

# Relationship between Locus of Control and Problem-Solving Skills of High School Administrators

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## Abstract

*The main objective of the study is to determine the relationship between high school administrators' problem-solving ability and locus of control. This study is a correlational survey. The population consists of 83 high school administrators in the central district of the province of Batman, Turkey. Seventy-nine of these completed the data collection tool according to the instructions given, forming the sample of the study. As data collection tools, "General Information Form," "Problem Solving Inventory" and "Internal External Locus of Control Scale" were used. As a result of statistical analysis, mean scores of high school administrators for Problem Solving Skills was found as 79,80; for Locus of Control scores, it was 8,29. This study found low level, positive and statistically significant relationships between high school administrators' scores on the Locus of Control Scale and Problem Solving Inventory.*

**Keywords:** *High school, principal, assistant principal, administrators, problem-solving skills, locus of control*

## 1. Introduction

No person is immune to problems, given scarce resources, unlimited needs and inevitable change. Some people are more skilled in problem solving than others: they evaluate problems realistically without exaggerating or underestimating, and attempt to solve them, thereby reaching effective conclusions. This problem-solving competence is one of the most significant preconditions for the protection, maintenance and development of our existence at the desired level.

Problem-solving skill, one of the decisive factors for personal success (Stevens, 1998), is a complex process consisting of cognitive, affective and behavioral features (Eskin, 2009). Since every problem situation may differ from another, there is no standard solution for problems encountered (Bedoyere, 1997; Karşlı, 2004). What may be a solution in a particular case, time, location, person or organization, may not be the right option in another case, time, location, person, or organization. This shows that the problems and solutions may be variable. This also reveals the complexity of the problem solving process. This variability and complexity shows how important it is to have an ability of problem-solving for those who are in a position of finding a solution to their problem.

Individual problem-solving skills can be significantly affected by sensory experiences, the attitude in the face of events, values, and personality traits (Güçlü, 2003). The successful detection of a problem depends on the person herself/himself, the environment, information collected about the problem and synthesized information; seeing the problem objectively and rightly; the meaning and importance of the problem; accurate assessment of the person's coping skills (Eskin, 2009). The most important difference between those solving the problems and those unable to do is the attitude towards the problem or intention difference (Öğülmüş, 2006).

This situation, which is for individuals, also applies to organizations. Protection, maintenance and improvements of existence of organizations, is possible through their efforts to meet the needs facing their existence. At this stage, the most critical role is in the hands of managers.

As in almost every organization, in schools there are many personal, professional and institutional problems. In solving these problems, school principals face the greatest responsibility. The principal is the person mainly responsible for realizing the success of the school in terms of reaching its goals. In fulfilling this important responsibility, some personality traits and competencies have a role. One of them is the "locus of control" trend, and the other is "problem-solving skills."

Locus of Control, taken as a personality attribute, is a tendency to perceive events affecting oneself as being either due to one's own abilities, characteristics or the consequences of one's actions, or due to chance, fate and powers beyond one's control. People who believe that events which affect them are under their own control are called "internals," whereas those who believe the events to be under the control of powers apart from themselves are called "externals" (Rotter, 1966). Problem-Solving Skills can be described as the capacity to solve the problem faced and achieve the desired results.

A large number of individual studies have been conducted in different countries to determine the relationship between problem-solving skills and locus of control of school administrators, taking the variables separately or with other variables. Some of these studies examined only school administrators' problem-solving ability (Ada, Dilekmen, Alver & Seçer, 2010; Akça & Yaman, 2009; Güçlü, 2003; Kayıkçı, 2007; Kurt, 2009; Sadıkoğlu, 2007; Sevgi, 2004; Siedner, 2004; Van Woert, 2000). In addition, there are studies examining the relationships between school administrators' problem-solving skills and thinking styles (Altuntas, 2008), instructional leadership behaviors and decision making strategies (Arın, 2006), leadership behaviors (Ulger, 2003), anxiety levels (Bozkulak, 2010), job satisfaction (Eves, 2008), burnout level (Kösterelioğlu, 2007) and effect on student achievement (Drummond, 2000). Similar studies exist for school administrators' locus of control. Studies done by Dilekmen, Alver, Ada & Akçay (2009), Turkoglu (2007) aim to determine solely school administrators' locus of control levels. In addition, there are studies examining the relationships among school administrators' locus of control and burnout (Arlotto, 2002; Dibekoğlu, 2006; Ozdemir, 2009), job satisfaction (Armstrong, 2001) and self-esteem levels (Yerebakan, 2007).

However, we have not found any similar research aiming to determine the relationship between the locus of control and problem-solving skills of high school administrators.

Problem-solving ability and locus of control tendency are characteristics that can affect the efficiency and effectiveness of school administrators. For this reason, it is significant to determine school administrators' problem-solving abilities and locus of control tendencies, and also to determine the relationship between them. In light of this focus, this study is distinctive, unique and significant.

### ***Purpose***

The main purpose of this study is to determine the relationship between high school administrators' problem-solving ability and locus of control tendency.

## **2. Method**

This study is a correlational survey. The study population, from the province of Batman, Turkey, consists of 23 principals, 49 vice-principals and 11 chief vice-principals; in total 83 high school administrators. Of these, 79 completed the data collection tool according to the instructions given, thus forming the sample of the study.

### ***Data Collection Tool***

The research data collection tool consists of three parts. In the first part, we used a Personal Information Form to collect personal information from high school administrators. In the second part, we used a 29-item Internal-External Locus of Control Scale (IE LOC Scale) to determine the level of internal and external locus of control. The scale was originally developed by Rotter (1966) and adapted to Turkish

language and culture by Dağ (1991) with adequate validity and reliability proofs. In the third part, we used a 35-item Problem Solving Inventory to determine the problem-solving ability level of the high school administrators. The inventory was originally developed by P.P. Heppner and C.H. Petersen (1982) and adapted to Turkish language and culture by Şahin, Şahin and Heppner (1993), with adequate validity and reliability proofs.

### ***Data Analysis***

In order to examine the scores of the high school administrators on the Problem-Solving Inventory and Internal-External Locus of Control Scale in terms of branch, most recently completed education, task title and total service time in that position, we used independent samples t-tests. We also used one-way ANOVA for independent samples to examine the effect of the total service time variable. The Pearson Correlation Coefficient Significance Test was used to determine the relationship between high school administrators' levels of internal/external locus of control and their problem-solving skill levels.

## **3. Findings**

The findings of this research are as follows:

The high school administrators' problem-solving skill scores did not indicate any statistically significant difference when sorted by most recent completed educational institution, total time in the teaching profession, task title or total service time in task. High school administrators' problem solving skills scores [ $t(77) = 2593, p < .05$ ] did indicate significant difference only in terms of branch variable. It was determined that the average scores of the administrators' problem-solving skills whose branch was numerical ( $\bar{X} = 86.64$ ) were higher than those in the social sciences branch ( $\bar{X} = 76.63$ ). The high school administrators' problem-solving skill scores ranged from a minimum of 42 to a maximum of 116 points. The mean scores of problem-solving skills of high school administrators' were 79.80.

The high school administrators' locus of control scores did not indicate statistically significant difference in terms of the last completed education institution, the total time in the teaching profession, or total service time in task. The high school administrators' locus of control scores ranged from a minimum of 2 to a maximum of 16 points. The mean score of the high school administrators' locus of control was 8.29.

According to the results of significance tests for the Pearson Correlation Coefficient Significance Test, which was performed in order to determine the relationship level between problem solving skills and internal-external locus of control for the high school administrators, there is a positive, significant and low level relationship ( $r = .294, p < 0.01$ ) between the scores of problem-solving skills and locus of control inventories.

## **4. Discussion and Conclusion**

As a result of this research, we found that the problem-solving skill scores of high school administrators' indicate no significant difference in terms of the most recent completed educational institution, the total time in the teaching profession, task title or total service time in task. The finding that there is no significant difference between scores of the problem solving skills of school administrators in terms of the most recent completed educational institution is in line with the finding of the research done by Kayıkçı (2007). The finding that there is no significant difference between scores of problem solving skills of the school administrators in terms of total service time in teaching profession is in line with the findings of similar studies (Ada, Dilekmen, Alver&Seçer, 2010; Güçlü, 2003; Arın, 2006). The finding that there is no significant difference between scores of problem solving skills of school administrators in terms of total service time in task title (administration) supports the findings of the studies carried out by Ada, Dilekmen, Alver and Seçer (2010), Akça and Yaman (2009), Altuntaş (2008), Arın (2006), Bozkulak (2010), Eves (2008), Güçlü (2003), Kayıkçı (2007) and Kösterelioğlu (2007).

As similar studies indicate, school administrators' problem-solving skill scores are not correlated in statistically significant ways with the most recent completed educational institution, the total time in the teaching profession, task title or total service time in task. In another words, school administrators' problem-solving skill is independent from these variables. It can be concluded therefore that these specifications do not impose any limitations on school administrators' problem-solving skill. In addition, this finding indicates that any school administrator can improve his or her problem-solving skill regardless of the most recent completed educational institution, the total time in the teaching profession, task title or total service time in task.

The high school administrators' problem-solving skills scores [ $t(77) = 2593, p < .05$ ] indicate statistically significant difference in terms of only branch variable. It was found that the average scores of school administrators whose branches were numerical ( $\bar{X} = 86.64$ ) were higher than those of administrators whose branches were social sciences ( $\bar{X} = 76.63$ ). A possible reason for this is that phenomena in the natural sciences are more often viewed as having cause-effect relationships when compared to the social sciences. Thus, the average scores of school administrators whose branches were numerical were statistically higher than those of administrators whose branches were in the social sciences. On the other hand, there are also a few studies (Akça & Yaman 2009; Altuntaş, 2008; Eves, 2008; Kösterelioğlu, 2007) positing no difference between branch and the problem-solving skill scores of high school administrators.

At the same time, it was found that the locus of control scores of the high school administrators indicated no significant difference in terms of the most recent completed educational institution, the total time in the teaching profession, task title and total service time in task. These results are in line with the results of different studies. For example, school administrators' locus of control scores show no significant difference in terms of branch (Özdemir, 2009; Yerekaban, 2007); in terms of total service time in teaching profession (Yerekaban, 2007); in terms of task title (Dibekoğlu, 2006) and in terms of total service time in task (Dibekoğlu, 2006; Dilekmen, Alver, Ada & Akçay, 2009; Yerekaban, 2007). As similar studies indicate, school administrators' locus of control scores are not correlated in statistically significant ways with the most recently completed educational institution, the total time in the teaching profession, task title or total service time in task. In another words, school administrators' locus of control is independent from these variables.

Problem-Solving Inventory score limits are between 32 and 192. The average point value of the inventory is 80. Values above the average show a perception that the person is not proficient in problem-solving skills, whereas values below the average show that the person is proficient in problem-solving skills (Akça & Yaman, 2009; Tokat, Kara & Ülkgün, 2007). The high school administrators' problem-solving skills scores ranged from 42 to 116. The mean score of the problem-solving skills of the high school administrators was determined to be 79.80. This result indicated that the perception of administrators related to problem-solving skills was on the average.

Roeter's Internal-External Locus of Control Scale scores range from 0 to 23 points, and higher scores indicate a higher belief in external locus of control. However, some studies (Akça & Yaman, 2009; Çolak, 2006; Saracaloğlu, Serin & Bozkurt, 2005; Sulu, 2007; Tokat, Kara & Ülkgün, 2007) suggest that 0-11 points indicate internal locus of control and 12-23 points indicate external locus of control. The high school administrators' locus of control scores ranged from a minimum of 2 to a maximum of 16 points. The mean score in locus of control was 8.29 for the high school administrators. This average indicates that the high school administrators are more inclined to have an internal locus of control.

Between the scores of the high school administrators' problem solving skills and those of locus of control scale, we found a low level, positive and significant correlation ( $r = .294, p < .01$ ). Accordingly, it can be said that the higher the perception concerning high school administrators' problem-solving skills, the

higher the tendency of having an internal locus of control. Similar results were found in studies targeting different age groups and education level.

Many studies have been done to determine the relationship between the problem-solving skills and locus of control of students, from primary school students to graduate students at different ages and education levels, as well as of teachers and school administrators. Some studies found a positive relationship between problem solving skill and locus of control for primary school students (Derin, 2006; Serin & Derin, 2008), adolescents (Aydın, 1999), nursing students (Günüşen & Üstün, 2011; Ulupınar, 1997), university students (Bilgin, 2010; Yalçın, Tetik, & Açıkgöz, 2010; Malki, 1998; Johnson, & Killmann, 1975) and graduate students (Saracaloğlu, Serin, & Bozkurt, 2005); primary school teachers (Bozkurt N., Serin O. & Emran B. (2004); school administrators (Akça, F. & Yaman, B. (2009) and educational administrators (Bağlum, O. K. (2000).

As supported by the above-mentioned studies, the higher the perception of competency concerning problem-solving ability, the higher the tendency towards an internal locus of control. Similarly, the lower the perception of competency concerning problem-solving ability, the higher the tendency towards an external locus of control.

In light of this basic result, if one's perception of one's own competency for problem-solving ability increases, one may be expected to have or develop an internal locus of control. It is likely that high school administrators with high perceptions of problem solving skills and internal locus of control do what they are expected to do. To ensure this situation, as a starting point, a school can enhance its high school administrators' perception of their own competency in problem-solving ability. For this purpose, first of all, high school administrators having high and low level problem-solving skill should be identified using qualitative researches, and the reasons why they perceive themselves inadequate in terms of problem solving must be revealed. Then, in the light of these findings, administrators should be presented with opportunities to develop problem-solving skills, including trainings such as seminars, courses, and workshops.

## References

- Ada, Ş., Dilekmen, M., Alver, B. & Seçer, İ. (2010). İlk ve ortaöğretim okul yöneticilerinin problem çözme becerilerinin çeşitli değişkenler açısından incelenmesi [Examining Problem Solving Skills of Primary and Secondary School Principals by Some Variables]. *Kuram ve Uygulamada Eğitim Yönetimi [Educational Administration: Theory and Practice]*, 16 (2), 153-166.
- Akça, F. & Yaman, B. (2009). Okul yöneticilerinin problem çözme davranışlarını etkileyen faktörleri incelemeye yönelik bir çalışma [A study on the examination of the factors affecting the problem-solving behaviors of school directors], *Kastamonu Education Journal*, 17(3), 767-780.
- Altuntaş, E. A. (2008). *Okul yöneticilerinin düşünme stilleri ile problem çözme becerileri arasındaki ilişki*[The relationship between thinking styles and problem solving ability of school administrators]Unpublished master's thesis. Gaziosmanpaşa Üniversitesi, Sosyal Bilimler Enstitüsü, Tokat.
- Arın, A. (2006). *Lise yöneticilerinin öğretim liderliği davranışları ile kullandıkları karar verme stratejileri ve problem çözme becerileri arasındaki ilişki düzeyi*[A study of relationship between instructional leadership and decision making and problem solving strategies of secondary school principals] Unpublished master's thesis. Eskişehir Osmangazi Üniversitesi Sosyal Bilimler Enstitüsü.
- Arlotto, G. P. (2002). A structural equation modeling analysis of the direct and indirect effects of locus of control and empowerment on burnout in high school principals. The George Washington University.

- ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/305525776?accountid=16268>. (305525776).
- Armstrong, B. C. (2001). School size as a factor in the job satisfaction and locus of control of high school principals in Missouri. University of Kansas. ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/304698013?accountid=16268>. (304698013).
- Aydın, Ö. (1999). *Denetim odağı farklı olan ergenlerin problem çözme becerilerinin karşılaştırılması* [A Comparison for problem solving skills of adolescents who differs the locus of control] Unpublished master's thesis. Erzurum Üniversitesi, Sosyal Bilimler Enstitüsü.
- Bağlum, O. K. (2000). *Eğitim yöneticilerinde sorun çözme ve denetim odağı ilişkisi* [Relationship between problem solving and locus of control of educational administrators] Unpublished doctoral dissertation. Ankara Üniversitesi Sosyal Bilimler Enstitüsü.
- Bedoyere, Q. (1997). Sorun Çözme Teknikleri [Managing people and problems] (Çev.: Doğan Şahiner), Rota Yayın Yapım Tanıtım, İstanbul.
- Bilgin, A. (2010). *Üniversite öğrencilerinin çeşitli değişkenlere ve denetim odağına göre problem çözme beceri algıları* [Problem-solving skills perceptions of the university students according to different variants and locus of control] (Unpublished master's thesis). Marmara Üniversitesi Eğitim Bilimleri Enstitüsü, İstanbul.
- Bozkulak, P. B. (2010). *Okul yöneticilerinin problem çözme becerileri ve kaygı düzeyleri arasındaki ilişki* [The relationship between problem solving abilities and anxiety levels of school managers] (Unpublished master's thesis). Maltepe Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Bozkurt N., Serin O. & Emran B. (2004). İlköğretim birinci kademe öğretmenlerinin problem çözme becerileri, iletişim becerileri ve denetim odağı düzeylerinin karşılaştırmalı olarak incelenmesi [Comparatively Examining Primary School Teachers' Problem Solving Ability, Communication Competency and Locus of Control Levels ]. *XII. Eğitim Bilimleri Kongresi Bildirileri*, Gazi Üniversitesi Eğitim Bilimleri Enstitüsü, Ankara, Cilt II, 1373-1392.
- Çolak, E. (2006). Meslek lisesi makine bölümü öğretmenlerinin denetim odaklarının medeni durum, yaş, anne ve babanın eğitim düzeyi değişkenleri açısından incelenmesi kişi [Examining of teachers' locus of control in machinery program of vocational school in terms of marital status, age, education level of parents]. *Yeditepe Üniversitesi Eğitim Fakültesi Dergisi, Edu7, 2(1)*, 1-14.
- Dağ, İ. (1991). Rotter'in iç-dış kontrol odağı ölçeği (RİDKOÖ)nin üniversite öğrencileri için güvenilirliği ve geçerliliği [The validity and reliability of Rotter's internal-external locus of control for university students]. *Psikoloji Dergisi. 7(26)*, 10-16.
- Derin, R. (2006). *İlköğretim 8. sınıf öğrencilerinin problem çözme becerileri ve denetim odağı düzeyleri ile akademik başarıları arasındaki ilişki (İzmir il örnekleme)* [The relationship between academically achievements, locus of control levels and problem solving skills of primary school eight class students (İzmir city sample)]. (Unpublished master's thesis). Dokuz Eylül Üniversitesi Eğitim Bilimleri Enstitüsü, İzmir.
- Dibekoğlu, Z. (2006). *Okul yöneticilerinin denetim odaklarına göre tükenmişlik düzeyleri (Sakarya ili örneği)* [The level of burnout of principals in terms of locus of control] (Unpublished master's thesis). Sakarya Üniversitesi, Sosyal Bilimler Enstitüsü.
- Dilekmen, M., Alver, B., Ada, Ş., & Akçay, K. (2009). İlk ve ortaöğretim okul yöneticilerinin iç-dış kontrol odakları [Internal-external locus of control for elementary and secondary school principals]. *Abant İzzet Baysal Üniversitesi Dergisi, 9(1)*, 127-136.
- Drummond, I. R. (2000). Chicago public schools principals' perceptions on the effectiveness of the school-based problem-solving model on student success. Northern Illinois University. ProQuest

- Dissertations and Theses.Retrieved from <http://search.proquest.com/docview/304612813?accountid=16268>. (304612813).
- Eskin, M. (2009). Sorun Çözme Terapisi, [Problem Solving Therapy]. HYB Basım Yayın, Ankara.
- Eves, S. (2008). *Okul yöneticilerinin iş doyumları ile problem çözme becerileri arasındaki ilişki*[The relationship between the job satisfaction and problem solving skills of school administrators] (Unpublished master's thesis). Gaziosmanpaşa Üniversitesi, Sosyal Bilimler Enstitüsü, Tokat.
- Güçlü, N. (2003). Lise müdürlerinin problem çözme becerileri [Problem Solving Skills of High School Principals]. *Milli Eğitim Dergisi*, 160, 272-300.
- Günüşen, N. P. & Üstün, B. (2011). Hemşirelik öğrencilerinin problem çözme beceri düzeyleri ile kontrol odağı arasındaki ilişki [The Relationship Between Problem Solving Skills Levels and Locus of Control in Nursing Students],*Dokuz Eylül Üniversitesi Hemşirelik Yüksekokulu Elektronik Dergisi*, 4 (2), 72-77.
- Heppner, P. P. & Petersen, C. H. (1982). The development and implications of a personal problem solving inventory, *Journal of Counseling Psychology*, 29(1), 66-75.
- Johnson, B.K & Killmann, P.R. (1975). Locus of control and perceived confidence in problem solving abilities. *Journal of Clinical Psychology*, 31(1), 54-56.
- Karlı, M.D. (2004). Yönetimsel Etkililik [Managerial Effectiveness] (2.Baskı), Pegem A Yayınları, Ankara.
- Kayıkcı, H. (2007). *Müfredat laboratuvar ilköğretim okulu yöneticilerinin problem çözme yaklaşımları*[Problem solving approaches of the managers of primary curriculum laboratory schools] (Unpublished master's thesis). Yeditepe Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Kösterelioğlu, M.A. (2007). *Okul yöneticilerinin problem çözme becerileri ve tükenmişlik düzeyleri arasındaki ilişki*[Relation between the levels of problem solving skills and burnout of school administrators] (Unpublished master's thesis). Abant İzzet Baysal Üniversitesi Sosyal Bilimler Enstitüsü, Bolu.
- Kurt, T. (2009). *İlköğretim yöneticilerinin problem çözme yeterliliği*[Problem solving sufficiency of primary school principals] (Unpublished master's thesis). Yeditepe Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Main, E. D. (1990). The relation of locus-of-control orientations of sixth-grade students to problem solving performance on a physical science laboratory task. University of Florida. ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/303865061?accountid=16268>. (303865061).
- Malki, R. (1998). *Davranışlarda iç-dış kontrol odağı ile ruh sağlığı arasındaki ilişkinin incelenmesi*[Examining the relationship between internal-external locus of control and mental health] (Unpublished master's thesis). Ege Üniversitesi, Sosyal Bilimler Enstitüsü, İzmir.
- Öğülmüş, S. (2006). Kişilerarası Sorun Çözme Becerileri ve Eğitimi [Interpersonal Problem Solving Competency and Training] (3. Basım), Nobel Yayınları, Ankara.
- Özdemir, E. (2009). *Okul yöneticilerinin denetim odaklarına göre tükenmişlik düzeyleri*[Burnout levels of school administrators in relation to locus of control] (Unpublished master's thesis).Maltepe Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Peszat, M. J. (1988). The influence of locus of control on the problem-solving abilities of student nurses. University of Calgary (Canada).ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/303662335?accountid=16268>. (303662335).

- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs*, 80 (Whole No. 609), 1-28.
- Sadıkoğlu, P. (2007). *Endüstri meslek lisesi yöneticilerinin problem çözme yeterlilikleri* [The adequacy of the directors of industrial vocational schools to solve problems] (Unpublished master's thesis). Beykent Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.
- Saracaloğlu, A. S., Serin, O. & Bozkurt, N. (2005). Eğitim bilimleri enstitüsü lisansüstü öğrencilerinin problem çözme ve denetim odağı düzeylerinin bazı değişkenler açısından incelenmesi [Examining the level of problem solving and locus of control in terms of some variables, of postgraduate students in educational sciences institute]. *Buca Eğitim Fakültesi Dergisi*, 17, 237-242.
- Serin, N., B. & Derin, R. (2008). İlköğretim öğrencilerinin kişilerarası problem çözme becerisi algıları ve denetim odağı düzeylerini etkileyen faktörler [The factors affecting primary school students' perceptions of interpersonal problem solving skills and the levels of locus of control], *Uluslararası İnsan Bilimleri Dergisi*, 5(1),1-18.
- Sevgi, M. (2004). *İlköğretim okulu ve lise yöneticilerinin sorun çözmeye ilişkin tutumları* [Primary school and high school principals' attitudes towards problem solving] (Unpublished master's thesis). Abant İzzet Baysal Üniversitesi, Sosyal Bilimler Enstitüsü, Bolu.
- Siedner, L. (2004). Expert problem-solving by new principals within the context of low-performing urban schools: A study of new principals' perceptions of their problem understanding and problem-solving and the role disposition plays in re-culturing low-performing urban schools. The University of Connecticut. ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/305210509?accountid=16268>. (305210509).
- Stevens, M. (1998). Daha İyi Nasıl... Sorun Çözümleme [How to be a better... problem solver] (Çev.: Ali Çimen), Timaş Yayınları, İstanbul.
- Sulu, H. (2007). *Resmi ve özel ilköğretim okullarında çalışan öğretmenlerin iş tatminleri ile denetim odağı arasındaki ilişkinin incelenmesi* [The investigation of the relation between the job satisfaction of the teachers who work in private and state primary schools and the control focus.] (Unpublished master's thesis). İstanbul Üniversitesi, Sosyal Bilimler Enstitüsü.
- Şahin, N., Şahin, N. H. & Heppner, P.P. (1993). Psychometric properties of the Problem Solving Inventory in a group of Turkish university students. *Cognitive Therapy and Research*, 17(4), 379-396.
- Tokat, B., Kara, H. & Ülkün, N. (2007). Yöneticilerin sorun çözme yetenekleri ve kontrol odağının belirlenmesi: DPU örneği [Problem solving proficiency of managers and determining the locus of control: DPU Case study]. *Akademik Bakış Uluslararası Hakemli Sosyal Bilimler E-Dergisi*. İktisat ve Girişimcilik Üniversitesi – Türk Dünyası Kırgız – Türk Sosyal Bilimler Enstitüsü Celalabat – KIRGIZİSTAN, 11, 1-11.
- Turner, A. L. (1980). Problem solving training: Effects on problem solving skills, achievement, attrition, and locus of control of black, freshmen students. Temple University. ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/303067388?accountid=16268>. (303067388).
- Türkoğlu, E. (2007). *Türk Alman okul yöneticilerinin denetim odağı boyutunda farklı değişkenler açısından karşılaştırılması* [A comparative study of the Turkish and German school administrators on locus of control] (Unpublished master's thesis). Gaziosmanpaşa Üniversitesi, Sosyal Bilimler Enstitüsü, Tokat.
- Ulupınar, S. (1997). *Hemşirelik eğitiminin öğrencilerin sorun çözme becerilerine etkisi* [Effects of nursing education on nursing student's problem-solving skills] (Unpublished doctoral dissertation). İstanbul Üniversitesi, Sağlık Bilimleri Enstitüsü.



- Ülger, Ö. E. (2003). *Okul yöneticilerinin problem çözme becerilerinin liderlik davranışlarıyla ilişkisi* [The relationship between leadership behaviors and problem solving abilities of school managers] (Unpublished master's thesis). Beykent Üniversitesi, Sosyal Bilimler Enstitüsü, İstanbul.
- Van Woert, C. L. (2000). The nature and role of values in administrative problem solving: An in-depth look at expert and typical middle school principals. Columbia University Teachers College. ProQuest Dissertations and Theses. Retrieved from <http://search.proquest.com/docview/304596174?accounted=16268>. (304596174).
- Yalçın, B., Tetik, S. & Açıkgöz, A. (2010). Yüksekokul öğrencilerinin problem çözme becerisi algıları ile kontrol odağı düzeylerinin belirlenmesine yönelik bir araştırma [A study on the determination of the perceptions of problem solving skills and the levels of locus of control of high school students], *Organizasyon ve Yönetim Bilimleri Dergisi*, 2(2), 19-27.
- Yerekaban, H.B. (2007). *Resmi ilköğretim okullarında görev yapan eğitim yöneticilerinin benlik saygısı ve denetim odağı düzeyleri arasındaki ilişkinin incelenmesi*[The study of the relationship between the self-esteem and the focus of control types of public school principals] (Unpublished master's thesis). Yeditepe Üniversitesi Sosyal Bilimler Enstitüsü, İstanbul.