INTERNATIONAL JOURNAL TRENDS AND DEVELOPMENTS IN EDUCATION
JTADE

4(*1*), 2024, 27-43
www.jtade.com

The Relationship Between Empowering Leadership Characteristics and Entrepreneurial Teacher Behaviours

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Keywords

School Administrators
Entrepreneurial Teacher Behaviour
Leadership

Article Info:
Received : 15-02-2024
Accepted : 15-03-2024
Published : 30-06-2024

Abstract

Leadership characteristics of school administrators and the level of perception of teachers towards leadership behaviors are essential for school success. Being conscious of the relationship between the behaviors that affect teachers' behaviors and their consequences has the potential to improve school achievement. This study aimed to investigate the effects of empowering leadership characteristics of school administrators on teacher entrepreneurship. The research employed the quantitative method, and 400 teachers participated in the study electronically. The data were analysed using descriptive and correlation and regression analysis techniques. The teachers in Sakarya Province participated in the research, and the analyses of their responses revealed that the level of teachers' perceptions of empowering leadership was average and did not differ according to gender. It was observed that the perceptions of coaching for innovative performance decreased as the educational level increased. For this reason, the higher the education levels of the teachers, the higher their expectations of empowering leadership. It determined that the level of risk-taking and initiative-taking of teachers varied by their seniority years and gender, and the perception of risk-taking and initiative-taking was higher in both males and teachers with more seniority years. Junior teachers can develop risk-taking and initiative behaviours through activities that make them feel comfortable.

DOI: 10.5281/zenodo.10849972

To cite this article: Güngör, E., Bayrakcı, M. & Güngör, G. (2024). The relationship between empowering leadership characteristics and entrepreneurial teacher behaviours. *International Journal of Trends and Developments in Education, 4*(1), 27-43.

INTRODUCTION

The concept of entrepreneurship has been following a course of development that reminds its importance again, especially in the last century. It is accepted that entrepreneurship supports the sustainable economic development of societies and global competitiveness (Meyer et al., 2018). All around the world, people are taking initiative to pursue opportunities for their own financial gain, for their personal development, for the sake of their families, for customers' sake, and for the betterment of their societies. (Renko, 2017). Since entrepreneurship is also related to inherent characteristics, the value created as a result of entrepreneurial activities, and both individuals and societies benefit from this created value (Acs et al., 2010). For this reason, it stated that entrepreneurship has contributions at individual, organizational, and national levels. The phenomenon of entrepreneurship requires moving from the personal level to the level of development of the national economy and society. In many studies, entrepreneurship is among the basic skills that people of the 21st century should have. In addition, it is a skill that people of the twenty-first century should have (Karacaoğlu, 2022). Entrepreneurial activities, which are perceived as individual success, also have an essential share in developing communities and countries, and individual entrepreneurship should be considered a humble beginning of large-scale success (Baum and Locke, 2004). Hence, successful enterprises started with a modest dream and evolved into world-recognized companies impacting their communities (Toma et al., 2010; Pan and Akay, 2015; Hisrich et al., 2017). The phenomenon of entrepreneurship may be addressed at different levels, from the individual to organizational and social levels. There are many current studies on these issues, and these studies are growing. There are two different approaches to addressing the entrepreneurship phenomenon in the context of educational institutions. The former is associated with entrepreneurial behaviors and competencies that can reveal the current potential of school leaders (principals) and teachers who are at the center of school systems. According to the latter, the assumption that young generations are the future of societies should be emphasized in entrepreneurship education and pedagogy, which should organize the acquisition of an entrepreneurial mindset and skills. These two approaches support each other and constitute the two main pillars of current entrepreneurship debates in the context of educational institutions (Leffler, 2009; Hoppe, 2016). The starting point of this research, which includes the empowering leadership approach that is considered together with the phenomenon of teacher entrepreneurship, is the thoughts on entrepreneurship applications in educational environments. The main problem of this research is to investigate the effects of multidimensional empowering leadership on teacher entrepreneurship in the context of education institutions. Due to the expectations related to the different roles of school leadership, the empowering leadership approach needs to be implemented in educational institutions.

With the empowering leadership approach, organizational effectiveness goals can be achieved, and the opportunities and threats encountered in this process are transformed into innovative ideas, thus creating an environment where existing resources are used most effectively and efficiently by applying organizational innovation and change management, establishing coherent relationships with external resources (Byun et al., 2020). Empowering leadership has been emphasized recently in different context including job performance and organizational resilience for the school teachers (Limon, 2022; Limon et al., 2023). In the most general sense, the empowering leadership approach is the most excellent support for the changes that will create value in schools. In this way, entrepreneurial competencies and potential will be mobilized as a result of teachers gaining an entrepreneurial mindset (Aras, 2023). For this reason, states are also making great efforts to use the phenomenon of entrepreneurship effectively in many areas of society. In this way, the share of entrepreneurship in the welfare of societies is gradually increasing (Kurtulmuş et al., 2021). It is conceivable that the phenomenon of entrepreneurship can be taught to children at an early age within the framework of the education system. However, educational institutions and schools must first be

provided with an entrepreneurial mentality and culture. In this framework, teachers have essential duties in placing an entrepreneurial mentality in educational institutions. In this context, research should be conducted on empowering leadership behaviours in educational institutions to support teacher entrepreneurship (Önel, 2018). As a result of the literature review, it is noteworthy that research on entrepreneurship, entrepreneurship education, teacher entrepreneurship, and empowering leadership concepts has increased in recent years (Karademir et al., 2018; Keyhani and Kim, 2020; Ho et al., 2020). However, there is no study in which all these concepts are directly addressed. In this respect, this study is hoped to contribute to the literature.

Empowering leadership is an innovative approach that follows scientific and technological developments and ensures the effective and efficient management of schools in the context of educational institutions (Dağlı and Kalkan, 2021). Thus, the concept of entrepreneurial leadership that will emerge can be helpful in the process of providing entrepreneurial behaviors and competencies to teachers and students in schools. In this way, schools can be managed better, and better results can be achieved (Boduroğlu, 2023). With the implementation of empowering school leadership, it will be possible to provide students with an entrepreneurial mentality and skills as a result of mobilizing the entrepreneurial potential of teachers (Akkaya and Çetin, 2024). The primary purpose of this research is to create a multidimensional theoretical framework by using the concept of empowering leadership within the framework of educational institutions and to reveal whether there is a relationship between the concepts of empowering leadership and teacher entrepreneurship and the nature of the relationship. Thus, school principals' perceptions of empowering leadership and the impact of these perceptions on teachers' entrepreneurial mindset will be analyzed. To achieve this research aim, answers to the following sub-problems were sought within the framework of the quantitative stages of the study;

Sub Problems of the Research

1. According to teachers' perceptions, which empowering leadership behaviors are higher or lower?

2. According to teachers' perceptions, at what level do school principals exhibit empowering leadership behaviors?

3. Is there a significant difference between the empowering leadership behaviors of school principals by teacher characteristics (such as age, gender, branch, seniority, etc.) and principals (by gender) and the characteristics of the school (economic status and whether it is a project school)?

4. What are the entrepreneurship levels of teachers?

5. How does the entrepreneurship level of teachers differ by teacher characteristics (such as age, gender, branch, seniority, etc.) and principals (according to gender) and the economic status of the school and whether it is a project school?

6. Do school principals' empowering leadership behaviors perceived by teachers (followers) significantly explain teacher entrepreneurship?

METHOD

A quantitative method was used in our research. School principals' views on empowering leadership were examined within the framework of the relationship between empowering leadership and teacher entrepreneurship variables. In the quantitative research phase of the study, the relational screening model design was preferred. Our research data were collected in the 2022-2023 academic year. Our research population consists of teachers working in public schools in Sakarya province. The research sample consists of 400 teachers. In this study, data were collected through online

questionnaires. Information about the scales is given below. A six-item form was used to obtain information about themselves, the school principal, and school characteristics. The Empowering Leadership scale developed by Konczak et al. (2000) was initially accepted to have seven dimensions, each represented by three items. These dimensions are Empowerment, Responsibility, Self-Determination, Personal Problem Solving, Information Exchange, Skill Development, and Creative Performance Coaching. To determine whether the items were comprehensible, the researchers made corrections by consulting the opinions of managers, psychologists, and experts. To improve the model's fit, the researchers reorganized the scale by considering both conceptual and statistical criteria. As a result, only the items in the problem-solving sub-dimension related to the items in other dimensions were removed and one item in the information-sharing sub-dimension was also released. Finally, 17 items remained on the scale. The goodness of fit indices of these items was analyzed from a one-factor structure to a six-factor structure. The responses to the Empowering Leadership Scale are organized in a way that requires a choice between strongly disagree (1) and strongly agree (5) (Konan and Çelik, 2018).

The Entrepreneurial Teacher Behaviours Scale" is a scale developed by Van Dam, Schipper, and Runhaar (2010) that measures the level of teachers' perception of their entrepreneurial behaviors. The scale was first adapted into Turkish by Akkaya and Çetin (2022) by obtaining author permission. There are 3 dimensions and 13 items on the scale. In the dimension of Recognising Opportunities, there are items 1, 8, 13, and 5; in the dimension of Risk Taking, there are items 3, 6, 10, and 12; and finally, in the dimension of Taking Initiative, there are items 11, 4, 9, 7, and 2.

SPSS software was used to analyze the quantitative data collected to examine the relationships between empowering leadership and teacher entrepreneurship. Percentage, arithmetic mean, frequency, and standard deviation were used for descriptive analyses of empowering leadership, and correlation and regression analyses were used for the relationship between empowering leadership and teacher entrepreneurship. It has been clarified why correlation analysis and regression analysis were preferred as follows; Correlation analysis is used in this study to determine the strength and direction of the relationship between empowering leadership and teacher entrepreneurship. Regression analysis is used to measure the effect of one variable on another variable. In this study, regression analysis is performed to understand how much empowering leadership explains or helps to predict teacher entrepreneurship.

FINDINGS

Table 1. *Findings Related to Demographic Characteristics of the Sample*

Demographic Features		*Frequency (n)*	*Percentage (%)*
Gender	Female	190	47.50
	Male	210	52.50
Marital Status	Married	298	74.50
	Single	102	25.50
Type of school you work in	Primary School	208	52.00
	Middle School	135	33.75
	High School	57	14.25
Professional Seniority	1-5 Years	54	13.50
	6-10 Years	107	26.75
	11-15 Years	77	19.25
	16 years and over	162	40.50
	1-3 Years	166	41.50

Your tenure in your organization	4-6 Years	99	24.75
	7 years and over	135	33.75
Level of Education	Bachelor's degree	312	78.00
	Postgraduate	88	22.00
Total		400	100

Demographic characteristics of the participants are shown in Table 1. According to the table, 52.5% of the participant teachers are male, 74.5% of them are married, 52% of them work in primary schools, 40.5% of them have a professional seniority of 16 years or more, 41.5% of them have been working in their current institution for 1-3 years, and 78% of the participant teachers have a bachelor's degree.

Table 2. *Descriptive Findings Related to School Principals' Empowering Leadership Behaviours Scale According to Teachers' Perceptions*

Scale	*n*	*x̄*	*ss*	*Perception Level*
Authorization and Responsibility	400	3.75	0.73	High
Self-Determination	400	3.63	0.89	High
Knowledge Sharing	400	3.65	0.90	High
Skill Development	400	3.61	0.94	High
Coaching for Innovative Performance	400	3.55	0.94	High
Empowering Leadership Behaviours	400	3.64	0.79	High

When the empowering leadership behaviors scale was examined, it was found that the mean of the scale was high (x̄=3,64) in general. When the averages in terms of the sub-dimensions of the scale were examined, authorization and responsibility levels were high (x̄=3,75), self-determination levels were high (x̄=3,63), information sharing levels were high (x̄=3,65), skill development levels were high (x̄=3,61), coaching levels for innovative performance were high (x̄=3,55). In this context, it can be said that teachers' perceptions of their school principals' empowering leadership behaviors are at a high level.

Table 3. *Normality Test Results for the Distribution of Data Related to Perspectives on Empowering Leadership Behaviours Scale*

Scale	*Statistics*	*n*	*p*	*x̄*	*Median*	*Skewness*	*Kurtosis*
Authorization and Responsibility	0.120	400	0.000	3.75	4.00	-0.920	1.173
Self-Determination	0.156	400	0.000	3.63	3.66	-0.680	0.232
Knowledge Sharing	0.103	400	0.000	3.65	4.00	-0.598	-0.062
Skill Development	0.118	400	0.000	3.61	4.00	-0.661	0.141
Coaching for Innovative Performance	0.121	400	0.000	3.55	3.80	-0.676	-0.003
Empowering Leadership Behaviours	0.091	400	0.000	3.64	3.77	-0.627	0.089

Measures of central tendency were used to determine the distribution of the data. Median, arithmetic mean, kurtosis, and skewness coefficients were analyzed. As a result of the central tendency measurements, it was determined that the data used in the study were normally distributed since the median and mean values were close values to the skewness and kurtosis values, which were within the normal value limits, and parametric analyses were performed.

Table 4. *Independent Sample t-Test Results for Determining the Differentiation of Teachers' Perceptions of Empowering Leadership Behaviours According to Gender*

Scale	*Gender*	*n*	*x̄*	*ss*	*t*	*p*

Authorization and Responsibility	Female	190	3.76	0.70	0.082	0.280
	Male	210	3.75	0.76		
Self-Determination	Female	190	3.62	0.88	-0.128	0.920
	Male	210	3.63	0.91		
Knowledge Sharing	Female	190	3.65	0.90	0.037	0.427
	Male	210	3.65	0.90		
Skill Development	Female	190	3.64	0.90	0.534	0.659
	Male	210	3.59	0.97		
Coaching for Innovative Performance	Female	190	3.53	0.96	-0,410	0.436
	Male	210	3.57	0.93		
Empowering Leadership Behaviours	Female	190	3,64	0.78	-0,030	0.578
	Male	210	3,64	0.80		

Independent sample t-test analysis was applied to understand whether the participants' perceptions of empowering leadership behaviors differed in terms of gender variables. Participants' perceptions of empowering leadership behaviors did not show a statistically significant difference according to gender ($p>0.05$). From this point of view, gender is not seen as an influential variable in terms of sub-dimensions of empowering leadership behaviours. In other words, the participants' gender (teachers) does not significantly affect their perceptions of school principals' empowering leadership behaviors.

Table 5. *t-Test Results for the Determination of the Differentiation of Teachers' Perceptions of Empowering Leadership Behaviours According to Educational Status Groups*

Scale	*Education Status*	*n*	*x̄*	*ss*	*t*	*p*
Authorization and Responsibility	Bachelor's degree	312	3.76	0.72	0.337	0.243
	Postgraduate	88	3.73	0.78		
Self-Determination	Bachelor's degree	312	3.66	0.89	1.453	0.900
	Postgraduate	88	3.50	0.91		
Knowledge Sharing	Bachelor's degree	312	3.68	0.89	1.412	0.930
	Postgraduate	88	3.52	0.92		
Skill Development	Bachelor's degree	312	3.64	0.68	1.332	0.509
	Postgraduate	88	3.48	1.00		
Coaching for Innovative Performance	Bachelor's degree	312	3.61	0.91	2.335	0.023
	Postgraduate	88	3.33	1.06		
Empowering Leadership Behaviours	Bachelor's degree	312	3.67	0.78	1.646	0.657
	Postgraduate	88	3.50	0.82		

Independent sample t-test analysis was performed to determine whether the participants' perceptions of empowering leadership behaviors differed according to educational status. It was concluded that the participants' perceptions of coaching for innovative performance sub-dimension showed a significant difference according to the educational status variable ($p<0.05$). Teachers with undergraduate ($\bar{x}$ =3.61) education levels have higher perceptions of coaching for innovative performance than teachers with graduate ($\bar{x}$ =3.33) education levels.

Table 6. *ANOVA Test Results for the Determination of the Differentiation of Teachers' Perceptions of Empowering Leadership Behaviours in Terms of Educational Level Groups*

Scale	*Type of school you work in*	*n*	*x̄*	*ss*	*F*	*p*
Authorization and Responsibility	Primary School	208	3.74	0.58	0.085	0.916
	Middle School	135	3.75	0.64		
	High School	57	3.78	0.65		
Self-Determination	Primary School	208	3.68	0.60	0.952	0.423

	Middle School	135	3.53	0.64		
	High School	57	3.62	0.73		
Knowledge Sharing	Primary School	208	3.67	0.59	0.206	0.832
	Middle School	135	3.60	0.63		
	High School	57	3.66	0.68		
Skill Development	Primary School	208	3.64	0.66	0.555	0.585
	Middle School	135	3.63	0.69		
	High School	57	3.51	0.72		
Coaching for Innovative Performance	Primary School	208	3.58	0.60	0.239	0.840
	Middle School	135	3.51	0.65		
	High School	57	3.53	0.63		
Empowering Leadership Behaviours	Primary School	208	3.66	0.63	0.190	0.862
	Middle School	135	3.60	0.66		
	High School	57	3.62	0.73		

ANOVA analysis was applied to understand whether the participants' perceptions of empowering leadership behaviors differed according to their level of education. The difference between the participants' perceptions of empowering leadership behaviors according to the level of education in which they work is not statistically significant (p>0.05). From this point of view, the variable of the level of education could be more efficient in terms of the sub-dimensions of empowering leadership behaviours.

Table 7. *ANOVA Test Results for the Differentiation of Teachers' Perceptions of Empowering Leadership Behaviours in terms of Professional Seniority Groups*

Scale	*Professional Seniority*	*n*	*x̄*	*ss*	*F*	*p*
Authorization and Responsibility	1-5 years	54	3.81	0.68	0.757	0.519
	6-10 years	107	3.76	0.74		
	11-15 years	77	3.70	0.67		
	16 years and over	162	3.67	0.87		
Self-Determination	1-5 years	54	3.59	0.92	0.694	0.556
	6-10 years	107	3.57	0.92		
	11-15 years	77	3.75	0.79		
	16 years and over	162	3.67	0.91		
Knowledge Sharing	1-5 years	54	3.69	0.90	0.203	0.894
	6-10 years	107	3.62	0.91		
	11-15 years	77	3.65	0.84		
	16 years and over	162	3.61	0.96		
Skill Development	1-5 years	54	3.62	0.94	0.342	0.795
	6-10 years	107	3.57	0.88		
	11-15 years	77	3.70	0.95		
	16 years and over	162	3.57	1.03		
Coaching for Innovative Performance	1-5 years	54	3.59	0.98	0.261	0.853
	6-10 years	107	3.58	0.88		
	11-15 years	77	3.50	0.94		
	16 years and over	162	3.50	0.97		
Empowering Leadership Behaviours	1-5 years	54	3.66	0.79	0.128	0.944

	6-10 years	107	3.62	0.79
	11-15 years	77	3.64	0.76
	16 years and over	162	3.60	0.84

ANOVA analysis was conducted to understand whether the participants' perceptions of empowering leadership behaviors differed according to professional seniority. There is no significant difference in the participants' perceptions of empowering leadership behaviors according to professional seniority groups (p>0.05). From this point of view, we cannot say that professional seniority is an influential variable among the sub-dimensions of empowering leadership behaviours.

Table 8. *Teachers' Perceptions of Empowering Leadership Behaviours and Duration of Working with the School Administrator ANOVA Test Results for Differentiation in Terms of Groups*

Scale	*Working Time at School*	*n*	*x̄*	*ss*	*F*	*p*
Authorization and Responsibility	1-3 years	166	3.75	0.74	0.955	0.255
	4-6 years	99	3.81	0.63		
	7 years and over	135	3.64	0.87		
Self-Determination	1-3 years	166	3.62	0.86	0.313	0.688
	4-6 years	99	3.68	0.94		
	7 years and over	135	3.58	0.96		
Knowledge Sharing	1-3 years	166	3.65	0.88	0.570	0.441
	4-6 years	99	3.71	0.92		
	7 years and over	135	3.54	0.96		
Skill Development	1-3 years	166	3.61	0.91	0.294	0.660
	4-6 years	99	3.66	0.97		
	7 years and over	135	3.54	1.03		
Coaching for Innovative Performance	1-3 years	166	3.55	0.90	0.757	0.339
	4-6 years	99	3.62	1.00		
	7 years and over	135	3.43	1.02		
Empowering Leadership Behaviours	1-3 years	166	3.63	0.77	0.698	0.370
	4-6 years	99	3.69	0.81		
	7 years and over	135	3.54	0.85		

ANOVA analysis was conducted to understand whether the participants' perceptions of empowering leadership behaviors differed in terms of working time with the school administrator. The difference between the participants' perceptions of empowering leadership behaviors according to the groups of working time with the school administrator was not statistically significant (p>0.05). From this point of view, working time with the school administrator should not be seen as an influential variable in terms of empowering leadership behaviors.

Table 9. *Descriptive Findings of Entrepreneurial Behaviours Scale*

Scale	*n*	*x̄*	*ss*	*Perception Level*
Opportunity recognition	400	3.75	0.67	High
Taking Initiative	400	3.93	0.60	High
Risk Taking	400	3.21	0.82	Average
Entrepreneurial Behaviour Scale	400	3.65	0.56	High

When the scale of entrepreneurial behaviors was examined, it was found that the scale average was high (x̄=3.65) in general. When the averages were reviewed in terms of the sub-dimensions of the

scale, it was found that the level of opportunity recognition was high (x̄=3.75), the level of taking initiative was high (x̄=3.93) and the level of risk-taking was moderate (x̄=3.21). In this context, it can be said that the perceptions of the teachers working in the school about entrepreneurial behaviors are at a high level.

Table 10. *Independent Sample t-Test Results for Determining the Differentiation of Teachers' Perceptions of Entrepreneurial Behaviours in Terms of Gender Groups*

Scale	*Gender*	*n*	*x̄*	*ss*	*t*	*p*
Opportunity recognition	Female	190	3.76	0.66	0.369	0.712
	Male	210	3.73	0.69		
Taking Initiative	Female	190	3.92	0.62	-0.468	0.640
	Male	210	3.95	0.58		
Risk Taking	Female	190	3.07	0.86	-3.35	0,001
	Male	210	3.34	0.77		
Entrepreneurial Behaviour Scale	Female	190	3.61	0.58	-1.54	0.123
	Male	210	3.69	0.55		

Independent sample t-test analysis was preferred to determine whether the participants' perceptions of entrepreneurial behaviors differed in terms of gender variables. According to the analysis results, the participants' perceptions of entrepreneurial behaviour do not vary according to gender ($p>0.05$). According to the sub-dimensions of entrepreneurial behavior, the perception of opportunity recognition and taking the initiative does not differ according to gender ($p>0.05$). Still, the perception of risk-taking differs according to gender ($p<0.01$). In other words, the perception of male teachers is higher than female teachers.

Table 11. *t-Test Results for the Differentiation of Teachers' Perceptions of Entrepreneurial Behaviour in Terms of Educational Status Groups*

Scale	*Education*	*n*	*x̄*	*ss*	*t*	*p*
Opportunity recognition	Bachelor's degree	312	3.70	0.69	-2.763	0.006
	Postgraduate	88	3.90	0.56		
Taking Initiative	Bachelor's degree	312	3.91	0.60	-1.124	0.265
	Postgraduate	88	4.00	0.60		
Risk Taking	Bachelor's degree	312	3.17	0.83	-1.984	0.040
	Postgraduate	88	3.36	0.79		
Entrepreneurial Behaviour Scale	Bachelor's degree	312	3.62	0.57	-2.35	0.020
	Postgraduate	88	3.77	0.52		

Independent sample t-test analysis was performed to understand whether the participants' perceptions of entrepreneurial behavior differed in education level. According to the analysis results, the participants' perceptions of entrepreneurial behavior differ according to their level of education ($p<0.05$). According to the sub-dimensions of entrepreneurial behavior, the perception of taking the initiative does not differ according to the level of education ($p>0.05$). Still, the perception of opportunity recognition and taking risks differs according to the level of education ($p<0.05$). In other

words, the perception of risk-taking and opportunity recognition of teachers with postgraduate education is higher than the perception of teachers with undergraduate education.

Table 12. *ANOVA Test Results for the Differentiation of Teachers' Perceptions of Entrepreneurial Behaviour According to the Educational Level Groups*

Scale	*Type of school you work in*	*n*	*x̄*	*ss*	*F*	*p*
Opportunity recognition	Primary School	208	3.77	0.65	0.640	0.528
	Middle School	135	3.69	0.75		
	High School	57	3.79	0.56		
Taking Initiative	Primary School	208	3.96	0.60	0.657	0.519
	Middle School	135	3.88	0.61		
	High School	57	3.96	0.58		
Risk Taking	Primary School	208	3.23	0.81	0.646	0.525
	Middle School	135	3.23	0.84		
	High School	57	3.10	0.83		
Entrepreneurial Behaviour Scale	Primary School	208	3.67	0.55	0.367	0.693
	Middle School	135	3.62	0.59		
	High School	57	3.64	0.54		

ANOVA analysis was performed to determine whether the participants' perceptions of entrepreneurial behavior differed according to the level of education in which they were employed. Participants' perceptions of entrepreneurial behavior differ according to their level of education ($p>0.05$).

Table 13. *ANOVA Test Results for the Differentiation of Teachers' Perceptions of Entrepreneurial Behaviour According to Professional Seniority Groups*

Scale	*Professional Seniority*	*n*	*x̄*	*ss*	*F*	*p*
Opportunity recognition	1-5 years	54	3.52	0.76	4.648	0.003
	6-10 years	107	3.68	0.65		
	11-15 years	77	3.71	0.75		
	16 years and over	162	3.88	0.58		
Taking Initiative	1-5 years	54	3.72	0.74	3394	0.018
	6-10 years	107	3.91	0.55		
	11-15 years	77	3.93	0.61		
	16 years and over	162	4.02	0.56		
Risk Taking	1-5 years	54	2.27	0.85	2.146	0.094
	6-10 years	107	3.31	0.81		

	11-15 years	77	3.27	0.79		
	16 years and over	162	3.20	0.83		
Entrepreneurial Behaviour Scale	1-5 years	54	3.43	0.65	3.658	0.013
	6-10 years	107	3.65	0.55		
	11-15 years	77	3.66	0.57		
	16 years and over	162	3.72	0.52		

ANOVA analysis was performed to determine whether the participants' perceptions of entrepreneurial behavior differed in terms of professional seniority. It was found that the participants' perceptions of entrepreneurial behavior differed according to professional seniority ($p<0.05$). According to the sub-dimensions of entrepreneurial initiative behavior, the perception of risk-taking does not differ according to professional seniority ($p>0.05$), but the perception of opportunity recognition and taking the initiative differs according to professional seniority ($p<0.05$).

Table 14. *Tukey Test Results of Differentiation of Teachers' Risk-Taking Perceptions According to Professional Seniority Groups*

(I) Professional Seniority	*(J) Professional Seniority*	*Mean Difference (I-J)*	*Std. error*	*p*
1-5 years	6-10 years	-0.15447	0.11126	,507
	11-15 years	-0.18326	0.11831	,409
	16 years and over	-0.35648*	0.10474	,004
6-10 years	1-5 years	0.15447	0.11126	,507
	11-15 years	-0.02880	0.09961	,992
	16 years and over	-0.20202	0.08303	,073
11-15 years	1-5 years	0.18326	0.11831	,409
	6-10 years	0.02880	0.09961	,992
	16 years and over	-0.17322	0.09226	,239
16 years and over	1-5 years	.35648*	.10474	,004
	6-10 years	.20202	.08303	,073
	11-15 years	.17322	.09226	,239

Tukey test was conducted to determine between which seniority groups the risk-taking perception was between. As a result, there is a significant difference between the risk-taking perception of teachers with 1-5 years of seniority and teachers with 16 years or more seniority. Accordingly, the risk-taking perception of teachers with 16 years and more seniority was higher.

Table 15. *Tukey Test Results of Differentiation of Teachers' Perceptions of Taking Initiative in terms of Professional Seniority Groups*

(I) Professional Seniority	*(J) Professional Seniority*	*Mean Difference (I-J)*	*Std. error*	*p.*
1-5 years	6-10 years	-0.18435	0.10007	0.255
	11-15 years	-0.21174	0.10640	0.193
	16 years and over	-0.29630*	0.09420	0.010
6-10 years	1-5 years	0.18435	0.10007	0.255
	11-15 years	-0.02738	0.08958	0.990
	16 years and over	-0.11194	0.07468	0.439
11-15 years	1-5 years	0.21174	0.10640	0.193
	6-10 years	0.02738	0.08958	0.990

	16 years and over	-0.08456	0.08298	0.738
16 years and over	1-5 years	0.29630*	0.09420	0.010
	6-10 years	0.11194	0.07468	0.439
	11-15 years	0.08456	0.08298	0.738

Tukey test was conducted to understand which seniority groups the perception of taking the initiative is between. As a result, it is seen that the perception of taking the initiative of teachers with 1-5 years of seniority is different from the perception of taking the initiative of teachers with 16 years of seniority and above. Teachers with 16 years or more of professional seniority have a higher perception of taking initiative.

Table 16. *Tukey Test Results of Differentiation of Teachers' Perceptions of Entrepreneurial Behaviour in terms of Professional Seniority Groups*

(I) Professional Seniority	*(J) Professional Seniority*	*Mean Difference (I-J)*	*Std. error*	*p.*
1-5 years	6-10 years	-0.22117	0.09420	0.089
	11-15 years	-0.23086	0.10016	0.099
	16 years and over	-0.29345*	0.08867	0.006
6-10 years	1-5 years	0.22117	0.09420	0.089
	11-15 years	-0.00969	0.08433	0.999
	16 years and over	-0.07228	0.07030	0.733
11-15 years	1-5 years	0.23086	0.10016	0.099
	6-10 years	0.00969	0.08433	0.999
	16 years and over	-0.06259	0.07811	0.854
16 years and over	1-5 years	0.29345*	0.08867	0.006
	6-10 years	0.07228	0.07030	0.733
	11-15 years	0.06259	0.07811	0.854

Tukey test was conducted to understand which seniority groups the perception of entrepreneurial behavior is. Accordingly, there is a difference between teachers with 1-5 years of seniority and teachers with 16 years or more of professional seniority in entrepreneurial behavior perception. Teachers with 16 years of professional seniority had a higher perception of entrepreneurial behavior.

Table 17. *ANOVA Test Results for Determining the Differentiation of Teachers' Perceptions of Entrepreneurial Behaviour in Terms of Working Time with School Administrator Groups*

Scale	*Working Time at School*	*n*	*x̄*	*ss*	*F*	*p*
Opportunity recognition	1-3 years	166	3.73	0.69	0.104	0.901
	4-6 years	99	3.76	0.73		
	7 years and over	135	3.76	0.60		
Taking Initiative	1-3 years	166	3.88	0.64	0.860	0.424
	4-6 years	99	3.97	0.59		
	7 years and over	135	3.96	0.56		

Risk Taking	1-3 years	166	3.23	0.86	0.183	0.833
	4-6 years	99	3.23	0.75		
	7 years and over	135	3.18	0.84		
Entrepreneurial Behaviour Scale	1-3 years	166	3.63	0.59	0.207	0.813
	4-6 years	99	3.68	0.57		
	7 years and over	135	3.66	0.53		

ANOVA analysis was performed to determine whether the participants' perceptions of entrepreneurial behaviors differed in terms of working time with the school administrator. It was found that the participants' perceptions of entrepreneurial behaviors did not differ regarding working time with the school administrator groups (p>0.05).

Table 18. *The Relationship Between Empowering Leadership and Entrepreneurial Behaviour*

	n	*x̄*	*ss*	*Empowering Leadership Behaviours*	*Entrepreneurial Behaviour*
Empowering Leadership Behaviours	400	3.71	0.76	1	0,287**
Entrepreneurial Behaviour	400	3.65	0.57	0.287**	1

Pearson correlation analysis was conducted to understand the relationship between empowering leadership behavior and entrepreneurial behavior. According to the analysis results, there is a low-level significant relationship between empowering leadership behavior and entrepreneurial behavior (r=0.287; p<0.01).

Table 19. *The Effect of Empowering Leadership on Entrepreneurial Behaviour*

	Beta	*SH*	*Standardize Beta*	*t*	*p*	*R*	*R2*	*F*
(Constant)	2.892	0.136	-	21.073	0.000			
Entrepreneurial Behaviour	0.214	0.036	0.287	5.973	0.000	0.287	0.080	35.671

Simple linear regression analysis was preferred to reveal the effect of empowering leadership behavior on entrepreneurial behavior. According to the results of the study, empowering leadership impact behavior has a statistically significant impact on entrepreneurial behavior (B=0.287; R2=0.080; F=35.671; p=<0.01). Accordingly, teachers' perception of empowering leadership behavior explains 8% of the variance in the perception level of entrepreneurial behavior.

DISCUSSION, CONCLUSION AND SUGGESTIONS

Empowering leadership refers to a leadership style that aims to maximize the potential of team members by supporting, motivating, and empowering them. Empowering leaders support team members to increase their emotional and psychological well-being. Instead of focusing only on the results of the work, empowering leaders care about the work itself and the quality of relationships with colleagues. When empowering leaders create an environment that encourages entrepreneurial behaviors, teachers tend to behave more entrepreneurially. In this way, managers in educational institutions establish better relationships with teachers who are team members, and employees in educational institutions feel more comfortable and accessible as a result of empowering leadership practices in educational institutions, emotional and psychological well-being levels of team members (teachers) increase. This is a situation that increases performance in many areas.

In this study, the relationship between empowering leadership behaviors exhibited by school principals and entrepreneurial teacher behaviors was tried to be determined, and it was concluded that empowering leadership behaviors positively affect entrepreneurial teacher behaviors. From the

demographic characteristics of the research sample, it is seen that the number of female and male participants is very close to each other, the number of married participants is around 75% when marital status is considered, and half of them are primary school teachers when the type of school they work in is entertained. In addition, in terms of professional seniority, it is seen that the majority of the participants consist of "6-10" and "16 years and above" teachers, the number of participants with bachelor's degrees is around 78%, and the number of teachers with 1-3 years of service in the institution is higher than the others.

According to the analysis results, perceptions of entrepreneurial behaviour differ according to the level of education. When the variables of "initiative taking the initiative, recognizing opportunities, taking a risk" from the sub-dimensions of entrepreneurial behavior are concerned, the perception of taking the initiative does not differ according to the level of education, but the perception of recognizing opportunities and taking risk varies according to the level of education. In other words, the perception of taking risks and identifying opportunities of teachers with postgraduate education is higher than that of teachers with undergraduate education. In addition, teachers' perceptions of 'recognizing opportunities' and 'taking risks,' which are sub-dimensions of entrepreneurial behavior perceptions, differ according to professional seniority groups. It was understood that teachers with more seniority years had higher perception levels of recognizing opportunities and taking initiative. This situation can be interpreted as the effect of experience on teacher behaviors. It was found that risk-taking perceptions differed according to years of professional seniority, and it was determined that the risk-taking levels of teachers increased as their years of professional life progressed. In the entrepreneurial behavior scale's sub-dimension 'Risk Taking', the risk-taking perception of male teachers is higher than that of female teachers. Based on this situation, it is understood that gender is determinative in risk-taking behaviors. In addition, teachers who stay away from risk-taking behaviors in the first years of teaching feel more comfortable in the following years and show behavioral changes. Likewise, the risk-taking and entrepreneurial behavior perception of teachers with professional seniority of 16 years or more is higher. All the results obtained show that there is a relationship between empowering leadership and entrepreneurship perception, and its effect on entrepreneurship is high.

The findings align with existing literature, particularly as highlighted by Ertürk (2022), emphasizing that empowering school leaders support their teachers in initiating entrepreneurial activities. School leaders are urged to enhance perceived organizational support through entrepreneurial leadership, as discussed by Kasim (2021) and Sarıkaya and İlğan (2022). This study also reveals the necessity for empowering leaders to act as entrepreneurial leaders, fostering an entrepreneurial context. Woo et al. (2022) discuss how teacher leadership relates to decision-making and teacher well-being, concluding that empowering leadership behavior can significantly impact teachers' well-being, a result supported by our research. Pihie et al. (2014) underscore a significant relationship between teachers' perceptions of principals' entrepreneurial leadership practices and school innovativeness. Additionally, Ülküdür et al. (2015) find that the entrepreneurial features of teachers are crucial for school leaders' behavior.

According to the findings of the study, the following suggestions may be made to shed light on the practice and future research:

- Conducting studies to make new teachers feel more secure may increase entrepreneurial behaviors.

- Considering the effect of empowering leadership behaviors on entrepreneurial behaviors, it can be provided that school principals who work in close regions can meet at certain intervals in joint meetings to improve their leadership behaviors to increase the opportunities for the development of

school administrators, increase the communication among school principals, and improve the exchange of information.

• To contribute to the development of principals, it can be ensured that they can visit schools in different provinces, regions, and even in divergent countries.

• The research group of the study can be expanded.

• The research can be expanded to compare between different regions.

• It is worth investigating why teachers with less seniority are perceived as less entrepreneurial.

AUTHOR CONTRIBUTION

The first author has contributed substantially to the conception, the conception and design, analysis, and interpretation of data.

The second author contributed to the collection and design of the data and clarity of the data by making corrections, which completes the integrity about content.

The third author has been involved in collecting data and revising it critically for important intellectual content.

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