Statistics

In order to determine the normal distribution of the data, mean, truncated mean, mode, median, kurtosis skewness values, histogram, extreme values, box line plot, Kolmogorov-Smirnov, Shapiro-Wilk test results were examined and it was concluded that the data showed a normal distribution (Table 13).

Table 7
Descriptive statistics

Scales / Subscales	Mean	Trimmed mean	Min.	Maks.	Mod	Median	Kurtosis	Standart errors of Kurtosis	Skevnes	Standart errors of Skevness	Kolmogorov-Smirnov	Shapiro-Wilk
Student participation	34.41	32.52	15.00	40.00	32.41	32.00	.508	.133	-.441	.266	.000	.000
Instructional Strategies	33.65	33.82	15.00	40.00	32.00	33.00	1.305	.133	-.656	.266	.000	.000
Classroom Management	33.52	33.72	16.00	40.00	32.00	34.00	.669	.133	-.637	.266	.000	.000
Self-efficacy level (total scale)	99.59	99.94	61.00	120.00	99.59	100.00	.115	.133	-.414	.266	.000	.000
Ensuring professional development throughout the school	29.70	30.05	14.00	35.00	35.00	30.00	.997	.133	-.865	.266	.000	.000
Define and communicate shared goals	33.86	34.16	16.00	40.00	40.00	33.00	.328	.133	.328	.266	.000	.000
Providing feedback and supervising the teaching and learning process	31.70	31.85	17.00	40.00	36.00	32.00	.669	.133	-.571	.266	.000	.000
Instructional Leadership (total leadership)	95.26	96.04	50.00	115.00	111.00	95.00	.614	.133	-.700	.266	.000	.000

When the results of the Kolmogorov-Smirnov test, which was performed to determine the normal distribution of the data, were examined, the significance values of the scales and their sub-dimensions were found to be less than .05. At the same time, Shapiro-Wilk results of Instructional Leadership and Self-Efficacy scales were found to be .000. It is stated that there are hesitations about the Kolmogorov Smirnov test used in cases where the sample size is more than 50 (Can, 2017). In Social Sciences, it is possible that the Kolomogorov-Smirnov test results will be less than .05, especially in cases where the sample is large (Balcı & Ahi, 2017). However, if the number of samples in each cell is more than 20, it is considered as a sign that the results are sufficiently robust (Tabachnick & Fidell, 2007). Together with these data, it becomes necessary to check the mean, median, mode, kurtosis skewness values, as well as the results such as q-q, box and line, histogram, branch-leaf results (Tabachnick & Fidell, 2013). It is seen that the mean, mode and median values of the two separate scales and their sub-dimensions used in the research are close to each other. The fact that these values are close to each other is seen as a sign that the distribution is normal (Can, 2017). In addition, the kurtosis and skewness values of the data being between -1.96 and +1.96 and the standard error values of these values as .133 and .266, respectively, indicate that normality is achieved (Uysal & Kılıç, 2021).

Table 8
Results of sub-multivariate analysis of variance of Self-Efficacy scale by gender variable

Effect	Wilk's Lambda	F	Hypothesis df	Error df	p	Partial Eta Squared	Observed Power
Intercept	.012	8865.303	3.00	330.00	.000	.988	1.00
Group	.995	.533	3.00	330.00	.000	.005	.159

Table 9
Intergroup effects for self-efficacy scale sub-dimension scores

Source	Dependent Variable	df	F	p*	Partial Eta Squared	Observed Power
Intercept	Student Participation	1	20397.370	.000	.984	1.00
	Instructional Strategies	1	24391.406	.000	.987	1.00
	Classroom Management	1	20867.198	.000	.984	1.00
Gender	Student Participation	1	.332	.565	.001	.089
	Instructional Strategies	1	.376	.540	.001	.094
	Classroom Management	1	1.381	.241	.004	.216

*p>.05

When the results of multivariate analysis of variance are evaluated in terms of gender variable, it is seen that there is no significant difference in terms of female and male teachers in all sub-dimensions (p>.05).

Table 10
Multivariate analysis of variance results of Self-Efficacy scale sub-dimensions according to school type variable

Effect	Wilk's Lambda	F	Hypothesis df	Error df	p	Partial Eta Squared	Observed Power
Intercept	.012	8853.249	3.00	330.00	.000	.988	1.00
Group	.952	5.548	3.00	330.00	.000	.048	.941

Table 11
Intergroup effects for self-efficacy leadership scale sub-dimension scores

Source	**Dependent Variable**	**df**	**F**	**p***	**Partial Eta Squared**	**Observed Power**
Intercept	Student Participation	1	20791.174	.000	.984	1.00
	Instructional Strategies	1	24889.406	.000	.987	1.00
	Classroom Management	1	20748.469	.000	.984	1.00
School type	Student Participation	1	6.813	.009	.020	.740
	Instructional Strategies	1	.288	.592	.001	.083
	Classroom Management	1	.044	.833	.000	.055

*p<.05

When the results of the multivariate analysis of variance are evaluated in terms of the school type variable, it is seen that there is a significant difference in favor of the teachers working in the primary school in the student participation sub-dimension (p<.05). This difference appears to have a small effect size in practice (η2: .020). When the arithmetic mean values in the sub-dimension of student participation were examined, it was seen that this value was 33.02±3.95 for teachers working in primary schools and 31.85±4.24 for teachers working in secondary schools.

Table 12
Results of multivariate analysis of variance of Self-Efficacy scale sub-dimensions according to seniority variable

Effect	**Wilk's Lambda**	**F**	**Hypothesis df**	**Error df**	**p**	**Partial Eta Squared**	**Observed Power**
Inrcept	.013	8085.492	3.00	329.00	.000	.987	1.00
Group	.965	1.951	3.00	329.00	.071	.017	.720

Table 13
Intergroup effects for self-efficacy leadership scale sub-dimension scores

Source	**Dependent Variable**	**df**	**F**	**p***	**Partial Eta Squared**	**Observed Power**
Intercept	Student Participation	1	18703.364	.000	.983	1.00
	Instructional Strategies	1	22580.907	.000	.986	1.00
	Classroom Management	1	19073.170	.000	.983	1.00
Seniorty	Student Participation	1	4.680	.010	.028	.784
	Instructional Strategies	1	2.468	.086	.015	.494
	Classroom Management	1	4.011	.019	.024	.715

*p<.05

When the results of multivariate analysis of variance are evaluated in terms of seniority, it is seen that there is a significant difference in favor of teachers with 21 years or more seniority in student participation and classroom management sub-dimensions (p<.05). This difference appears to have a small effect size in practice (η2: .028-.024). According to the seniority variable, according to the Scheffee analysis results of post-hoc analyzes, it was found that there was a significant difference in student participation and classroom management sub-dimensions between teachers with 11-20 years of seniority and teachers with 21 years and more seniority (respectively, p=.012, p. =.49). When the arithmetic mean values of both sub-dimensions were examined, it was seen that this value was 33.93±4.16 for teachers with 21 years and more seniority in the classroom management sub-dimension, and this value was 32.96±4.59 for teachers with 11-20 years of seniority. Regarding the student participation sub-dimension, the arithmetic mean of teachers with a seniority of 21 years or more was found to be 33.01±4.10, while this value was found to be 31.50±4.28 for teachers with a seniority of 11-20 years.

Table 14
Results of multivariate analysis of variance of sub-dimensions of Self-efficacy scale by age variable

Effect	**Wilk's Lambda**	**F**	**Hypothesis df**	**Error df**	**p**	**Partial Eta Squared**	**Observed Power**
Intercept	.012	8710.234	3.00	330.00	.000	.988	1.00
Group	.975	2.850	3.00	330.00	.000	.025	.681

Table 15
Intergroup effects for self-efficacy leadership scale sub-dimension scores

Source	**Dependent Variable**	**df**	**F**	**p***	**Partial Eta Squared**	**Observed Power**
Intercept	Student Participation	1	20215.572	.000	.984	1.00
	Instructional Strategies	1	24555.717	.000	.987	1.00
	Classroom Management	1	20416.792	.000	.984	1.00
Age	Student Participation	1	38.343	.135	.007	.321
	Instructional Strategies	1	10.197	.413	.002	.129
	Classroom Management	1	5.361	.586	.001	.084

*p>.05

When the results of the multivariate analysis of variance were evaluated in terms of age, it was seen that there was no significant difference between the groups regarding the sub-dimensions (p>.05).

Table 16
Results of Instructional Leadership Scale sub-multivariate analysis of variance according to gender variable

Effect	**Wilk's Lambda**	**F**	**Hypothesis df**	**Error df**	**p**	**Partial Eta Squared**	**Observed Power**
Intercept	.016	6955.871	3.00	330.00	.000	.984	1.00
Group	.981	2.097	3.00	330.00	.100	.019	.534

Table 17
Intergroup effects for instructional leadership scale sub-dimension scores

Source	Dependent Variable	df	F	p*	Partial Eta Squared	Observed Power
Intercept	Ensuring professional development throughout the school	1	15710.949	.000	.979	1.00
	Define and communicate shared goals	1	16737.965	.000	.981	1.00
	Providing feedback and supervising the teaching and learning process	1	20778.216	.000	.984	1.00
Gender	Ensuring professional development throughout the school	1	2.423	.121	.007	.342
	Define and communicate shared goals	1	2.736	.099	.008	.378
	Providing feedback and supervising the teaching and learning process	1	5.693	.018	.017	.662

*P<.05

When the results of multivariate analysis of variance are evaluated in terms of gender variable, we see that there is a significant difference between male and female teachers in favor of male teachers in the sub-dimension of "providing and supervising the teaching and learning process" (p:.018). This difference appears to have a small effect size in practice (η2: .017). When the arithmetic mean of this sub-dimension was examined, it was found that the arithmetic mean of female teachers was 31.16 ± 4.12, and the arithmetic mean of male teachers was 32.21±3.90.

Table 18
Results of multivariate analysis of variance of Instructional Leadership scale sub-dimensions according to school type variable

Effect	Wilk's Lambda	F	Hypothesis df	Error df	p	Partial Eta Squared	Observed Power
Intercept	.016	6927.452	3.00	330.00	.000	.984	1.00
Group	.965	4.007	3.00	330.00	.008	.035	.836

Table 19
Intergroup effects for instructional leadership scale sub-dimension scores

Source	Dependent Variable	df	F	p*	Partial Eta Squared	Observed Power
Intercept	Ensuring professional development	1	15785.631	.000	.979	1.00

	throughout the school					
	Define and communicate shared goals	1	16640.867	.000	.980	1.00
	Providing feedback and supervising the teaching and learning process	1	20720.025	.000	.984	1.00
School type	Ensuring professional development throughout the school	1	4.006	.046	.012	.514
	Define and communicate shared goals	1	1.012	.315	.003	.171
	Providing feedback and supervising the teaching and learning process	1	4.731	.030	.014	.583

*P<.05

When the results of the multivariate analysis of variance are evaluated in terms of the school type variable, it is seen that there is a significant difference in favor of the teachers working in the primary school in the sub-dimensions of "Providing professional development throughout the school" and "Providing feedback and supervising the teaching and learning process" (respectively, p:.046, .030). This difference appears to have a small effect size in practice (η2: .012, .014, respectively). When the arithmetic mean values of both sub-dimensions were examined, this value was found to be 30.20±3.36 for teachers working in primary schools and 29.25±5.04 for teachers working in secondary schools in the sub-dimension of "Providing *professional development throughout the school". The arithmetic mean values for the sub-dimension of "providing and supervising the teaching and learning process" were found to be 32.20±3.65 for primary school teachers and 31.24±4.33 for secondary school teachers.*

Table 20
Results of multivariate analysis of variance of Instructional Leadership scale sub-dimensions according to seniority variable

Effect	**Wilk's Lambda**	**F**	**Hypothesis df**	**Error df**	**p**	**Partial Eta Squared**	**Observed Power**
Intercept	.018	6105.804	3.000	329.00	.000	.982	1.00
Group	.987	.713	6.000	658.00	.639	.006	.286

Table 21
Intergroup effects for instructional leadership scale sub-dimension scores

Source	**Dependent Variable**	**df**	**F**	**p***	**Partial Eta Squared**	**Observed Power**
Intercept	Ensuring professional development throughout the school	1	13909.975	.000	.977	1.00
	Define and communicate shared goals	1	14817.814	.000	.978	1.00

	Providing feedback and supervising the teaching and learning process	1	18226.195	.000	.982	1.00
Seniority	Ensuring professional development throughout the school	1	.184	.832	.001	.079
	Define and communicate shared goals	1	.055	.947	.000	.058
	Providing feedback and supervising the teaching and learning process	1	.693	.501	.004	.167

*p>.05

When the results of multivariate analysis of variance were evaluated in terms of seniority, it was seen that there was no significant difference in all three sub-dimensions (p>.05).

Table 22
Results of multivariate analysis of variance of Instructional Leadership Scale sub-dimensions by age variable

Effect	**Wilk's Lambda**	**F**	**Hypothesis df**	**Error df**	**p**	**Partial Eta Squared**	**Observed Power**
Intercept	.016	6871.672	3.00	330.00	.000	.984	1.00
Group	.977	2.616	3.00	330.00	.051	.023	.639

Table 23
Intergroup effects for instructional leadership scale sub-dimension scores

Source	**Dependent Variable**	**df**	**F**	**p***	**Partial Eta Squared**	**Observed Power**
Intercept	Ensuring professional development throughout the school	1	15536.934	.000	.979	1.00
	Define and communicate shared goals	1	16473.150	.000	.980	1.00
	Providing feedback and supervising the teaching and learning process	1	20551.883	.000	.984	1.00
Age	Ensuring professional development throughout the school	1	3.150	.077	.009	.425
	Define and communicate shared goals	1	2.109	.147	.006	.305

	Providing feedback and supervising the teaching and learning process	1	6.180	.013	.018	.698

*P<.05

When the results of multivariate analysis of variance are evaluated in terms of age variable, we see that there is a significant difference between the groups in the sub-dimension of "providing and supervising the teaching and learning process" in favor of teachers aged 44 and over (p:.013). This difference appears to have a small effect size in practice (η2: .018). When the arithmetic averages related to this sub-dimension were examined, it was found that the arithmetic average of the teachers aged 33-43 was 31.22±4.21 and the arithmetic average of the teachers aged 44 and over was 32.32±3.73.

Pearson Correlation Results

Table 24
Simple correlation results by gender

Subscales	**Gender**	**n**	**Instructional Leadership**	**Self-efficacy**
Instructional Leadership	1	165	1.00	.291**
	2	169	1.00	.120
	Total	334	1.00	.195**
Self-efficacy	1	165	.291**	1.00
	2	169	.120	1.00
	Total	334	.195**	1.00

p<.01**

When the simple linear correlation results were examined, it was concluded that there was a small relationship between the instructional leadership of school principals and the self-efficacy of female teachers (r=.291, p<.01**). When the results were examined in terms of male teachers, no significant relationship was found between the instructional leadership of school principals and the self-efficacy of male teachers. It was determined that the instructional leadership of school principals explained the self-efficacy of female teachers by 8.4%. It is thought that the fact that female teachers have a more emotional structure and need more support in the education-teaching process than male teachers is effective in the emergence of this finding reached in the research.

Table 25
Simple correlation results by school type

Subscales	**School type**	**n**	**Instructional Leadership**	**Self-efficacy**
Instructional Leadership	Elementary School	160	1.00	.122
	Secondary School	174	1.00	.238**
	Total	334	1.00	.195**
Self-efficacy	Elementary School	160	.122	1.00
	Secondary School	174	.238**	1.00
	Total	334	.195**	1.00

p<.01**

When the results of the simple linear correlation according to the school type variable were examined, no significant correlation was found between the instructional leadership of the school principals and the self-efficacy of the teachers working in primary schools. However, a small correlation was found between the instructional leadership of school principals and the self-efficacy of teachers working in secondary schools (r=.238, p<.01**). It was determined that the instructional leadership of the school principals explained the self-efficacy of the teachers working in secondary schools at the rate of 5.6%. The reason for this situation can be shown as the fact that teachers working in secondary schools have more responsibilities.

Table 26
Simple correlation results by seniority

Subscales	**Seniority**	**n**	**Instructional leadership**	**Self-efficacy**
Instructional leadership	1-10 years	67	1.00	.373**
	11-20 years	119	1.00	.067
	21 years and elder	148	1.00	.240**
	Total	334	1.00	.195**
Self-efficacy	1-10 years	67	.373**	1.00
	11-20 years	119	.067	1.00
	21 years and elder	148	.240**	1.00
	Total	334	.195**	1.00

p<.01**

When the simple linear correlation results were examined, a moderate correlation was found between the instructional leadership of school principals and the self-efficacy of teachers with 1-10 years of seniority (r=.373, p<.01**). In addition, a small relationship was found between the instructional leadership of school principals and the self-efficacy of teachers with more than 21 years of seniority (r=.240, p<.01**). However, no significant relationship was found between the instructional leadership of school principals and the self-efficacy of teachers with 11-20 years of seniority. It was determined that the instructional leadership of the school principals explained 13.9% of the self-efficacy of the teachers with a seniority of 1-10 years, while the self-efficacy of the teachers with a seniority of 21 years and above explained 5.7%. The reason why the instructional leadership of school principals explains the self-efficacy of teachers with a seniority of 1-10 years is higher than that of teachers with a seniority of 21 years and above, it can be interpreted that new teachers need more support. In addition, we can explain the reason why this rate is lower for teachers with a seniority of 21 years and above, as teachers with this seniority are relatively more closed to development and change. At the same time, we can explain the reason why school principals' instructional leadership does not have a significant relationship between the self-efficacy of teachers with 11-20 years of seniority, as teachers with this seniority follow the developments themselves without being dependent on external support.

Table 27
Simple correlation results by age

Subscales	**Age**	**n**	**Instructional leadership**	**Self-efficacy**
Instructional	33-43 years	189	1.00	.208**

leadership	44 years and older	145	1.00	.173*
	Total	334	1.00	.195**
Self-efficacy	33-43 years	189	.208**	1.00
	44 years and older	145	.173*	1.00
	Total	334	.195**	1.00

p<.05*, p<.01**

When the simple linear correlation results according to the age variable are examined, there is a difference between the instructional leadership of school principals and the self-efficacy of teachers aged 33-43 (r=.208, p<.01**) and teachers aged 44 and over (r=.173, p. <.05*) was found to be slightly correlated with self-efficacy. It was determined that the instructional leadership of the school principals explained 4.3% of the self-efficacy of the teachers in the 33-43 age range, and 2.9% of the self-efficacy of the teachers over the age of 44. The reason for this situation can be shown as the fact that teachers aged 44 and over are more closed to change or have higher proficiency due to their experience.

Table 28
Multiple linear regression results between instructional leadership sub-dimensions and Self-Efficacy

Self-Efficacy	**n**	**B**	**Standard error**	**β**	**t**	**p**	**Zero-order r**	**Partial r**
Constant	-	4.804	-	-	17.407	.000	-	-
Student participation	334	-.115	.374	-.117	-.794	.428	-.044	-.043
Instructional Strategies	334	.333	.348	-.333	2.251	.025	-.123	.121
Classroom Management	334	-.019	.290	-.019	-.185	.853	-.010	-.010

The results of the multiple linear regression analysis conducted to determine how the dimensions of providing professional development, defining and communicating shared goals, and providing feedback and supervision to the teaching and learning process, which are thought to have an impact on teachers' self-efficacy, predicted a significant relationship between instructional leadership sub-dimensions and teacher self-efficacy. a relationship (R=.217; R2= .047) was detected (F(3-330)=5.427; p<.001). These three sub-dimensions explain 4.7% of teachers' self-efficacy. According to the standardized regression coefficients, the order of importance of the predictive variables on teaching self-efficacy is the dimension of defining and communicating shared goals (β=0.333), providing professional development throughout the school (β=0.115), and providing feedback and monitoring to the teaching and learning process (β=0.019). . Considering the significance tests of the regression coefficients, it is seen that the dimension of defining and communicating shared goals (p<0.001), one of the predictive variables, is a significant predictor of teachers' self-efficacy. When the relationships between the predictor variables and teacher self-efficacy are examined, the dimensions of providing professional development throughout the school (r=0.44; when the effect of other predictor variables are controlled), defining and communicating shared goals (r=0.123; when the effect of other predictive variables is controlled), teaching and learning process It has been observed that there is a level of correlation with providing feedback and monitoring (r=0.10; when the effect of other predictive variables is controlled). According to the results of the regression analysis, the regression equation that predicts teacher self-efficacy is as follows: (-0.115 x student participation scale score) + (0.333 x teaching strategies scale score) + (-.019 x classroom management scale score) + (4,804).

Discussion / Conclusions and Suggestions

Spillane, Hallett, and Diamond (2003) stated that the success of the school and the student largely depends on the school leader who provides the instructional change in the school. However, there are few studies on the effects of instructional leadership on school and student success (Ovando, & Ramirez, 2007; Bround, 2016). When the results of multivariate analysis of variance were evaluated in terms of gender and age variables of teachers' self-efficacy, it was seen that there was no significant difference between the groups in terms of sub-dimensions (p>.05). When the results were evaluated in terms of the school type variable, it was seen that there was a significant difference in favor of the teachers working in the primary school in the student participation sub-dimension (p<.05). This difference was determined to be small effect size in practice (η2: .020). When the arithmetic mean values in the student participation sub-dimension were examined, it was seen that this value was 33.02±3.95 for teachers working in primary schools and 31.85±4.24 for teachers working in secondary schools. When the results are examined in terms of the seniority variable, it is seen that there is a significant difference in favor of teachers with 21 years and more seniority in the sub-dimensions of student participation and classroom management, and this difference has a small effect size in practice (p<.05; η2: .028-.024). According to the seniority variable, according to the Scheffee analysis results of post-hoc analyzes, it was found that there was a significant difference in student participation and classroom management sub-dimensions between teachers with 11-20 years of seniority and teachers with 21 years and more seniority (respectively, p=.012, p. =.49). When the arithmetic mean values of both sub-dimensions were examined, it was seen that this value was 33.93±4.16 for teachers with 21 years and more seniority in the classroom management sub-dimension, and 32.96±4.59 for teachers with 11-20 years of seniority. Regarding the student participation sub-dimension, the arithmetic mean of teachers with a seniority of 21 years or more was 33.01±4.10, while this value was determined as 31.50±4.28 for teachers with a seniority of 11-20 years. In the study conducted by Aslan and Kalkan (2018), it was concluded that there was no significant difference between the teachers' self-efficacy perceptions in terms of gender variable, but a significant difference in terms of professional seniority and school type variables. However, in the study conducted by Korkut and Babaoğlan (2012), they concluded that, contrary to the findings of our study, the self-efficacy of classroom teachers differs according to the gender variable and does not differ according to seniority. In the study conducted by Özkurt (2017), it was concluded that the self-efficacy perceptions of classroom teachers do not differ according to gender and professional seniority. Özdemir, in his study on instructional leadership in 2020, stated that school principals should have a deeper instructional leadership feature for various fields. In addition, the researcher stated that school principals' classroom management and basic pedagogical practices are not sufficient (Özdemir, 2020).

When the results of the instructional leadership scale were examined, it was seen that there was a significant difference between male and female teachers in the sub-dimension of "providing and supervising the teaching and learning process" in terms of gender variable in favor of male teachers, and this difference had a small effect size in practice (p:.018; η2. : .017). When the arithmetic averages related to this sub-dimension were examined, it was determined that the arithmetic average of female teachers was 31.16±4.12, and the arithmetic average of male teachers was 32.21±3.90. When the results of the multivariate analysis of variance were evaluated in terms of the school type variable, it was found that there was a significant difference in favor of the teachers working in the primary school in the sub-dimensions of "Providing professional development throughout the school" and "Providing feedback and

supervising the teaching and learning process" (respectively, p:.046, . 030). This difference appears to have a small effect size in practice (η2: .012, .014, respectively). In the sub-dimension of "Providing professional development throughout the school", it was observed that the arithmetic mean value for teachers working in primary schools was 30.20±3.36, and the arithmetic mean value for teachers working in secondary schools was 29.25±5.04. The arithmetic mean values of the sub-dimension of "providing and supervising the teaching and learning process" were calculated as 32.20±3.65 for primary school teachers and 31.24±4.33 for secondary school teachers. Similarly, the results of the research conducted by Yılmaz and Kurşun in 2015 concluded that the mean scores of classroom teachers in the sub-dimensions of instructional leadership were higher than that of branch teachers. However, Yılmaz and Kurşun (2015) concluded that there was no significant differentiation in any of the sub-dimensions of instructional leadership according to teachers' gender, professional seniority and age. When the results of multivariate analysis of variance were evaluated in terms of the seniority variable of our study, it was seen that there was no significant difference between all three sub-dimensions (p>.05). When the results of multivariate analysis of variance are compared in terms of age, it is seen that there is a significant difference between the groups in the sub-dimension of "providing and supervising the teaching and learning process" in favor of teachers aged 44 and over, and this difference has a small effect size in practice (p:.013; η2: .018). When the arithmetic averages for this sub-dimension were examined, it was found that teachers aged 33-43 were 31.22±4.21 and 32.32±3.73 for teachers aged 44 and above. When the results of Derbedek, (2008)'s research were examined, they stated that there was no significant difference in the instructional leadership characteristics of school principals according to age and gender variables. In addition, the researchers say that the instructional leadership characteristics of school principals are noticed more according to the years of seniority of the teachers. When the results of the research conducted by Derbedek (2008) were evaluated according to the branches of the teachers, it was seen that there was a significant differentiation in the dimension of instructional leadership in defining the purpose. In this dimension, they concluded that the arithmetic mean values of the classroom teachers are higher than the branch teachers, and they stated that the classroom teachers think more positively than the branch teachers in defining the school principals' goals, understanding the duties and responsibilities of the staff. In their study, Bozkurt and Soner (2022) stated that school principals often exhibit all of the dimensions of instructional leadership, and that they exhibit the most common behavioral dimension in determining and sharing school goals; he says that the dimension of instructional leadership, which he performs at least, is used to support and develop the teacher. In addition, it has been seen that school principals ensure unity and integration with all stakeholders in the school by clearly sharing the aims of the school, guiding the school personnel, adopting the school and seeing himself as a part of the school by using the instructional leadership characteristics of the school principals (Şişman, 2018). Hosseingholizadeh et al. (2020) also showed that the instructional leadership of school principals contributes to the professional learning of teachers. In similar studies, Köstereliogl u and Olukçu (2019), Yaman and Ezer (2015), Bas and Yıldırım (2010) and Serin (2011) also stated that school principals use instructional leadership characteristics in this way.

When the Pearson correlation results of this study were examined, it was concluded that there was a small relationship between the instructional leadership of school principals and the self-efficacy of female teachers (r=.291, p<.01**). No significant relationship was found between the instructional leadership of school principals and the self-efficacy of male teachers. The rate of explaining the self-efficacy of female teachers by the instructional leadership of school principals was found to be 8.4%. It is thought that the fact that female teachers have a more emotional structure and need more support in the education-teaching process than male teachers is effective in the emergence of this difference. When the results of the simple linear correlation according to the school type variable were examined, no significant correlation was found between the instructional leadership of the school principals and the self-efficacy of the

teachers working in primary schools. However, a small correlation was found between the instructional leadership of school principals and the self-efficacy of teachers working in secondary schools (r=.238, p<.01**). The rate of the instructional leadership of school principals explaining the self-efficacy of teachers working in secondary schools was found to be 5.6%. The reason for this situation is thought to be that teachers working in secondary schools have more responsibilities and need more support. When the simple linear correlation results were examined in terms of seniority variable, it was concluded that there was a moderate relationship between the instructional leadership of school principals and the self-efficacy of teachers with 1-10 years of seniority (r=.373, p<.01**). While a small correlation was found between the instructional leadership of school principals and the self-efficacy of teachers with a seniority of over 21 years (r=.240, p<.01**), no significant relation was found between the instructional leadership of principals and the self-efficacy of teachers with a seniority of 11-20 years. It was determined that the instructional leadership of the school principals explained 13.9% of the self-efficacy of the teachers with a seniority of 1-10 years, and the self-efficacy of the teachers with a seniority of 21 years and above was 5.7%. It is thought that the reason why the instructional leadership of school principals explains the self-efficacy of teachers with a seniority of 1-10 years is higher than that of teachers with a seniority of 21 years and above, because new teachers need more support. In addition, it is thought that the fact that this rate is lower among teachers with a seniority of 21 years and above is due to the fact that teachers are relatively more closed to development and change. At the same time, we can explain the reason why school principals' instructional leadership does not have a significant relationship between the self-efficacy of teachers with 11-20 years of seniority, as teachers with this seniority follow the developments themselves without being dependent on external support. When the simple linear correlation results are evaluated according to the age variable, there is a significant difference between the instructional leadership of school principals and the self-efficacy of teachers aged 33-43 (r=.208, p<.01**) and teachers aged 44 and over (r=.173,). p<.05*) was found to be slightly correlated with self-efficacy. It was determined that the instructional leadership of the school principals explained 4.3% of the self-efficacy of the teachers in the 33-43 age range, and 2.9% of the self-efficacy of the teachers over the age of 44. The reason for this situation can be shown as the fact that teachers aged 44 and over are more closed to change or have higher proficiency due to their experience. In a similar study conducted by Sığrı et al., (2010), significant differences were found between the instructional leadership levels of administrators with a high perception of general self-efficacy and those with a low perception of general self-efficacy. In the studies conducted, it was concluded that the administrators with high self-efficacy perform the instructional leadership better. School principals with high self-efficacy perceptions are successful role models, Lyons and Murphy (1994) state that school principals with high self-efficacy perceptions rely on their personal power resources to influence teachers, not with the limitations imposed by procedures and legislation, and that they rely on expertise, reference and information. states that they bring their inner strengths, such as strength, to the fore. Ma and Marion (2021) also concluded in their study that instructional leadership directly and positively affects teacher efficacy. In addition, researchers stated that instructional leadership contributes to the mission of the school, the execution of the curriculum, and the formation of a positive school learning climate (Ma & Marion, 2021). In the study conducted by Liaquat et al. (2021), it was stated that the instructional leadership of school principals affects teacher efficacy.

The results of the multiple linear regression analysis conducted to determine how the dimensions of providing professional development, defining and communicating shared goals, and providing feedback and supervision to the teaching and learning process, which are thought to have an impact on teachers' self-efficacy, predicted a significant relationship between instructional leadership sub-dimensions and teacher self-efficacy. a relationship (R=.217; R2=.047) was found. It was concluded that these three sub-dimensions explained 4.7% of

teachers' self-efficacy and when the significance tests of the regression coefficients were taken into account, the dimension of defining and communicating shared goals, one of the predictive variables ($p<0.001$), was a significant predictor of teachers' self-efficacy. When the relationships between the predictor variables and teacher self-efficacy are examined, the dimensions of providing professional development throughout the school ($r=0.44$; when the effect of other predictor variables are controlled), defining and communicating shared goals ($r=0.123$; when the effect of other predictive variables is controlled), teaching and learning process It was concluded that there was a correlation at the level of providing feedback and monitoring ($r=0.10$; when the effects of other predictor variables were controlled).

Considering the results obtained from this study, the following recommendations are made:

1. The research can be studied with more samples and different school levels.
2. Partial correlation etc. Variables that have an impact on instructional leadership and self-efficacy variables can be determined with different analyzes.
3. Structural Equation Modeling studies can be done with the variables in this study.
4. In addition to the quantitative results related to instructional leadership and self-efficacy, qualitative studies can contribute to the field.
5. Based on the conclusion that the instructional leadership of school principals predicted teachers' self-efficacy by 4.7%, various experimental et al. studies can be done.
6. Since this research is limited to primary and secondary schools in the city center of Elazig, future studies can be conducted on teachers at different education levels.
7. By keeping the sample group larger, more teachers' opinions can be included.
8. Studies can be conducted on the relationship between instructional leadership and different variables.
9. As a sample group, new studies can be conducted on the opinions of school principals.

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