Okul Yöneticilerinin İnisiyatif Alma Düzeyleri ile Problem Çözme Becerileri Arasındaki İlişki [1]

The Relationship between Initiative Taking Levels and Problem Solving Skills of School Administrators [1]

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ÖZ: Bu araştırma, okul yöneticilerinin inisiyatif alma düzeyleri ile problem çözme becerileri arasındaki ilişkiyi incelemek amacıyla yapılmıştır. Araştırma betimleyici ilişkisel tarama desenindedir. Örneklem, Orta Karadeniz'de bir ilde bulunan 282 okulöncesi, ilkokul, ortaokul ve lise yöneticisinden oluşmaktadır. Veriler Okul Müdürlerinde Kişisel İnisiyatif Ölçme Aracı ve Problem Çözme Envanteri aracılığıyla toplanmıştır. Değişkenler arasındaki ilişkiler Pearson korelasyon katsayıları ve çoklu doğrusal regresyon analizi ile incelenmiştir. Araştırma sonuçları aceleci ve kaçıngan problem çözme yaklaşımları ile inisiyatif almanın tüm alt boyutları arasında anlamlı negatif ilişki olduğunu gösterirken, bu ilişkilerin düşünen, kendine güvenli, değerlendirici ve planlı yaklaşımlarda anlamlı ve pozitif olduğu saptanmıştır. Çoklu doğrusal regresyon analizi sonuçları okul yöneticilerinin inisiyatif almalarının göreli en önemli yordayıcısının kendine güvenli problem çözme yaklaşımı olduğunu göstermiştir. Sonuç olarak, araştırma okul yöneticilerinin etkili problem çözme becerilerinin desteklenmesinin inisiyatif alma düzeylerini arttıracağını ortaya koymaktadır.

Anahtar sözcükler: Okul yöneticisi, inisiyatif alma, problem çözme

ABSTRACT: This research aims to examine the relationship between initiative taking levels and problem solving skills of school administrators. The research was designed as a descriptive relational survey. The sample consists of 282 preschool, primary, secondary and high school administrators working in public schools from a central Black Sea Region province of Turkey. Data were collected through the Personal Initiative Measurement Tool for School Principals and the Problem Solving Inventory. Relationships were tested through Pearson's correlation and multiple linear regression analyses. Results indicated that there were negative significant relationships between the impulsive and avoidant problem solving styles and all sub-dimensions of taking initiative, while the relationships

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were significant and positive for reflective style, problem solving confidence, monitoring, and planfulness. Multiple linear regression analyses showed that the most powerful predictor of school administrators' taking initiative was the problem solving confidence. It was concluded that supporting school principals for effective problem solving skills may increase their level of taking initiative.

Keywords: School administrator, initiative taking, problem solving

1. INTRODUCTION

Societies rely most on education to equip new generations with the qualities required by the age, and build a better future. As Akın (2019) stated, the fact that the education systems reach the specified goals depends on the effectiveness of the administration in schools. School administrators having various managerial skills will ensure that schools and the education system as a whole are effective. One of these managerial skills is the initiative taking behaviour. In this study, the initiative taking behaviours of school administrators' were discussed on the theoretical basis of the concept of "personal initiative" (Frese, Fay, Hilburger, Leng, & Tag, 1997; Frese & Fay, 2001), which was conceptualized by the German organizational behaviour researcher Frese and his friends. For this research, initiative taking behaviour can be defined as school administrators' doing things that are not covered by job descriptions or legislation and which they realize proactively and persistently.

The task of the school administration is to keep the school alive in accordance with its aims (Bursalıoğlu, 2019) and to ensure its development (Taymaz, 2019), by using all human and substance resources in the school in the most effective way. While keeping the school alive is possible with a relatively passive management approach, developing the school requires a more active approach. Although school administrators, who can execute the orders of the Ministry in the best way, seem sufficient enough for today, the school principal sought in the future is expected to be the person who challenges the Ministry and helps the centre to realize its goals (Akın, 2019, p. 81). Because the social structure and conditions that are in a rapid change constantly put new responsibilities on the school administrators. Being able to fulfil the requirements of contemporary conditions, to find satisfactory solutions to today's organization and management problems requires different, new and current approaches instead of the understanding and approaches valid yesterday (Balcı, 2014). It is also expected from school administrators to cope with these problems brought by the contemporary life order and to apply some necessary updates to education (Şişman, 2004, p. 20). The school principal should see himself or herself as an architect of change, rather than advocating the current situation or guarding the door of the school during the intervention to this situation (Balcı, 2014; Şişman, Açıkalın, & Turan, 2018). Taking initiative means initiating change in a sense. Therefore, it can be said that school administrators should take the initiative in order to transform their schools in accordance with the requirements of the modern world and society.

Central planning of change and reform efforts alone is not sufficient. Şişman et al (2018), stated that frequent system changes and reforms are made to improve the quality of education in Turkey. The expected benefit from many radical system changes to date has not been achieved. The biggest reason for this is that the changes cannot be made to the teachers and the schools as desired. It is perceived day by day that the anticipated improvement in Turkish education system will be school based. As Raeisi and Noor Mohammadian (2016) stated, the educational policies adopted by central authorities do not make sense unless they are reflected in practice. The success of innovations in the field of education depends largely on school-centred initiatives and school administrators. Furthermore, Akın (2016) reports that Ministry-centred initiatives necessitate school-based efforts and new initiatives by school administrators. Similarly, Şişman (2004) states that school reform studies and innovations planned in the education system should start from school, be school-centred, and school administrators should lead the innovation process. In this process, school administrators' leadership only within the framework of their legal powers and legislation may not be sufficient alone to achieve success (p. 50). In this sense, taking initiative in the process of both conducting a school-level administration and implementing change and reform efforts in schools becomes a necessity rather than a preference.

When the antecedents and the consequences of the initiative taking concept are examined, it is seen that employees who actively cope with the problems can take the initiative more easily (Frese & Fay, 2001, p. 154). So, it can be predicted that school administrators with effective problem solving skills may take more initiative. Moreover, taking initiative can be seen as a problem solving approach. Because the school principal who will take the initiative should first recognize a problem spontaneously and evaluate the problem with a proactive approach. Afterwards, s/he should be able to apply the solution s/he deems appropriate to the obstacles insistently and with perseverance. Based on this deduction, in this study, the relationship between school administrators' problem solving skills and initiative taking behaviours was analysed. More specifically, school administrators' problem-solving skills as a predictor of taking initiative behaviour were examined.

1.1. Taking Initiative at School Administration

Taking initiative is that the person takes an extra role with his own will and a proactive approach and persistently fulfils the task required by this role s/he assumes her or himself (Akın, 2019. p. 14). Taking initiative has three dimensions: self-starting, proactivity and persistence (Frese & Fay, 2001). *Self-starting* can be explained as manifesting a behaviour without external pressures, role requirements, instructions or clear directives. For this reason, taking initiative can be considered as realizing the goals set by the individual as well as the goals set for her or himself (Frese, Garts, & Fay, 2007). *Proactivity* means that the individual recognizes opportunities and problems in advance and takes action accordingly. A proactive employee aims to change the work environment according to the needs of the future (Bateman & Crant, 1993; Crant, 2000; Fay & Frese, 2001; Rank, 2006). To be proactive is to feel and predict what to do without having to be told, by considering the future as well as the current situation. Employees with such an approach will take into account both problems and opportunities that will appear (Frese et al, 2007). Compared to relatively passive employees, proactive employees take a more active role in shaping and changing the work environment to achieve their goals. Rather than waiting for information or opportunities to be presented to them (Crant, 2000), they tend to generate new ideas to improve the work environment, develop their personal skills and set further goals (Seibert, Kraimer, & Crant, 2001). The proactive behaviour of employees in the work environment is influenced by the management approach. In organizations dominated by the oppressive and normative management approach, obedience to the status quo is at the forefront as proactive behaviour is not encouraged; on the other hand, it is observed that giving psychological support and autonomy to the employee increases the frequency of proactive behaviour (Wikhamn & Selart, 2019). *Persistence* means that the employee actively struggles with the obstacles that s/he may encounter while implementing the targets s/he set with a proactive approach. A persistent employee does not care about the number of attempts and the time s/he spent trying to achieve her or his goal (Frese et al, 1997).

Considering the dimensions of initiative taking behaviour in the context of school administrators, it is an important question what kind of action it is. For example, if a school administrator offers suggestions to senior administrators for better execution of the work, or if s/he aspires spontaneously to take on important responsibilities which s/he is not given by the top authorities, s/he performs self-starting behaviour. A school administrator's being proactive means that s/he is good at seeing opportunities that benefit the school, or is seeking continuous improvement in professional matters. While doing all this, the school principal should not give up in the face of difficulties but overcome the obstacles by working with perseverance, which constitutes the persistence dimension (Akın, 2012; 2014; 2019).

The contribution of an employee who avoids doing more than what is expected from her or him and the one who seeks ways to do her or his job more effectively and takes responsibility instead of waiting for help when s/he encounters a problem, would be different for the benefit of the organization (Starzyk & Sonnentag, 2019). The concept of initiative taking behaviour, which was first introduced for employees of profit-oriented organizations, was used in research on many different occupational groups and fields of work (Redfern, Coster, Ewans, & Dewe, 2010). School administrators also do a job where it is necessary to take initiative. As Ferrazi (2017) notes, fulfilling certain requirements or strictly following certain guidelines may be considered sufficient for an executive's role requirements, but when you try to reduce risk, obey the chain of command, and strictly adhere to the job description, you cannot provide your professional development, develop new projects, you cannot get the maximum benefit (p. 261). For this reason, school administrators should also be able to question their work, watch for opportunities to make extra contributions and take initiative.

Akın (2019) states that initiative taking in school administration can be defined as an undisclosed contribution of school administrators as long as they are compatible with the basic objectives of National Education. As stated by the author, the administrators in some of our schools determine and realize high-level goals for them, such as increasing the quality and effectiveness of education and training, establishing effective cooperation with the environment, and raising students as world citizens with the requirements of the age (p. 73). On the other hand, administrators of some schools that have similar opportunities and resources have difficulties in sustaining the school's routine bureaucratic jobs and are content with saving the day. It can be argued that one of the points where these schools differ in terms of possibilities is the way they interpret the duties, powers and responsibilities of their administrators. In other words, the administrators of effective schools seem to take more initiative. As Akın (2019) states, the goals defined for schools show a more general quality. While it can be easily understood what to do, sometimes there is hesitation about how to do these. The partial gap here pushes some school administrators to act timidly, while some administrators take initiative, perhaps using their powers close to full capacity (p. 76).

1.2.   Problem Solving as a Predictor of Initiative Taking

Problem solving has different definitions such as "to resolve an undesirable state of affairs by using a systematic approach" (Kruger, 1997, s. 164), efforts to overcome the obstacles encountered in reaching a goal (Bingham, 1998; cited in Samancı, 2018), a process that requires a series of efforts to eliminate the difficulties encountered in reaching a certain goal (Izgar, Gürsel, Kesici, & Negiş, 2004). As seen in the definitions, problem solving is about overcoming undesired situations, obstacles and difficulties encountered in achieving a goal. Organizations, too, are structures set up to achieve specific goals, and the path to goals in all organizations is more or less full of obstacles.

It is the primary and basic duty of today's administrators to examine the problems faced by organizations, to go to the root of the problem and to find new solutions (Üstün & Bozkurt, 2003, p. 13). Problem solving is one of the most important duties of school administrators as well as all administrators (Buluç, Sulak, & Serin, 2011; Hoy & Miskel, 2013; Özdemir, 2013; Şişman, 2004). Bursalıoğlu (2019) states that perhaps the most important feature that school administrators should have in order to perform their duties properly is problem solving skills. According to him, school administrators are responsible to many groups inside and outside the school. Therefore, they need to have the ability to keep these groups in balance and to solve problems arising from these groups (p. 41). Considering all these problems

that may occur in schools, it is a great necessity for school administrators to be effective in problem solving (D. J. Allison & P. A. Allison, 1993).

In this study, the theoretical framework developed by Heppner (1988) and adapted to Turkish culture with the work of Şahin, Şahin and Heppner (1993) was used to examine the problem solving skills of school administrators. According to this model, it can be said that individuals act according to six different styles while solving the problems they face. These are impulsive, reflective, self-confident, avoidant, monitoring and planful problem solving styles. The explanations for each of these styles are as follows (Erdoğmuş, 2004; Şahin et al, 1993): *Impulsive style* means that when an individual experiences a problem, without making too many options and evaluating the possibilities of the options one by one, acting in line with the first solution s/he finds, regrets after making random decisions. *Reflective style* involves trying to understand exactly what the problem is when encountered a problem, to consider all possible information, to compare the solutions and to predict possible results. Problem solving confidence or *confident style* means that the individual can produce creative solutions for solving problems, believes in overcoming problems when enough time is given and spends effort, and has a method to use in solving problems when comparing options and deciding what is appropriate. *Avoidant style* questions whether an individual tries to understand what the problem is when s/he encounters a problem, whether s/he investigates why s/he fails when the solutions s/he applied fails and accordingly, the suspicion about solving the problem. *Monitoring style* involves the individual trying to think of all possible solutions when s/he has a problem, comparing the result s/he thinks should emerge after trying a certain path in the solution of the problem, and evaluating how s/he feels when s/he encounters a problem. Finally, *planful style* addresses the trust of the individual, even if s/he does not notice her or his problems in the first place, is able to reach a solution, to make decisions about herself or himself and to be satisfied with these decisions, to focus on that problem when s/he has a problem and to carry out this plan while planning to solve the problem.

When there is a problem in the organization, the relevant legislation can show the administrator how to proceed in general, but it is almost impossible to foresee all problems and determine detailed solutions for each (Güçlü, 2003). In such cases, where the legislation and other resources guiding school administrators are insufficient, it is necessary to take initiative. Research shows that the perception of organizational support (Nayır & Taşkın, 2017) and trust (Demir & Arslan, 2018) makes it easier for employees to take initiative. Studies with school administrators (Akın, 2012; 2014; Sevil & Bülbül, 2019) show that school administrators' belief that they can administer the school effectively and their self-confidence facilitates initiative. Similarly, it can be argued that school administrators with effective problem solving skills will take initiative more easily. Some researches addressing problem solving skills of school administrators examine the relationship between problem solving and leadership behaviours (Ülger, 2003), burnout levels (Akın Köstereioğlu, 2007), thinking styles (Ağcayazı Altuntaş, 2008), job satisfaction (Eves, 2008), emotional intelligence levels (Yerli, 2009), anxiety levels (Bozkulak, 2010) and conflict management styles (Tan, 2016). The possible relationship between school administrators' initiative taking behaviour and problem solving skills seems to be a field neglected by researchers. As emphasized before, sufficient theoretical justification can be produced that the high problem solving skills of school administrators can make it easier for them to take initiative. The aim of this research is to empirically question the legitimacy of these theoretical deductions. Spesifically, examining the possible relationships between school administrators' problem solving skills and initiative taking behavior is the main purpose of this research. Accordingly, answers to the following questions were sought:

1. Are there significant relationships between school administrators' initiative taking behaviours and problem solving skills?

2. Do the problem solving skills of school administrators predict their initiative taking behaviours?

2. METHOD

2.1. Research Design

Quantitative method was adopted in the research. This study, in which the main purpose is to determine the relationship between the initiative taking levels and problem solving skills of school administrators, was designed as a predictive relational survey (Büyüköztürk, Çakmak, Akgün, Karadeniz & Demirel, 2012, p. 227).

2.2. Population and Sample

The population of the research consists of 919 school administrators who work in a province in central Black Sea Region. At least 278 participant represents our targeted population at .05 error margin (Büyüköztürk et al., 2012). 282 school administrators selected from the population constitute the sample of the study. Table 1 summarizes the properties of the sample.

Table 1: *Properties of the Sample*

Variables	Group	n	%	Total
Gender	Male	248	87.9	
	Female	34	12.1	
Age	≤ 35	49	17.4	
	36-40	62	22	
	41-45	64	22.7	
	46-50	57	20.2	
	≥ 51	50	17.7	
Job Title	Principal	149	52,8	
	Vice Principal	133	47.2	282
School Level	Pre-School	23	8.2	
	Primary	56	19.8	
	Secondary	110	39	
	High School	93	33	
Province	City Center	224	79.4	
	Village/Town	58	20.6	
Education	Associate/Bachelor	185	65.6	
	Graduate	97	34.4	

As Table 1 shows, 248 of the school administrators participating in the research are male and 34 are female. While 49 participants were aged 35 and under, there were 62 people between the ages of 36-40, 64 between the ages of 41-45, 57 between the ages of 46-50 and 50 and over 50. While 149 school administrators work as principals, 133 school administrators work as assistant principals. Of the total 282 participants, 23 work in preschools, 56 in primary schools, 110 in secondary schools, and 93 in high

schools. 224 schools are in the city or district centre and 58 schools are in the village or small town. 185 of the school administrators have associate and undergraduate degrees and 97 of them have a postgraduate degree.

2.3. Data Collection Tools

To determine the initiative taking levels of school administrators, Personal Initiative Measurement Tool for School Principals developed by Akın (2012) was used and to determine their problem solving skills, Problem Solving Inventory developed by Heppner and Peterson (1982) and adapted into Turkish by Şahin, Şahin and Heppner (1993) was used. In addition, an information form consisting of seven questions was used to determine the gender, age, duty (principal/assistant principal), the school's location, the seniority of the school administrator, the level of education and the number of students in the school to collect information about the participants.

Personal initiative measurement tool for school principals. Personal Initiative Measurement Tool for School Principals, developed by Akın (2012), was used to determine the initiative taking levels of school administrators. The tool consisting of 32 items is a Likert-type scale scored between 1 and 5. Although the scale was developed for school principals, it was stated that the validity and reliability of the tool was provided with the same factors and items for the assistant principals in the same development study, and in this study, it was applied to both the principals and the assistant principals. In the study in which the scale was developed, Cronbach's Alpha internal consistency coefficients for sub-dimensions self-starting, proactivity and persistence are .88, .83, and .89 respectively. Within the scope of this study, Cronbach's Alpha internal consistency coefficients were calculated as .88 for self-starting, .84 for proactivity, and .86 for persistence. In the scale, there are items such as "even if it is not explicitly defined in the legislation as the duty of a school administrator, I do the work that needs to be done for the school" (self-starting: items 1, 2, 5, 6, 12, 19, 20, 21, 22, 24, 25 and 26), "I constantly search for ways to do my job better" (proactivity: items 4, 7, 9, 13, 14, 15, 16, 18 and 29) and "I struggle with the status quo when I bring the innovations to my school" (persistence: items 3, 8, 10, 11, 17, 23, 27, 30, 31, 32).

Problem solving inventory. A 35-item Problem Solving Inventory developed by Heppner and Peterson (1982) and adapted to Turkish by N. Şahin, N. H. Şahin and Heppner (1993) was used to measure the problem solving skills of school administrators. In the study in which the Problem Solving Inventory was developed, the Cronbach's Alpha internal consistency coefficients reported for the sub-dimensions were .78 for impulsive style (items 13, 14, 15, 17, 21, 25, 26, 30, and 32), .76 for reflective style (items 18, 20, 31, 33, and 35), .64 for problem solving confidence style (items 5, 23, 24, 27, 28, and 34), .74 for avoidant style (items 1, 2, 3, and 4), .69 for monitoring style (items 6, 7, and 8), and .59 for planful style (items 10, 12, 16, and 19). The Cronbach's Alpha internal consistency coefficients calculated for this study were .78, .69, .63, .58, .79, and .63 respectively.

2.4. Data Collection

In order to make the data collection process more practical and faster, and also to save paper usage, the scales were transferred to the Google documents application. Until a sufficient number of participants were obtained, the questionnaire was shared via personal mail addresses and phone numbers of school administrators that were sampled, and it was closed when sufficient numbers were reached. Since there was an arrangement not to send the questionnaire responses when there was an unanswered question, there was no missing data.

2.5. Data Anaysis

At the end of the data collection process, responses were received from 296 school administrators. The normal distribution of the data was examined. For this, firstly, the scores obtained from the scales were converted to z scores, and 3 participants who were outside the ± 4 limit (Çokluk, Şekercioğlu & Büyüköztürk, 2010, p. 14) were removed from the data set. Mahalanobis distance values were calculated in order to examine the multiple normal distribution, the scores of 11 participants who did not show a normal distribution were removed from the data set, and the data were analyzed by 282 participants. Statistical Package Program for Social Sciences (SPSS) program was used. The data on Google documents were taken with Microsoft Office Excel program and transferred to SPSS. To calculate participants' problem solving and personal initiative scores mean and standard deviation values were used. The Pearson correlation coefficient scores were calculated to determine the relationship between the sub-dimensions of the school administrators' initiative taking levels and their problem solving skills. Multiple linear regression analysis was performed to determine whether problem solving skills predicted each of the self-starting, proactivity, and persistence behaviours which are the sub-dimensions of taking initiative.

2.6. Research Ethics

In order to carry out an ethical research process, the permission of the developers of the measurement tools was obtained. Permissions are kept electronically. Tokat Gaziosmanpaşa University Social and Human Sciences Ethics Committee approved the research in terms of ethical concerns on 05.06.2020 with the decision of 8-2. In addition, application permission was obtained from the Provincial Directorate of National Education. Detailed information was provided to the school administrators who were sampled, and it was reported before the application that the data would be used for scientific purposes and evaluated anonymously. Implementation was carried out with those who received approval for voluntary participation. All the data of the research are kept and are provided accessible when necessary in line with the principles of accountability and transparency.

3. FINDINGS

To answer the first research question whether there was a significant relationship between initiative taking and problem solving scores, Pearson correlation analyses were executed and results are presented in Table 2.

Table 2: *The Relationship between Initiative Taking and Problem Solving*

Variables	M	SD	SS	Pr	P	I	R	C	A	M	Pl
Self-Starting (SS)	4.35	.48	1	.86*	.82*	-.34*	.61*	.67*	-.27*	.55*	.47*
Proactivity (Pr)	4.44	.44		1	.83*	-.35*	.63*	.70*	-.28*	.57*	.50*
Persistence (P)	4.44	.44			1	-.40*	.65*	.71*	-.32*	.52*	.55*
Impulsive (I)	2.06	.62				1	-.49*	-.44*	.32*	-.32*	-.39*
Reflective (R)	4.35	.46					1	.75*	-.31*	.60*	.67*
Confident (C)	4.29	.49						1	-.26*	.57*	.70*
Avoidant (A)	1.67	.73							1	-.25*	-.22*
Monitoring (M)	4.28	.54								1	.51*
Planful (Pl)	4.30	.51									1

* p< .01

As can be seen from Table 2, school administrators' initiative taking scores for self-starting, proactivity, and persistence were significantly and positively correlated with their problem solving scores for reflective style (r= .61 for self-startin, .63 for proactivity, and .65 for persistence), problem solving confidence (r= .67 for self-startin, .70 for proactivity, and .71 for persistence), monitoring (r= .55 for self-startin, .57 for proactivity, and .52 for persistence), and planfulness (r= .47 for self-startin, .50 for proactivity, and .55 for persistence). On the other hand, initiative taking scores were significantly and negatively correlated with school administrators' impulsive (r= -.34 for self-startin, -.35 for proactivity, and .40 for persistence) and avoidant problem solving (r= -.27 for self-startin, -.28 for proactivity, and -.32 for persistence) scores. Positive relationships were at a middle level while negative correlations were low. Results show that, as school administrators' reflective, problem solving confidence, monitoring, and planfulness scores increase their initiative taking scores increase, too. On the contrary, increasing impulsive and avoidant style scores mean decreasing initiative scores for self-starting, proactivity, and persistence.

The second research question was seeking an answer about the predicting role of problem solving skills on initiative taking of school administrators. Three separate multiple regression analyses were employed to answer this question. In each analysis one dimension of initiative taking was defined as dependent variable while problem solving dimensions were independent variables. Results are described in Table 3, 4, and 5. Firstly, a multiple regression analysis was executed to understand the predicting role of problem solving skills on self-starting. Results can be seen in Table 3.

Table 3: *The Predicting Role of Problem Solving Skills on Self-Starting*

Variables	B	SE	β	t	p
Constant	1.22	.30		4.11	.00*
Impulsive style	.01	.04	.01	.13	.90
Reflective style	.18	.08	.17	2.37	.02*
Confident style	.45	.07	.47	6.50	.00*
Avoidant style	-.04	.03	-.06	-1.32	.19
Monitoring	.19	.05	.21	3.86	.00*
Planfulness	-.01	.06	-.09	-1.41	.16

R= .71, R²= .50, Adj.R²= .49, F= 46.47,* p< .05

Table 3 demonstrates that the model testing whether the problem solving skills predict self-starting behaviors of school administrators is statistically significant (F= 46.47, p< .05). Problem solving dimensions, together, predict 50% of self-starting (R²= .50). T values show that reflective style, problem solving confidence, and monitoring are the dependent significant predictors of self-starting (p< .05). Problem solving confidence is relatively the most significant predictor of problem solving according to β coefficients (β= .47). Table 4 summarizes the multiple regression results analyzing the predicting role of problem solving skills on proactivity.

Table 4: *The Predicting Role of Problem Solving Skills on Proactivity*

Variables	B	SE	β	t	p
Constant	1.45	.26		5.63	.00*
Impulsive style	.00	.03	.00	.08	.94
Reflective style	.15	.07	.16	2.33	.02*
Confident style	.44	.06	.50	7.34	.00*
Avoidant style	-.04	.03	-.06	-1.35	.18
Monitoring	.18	.04	.23	4.32	.00*
Planfulness	-.08	.05	-.09	-1.47	.14

R= .74, R²= .55, Adj.R²= .54, F= 56.57,* p< .05

As it can be seen from Table 4, the model testing whether problem solving predict proactivity of school administrators is statistically significant, too (F= 56.57, p< .05). Problem solving dimensions explain 55% of the variance in proactivity (R^2= .55). Reflective style, problem solving confidence, and monitoring are the dependent predictors of the proactivity according to t values (p< .05). β coefficients tell us problem solving confidence is the most significant predictor of proactivity (β= 50). The last multiple regression analysis was made to understand if the problem solving skills predict school administrators' persistence scores or not. Results were as seen in Table 5.

Table 5: *The Predicting Role of Problem Solving Skills on Persistence*

Variables	B	SE	β	t	p
Constant	1.65	.26		6.33	.00
Impulsive style	-.03	.03	-.04	-.76	.45
Reflective style	.17	.07	.18	2.53	.01*
Confident style	.41	.06	.46	6.70	.00*
Avoidant style	-.06	.03	-.11	-2.42	.02*
Monitoring	.09	.04	.11	2.15	.03*
Planfulness	.01	.05	.01	.23	.82

R= .74, R^2= .55, Adj.R^2= .54, F= 56.28, p< .05*

As it can be seen from Table 5, the model testing the problem solving as a potential predictor of persistency behavior of school administrators is also significant (F= 56.28, p< .05). Problem solving dimensions explain 55% of persistency scores (R^2= .55). Reflective style, problem solving confidence, avoidant style, and monitoring were the dependent predictors of persistent behavior (p< .05). Problem solving confidence was the most significant predictor of the persistence again as in self-starting and proactivity (β= .46).

4. DISCUSSION and RESULT

3.1. Discussion

This research was conducted to examine the relationship between school administrators' initiative taking behaviour and problem solving skills. More specifically, it has been tested whether school administrators' problem-solving skills predict their initiative taking behaviour or not. The results show that school administrators take a high level of initiative in terms of self-stating, proactivity and persistence. This result is in line with the results of previous studies (Akın, 2012; Sevil & Bülbül, 2019). It is understood that school administrators in Turkey take initiative at a high level. The results of some research (Cereci, 2019; Çalışır, 2008) in the literature suggest that the high level of initiative of school administrators may be related to the unbalanced distribution of powers and responsibilities given to school administrators in the Turkish education system. Namely, the school administrators in Turkey think that they have a lot of responsibilities, and their authority, compared to their responsibility, is insufficient (Cereci, 2019), despite this, school principals do not hesitate to use their powers, and even take risks by taking action in many situations that exceed their authority (Çalışır, 2008). It is the duty of school administrators in a wide range of responsibilities, from failing taps in schools to painting whitewash, from official correspondence to teachers' professional development, from student discipline problems to communication with parents, from carried out projects to students' exam success (see, Akın, 2012; Cereci, 2018). School administrators are expected to do all these jobs without selecting the staff to work with and without sufficient resources and budget. Senior administrators impose many responsibilities on school administrators, but keep the authority expected to accompany these

responsibilities to themselves. It can be thought that this situation often leads school administrators to take initiative.

School administrators have high level of problem-solving skills in reflective, monitoring, planfulness and problem solving confidence approaches, just like the level of initiative. However, impulsive and avoidant problem solving scores are very low. Similarly, there are studies reporting that school administrators have high level of reflective, monitoring, planfulness and problem solving confidence skills (Akın Kösterelioğlu, 2007; Esen, 2012). With this aspect, the findings support previous research. Reflective, monitoring, planfulness and problem solving confidence approaches include the situations that should be in the problem solving process and the right steps to be taken. In impulsive approach, the individual tries to solve his problems without sufficiently researching and evaluating options. In avoidant approach, s/he steps back against the obstacles encountered during the attempts to solve the problem (Erdoğmuş, 2004; Şahin et all, 1993). As it turns out, school administrators consider themselves sufficient in problem solving as well as taking initiative.

There is a significant relationship between school administrators' initiative taking behaviours and problem solving skills in all dimensions. As the problem solving skills of school administrators increase in reflective, monitoring, planfulness and problem solving confidence styles, their level of initiative increases, too. On the other hand, as the impulsive and avoidant problem solving scores increase, the level of initiative decreases. These results show that when faced with a problem, school administrators who try to understand exactly what the problem is, evaluate possible options, are skilled in implementing solution plans and are confident in implementing the solution (Erdoğmuş, 2004; Şahin et all, 1993) therefore take more initiative. On the other hand, it is understood that school administrators, who tend to act hastily without thinking enough in the solution of problems, take less initiative. Taking initiative means that employees question how they can do their job better, think about different options, and put the most suitable of these options into action (Frese & Fay, 2001, p. 166-167). In this sense, the fact that school administrators have high problem solving skills in reflective, monitoring, planfulness and problem solving confidence approaches may make it easier for them to take initiative. On the other hand, it may be difficult for school administrators, who take an impulsive and avoidant attitude in solving school problems, to take initiative.

Although the correlation results are insightful, the regression results reveal a clearer picture about which problem solving approaches explain which initiative dimensions and to what extent. According to the results of multiple linear regression analysis, problem solving skills explain approximately half of the variance in school administrators' initiative taking in self-starting, proactivity, and persistence dimensions. This finding shows that the problem solving skills of school administrators are important predictors of their initiative taking behaviour.

The results showed that the most important predictor of school administrators' self-starting, proactive, and persistent initiative taking behaviours is relatively the problem solving confidence style. The most remarkable and important finding of the research is that the problem solving confidence approach came into prominence for all three dimensions of initiative taking behaviour. It is theoretically accepted that employees' self-confidence in matters related to their work can facilitate their initiative taking (Fay & Frese, 2001; Frese & Fay, 2001). The beliefs of individuals that they can do a job and their confidence in this issue can be explained by Bandura's (1977; 1997) self-efficacy concept. Akın's (2012) study with school administrators supported this theoretical inference and showed that the self-efficacy of school administrators is an important predictor of the initiative taking behaviour. In this sense, the fact

that the problem solving confidence approach is relatively the most important predictor of school administrators' initiative taking behaviour seems to be compatible with previous research results.

The results showed that it is important for school administrators to rely on themselves for problem-solving skills so that they can make self-starting initiatives in their schools. The fact that school administrators have a confident problem solving style means that they can offer creative and effective alternative solution suggestions while thinking about problems (see, Heppner, 1988; Şahin et all, 1993). Introducing creative and alternative solutions in school administration is closely related to self-starting behaviour. This is because the school administrators' taking initiative in the self-starting dimension means that they act with an intrinsic motivation (Ponton, 1999), without getting guidance from their superiors or being inspired by someone else (Galub, 2009). This relationship between self-starting behaviour and problem solving confidence gives insight into how to support innovative initiatives to be launched at school level. If school administrators are required to produce new projects, to take initiatives that lead teachers and students in terms of instructional leadership, and to find new ideas about education and putting them into practice by going beyond the planned works from the centre, their problem solving skills should be supported and their confidence in this issue should be increased.

Another important finding is that school administrators' problem solving confidence explains a very important part of their proactive behaviour. The fact that school administrators are proactive means that they can realize new opportunities in school-related jobs (Rooks, Sserwanga, & Frese, 2016), see what can be useful for their school in advance and take action in this direction. At this point, it is possible that many problems will arise. Confidence in problem solving also expresses a belief in self-efficacy in overcoming future problems (see, Şahin et all, 1993, p. 389). Therefore, it can be evaluated that school administrators' trusting that they can solve the problems that may arise while creating proactive future projections, can enable them to act more comfortably.

It was determined that the problem solving confidence of school administrators explain the important part of persistent initiative taking behaviour as well as self-starting and proactive behaviours. Persistent behaviour in taking initiative means overcoming the obstacles while implementing the thoughts with one's own initiative and endeavouring fearlessly without giving up (Hong, Liao, Raub, & Han, 2016). School administrators who are confident about problem solving think that they can solve most of the problems they encounter when they spare enough time and effort (see, Şahin et al, 1993, p. 389). Therefore, it can be concluded that problem solving skills are important and should be supported so that school administrators do not give up against many obstacles that they are likely to encounter while implementing their initiatives.

3.2. Conclusion and Implications

This research aimed to analyze the relationship between school administrators' initiative taking levels and problem solving skills. Results indicate that school administrators' increasing reflective, self-confident, monitoring, and planful problem solving skills means increased levels of initiative taking. Furthermore, problem solving confidence was determined as the most significant predictor of initiative taking for all three dimensions; self-starting, proactivity, and persistence. Based on these results, some suggestions can be made. First, if the Ministry of National Education (MoNE) wants to employ school administrators with high level of initiative taking, it can select school administartors who are self-confident when handling a difficult situation. Such a selection can be made based on problem solving scenarios where candidates offer their original solutions for structured education problems. In this way

MoNE can add a reseaech based criteria to the school administrator selection process. Of course, private schools can also use such a problem solving scenario based selection process. Second, MoNE can support current school administrators to rely on themselves about problem solving through specific professional development options. Graduate programs on Educational Administration can be suggested for school administrators to gain a theoretical base on both problem solving and initiative taking. Additionally, we think that further qualitative research may be beneficial to answer important questions that are still uncertain after our results. One of them is how problem solving confidence affects initiative taking in a given situation. What do school administrator actually experience when they plan to take an initiative and what do they experience when trying to handle problems during their initiative? Such questions are meaningful to understand the relationship between problem solving and initiative taking but quantitative research can not answer these type of questions by its nature. Further qualitative research may cope with such a limitation existing in our research.

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