



Examining the Relationships Among School Engagement, Quality of School Life and Academic Achievement of University Students

Ömer Kutlu

Ankara University, omerkutlu@ankara.edu.tr

Seval Kula Kartal

Ankara University, skula@ankara.edu.tr

Abstract

It is aimed to examine the predictor roles of quality of school life and school engagement on academic achievement. Study group consists of 204 students from different departments of Ankara University. The information about the students' achievement is obtained by asking students their grade-point averages. Students School Engagement Scale and Quality of University Life Scale are conducted on the students so as to attain the data related with the students' engagement and the quality of their life. The model in which academic achievement is a dependent variable, school engagement and quality of school life are predictor variables is analyzed by using regression analysis. In the study, it is concluded that the school engagement of the students is a significant predictor of their achievement, while quality of students' university life is not a significant predictor of their achievement. It is revealed that there is a medium strength significant relationship between engagement and quality of school life. The results of the analysis made to find out the components of school engagement that best predict students' achievement show that cognitive and behavioral engagement are significant predictors of the achievement. Emotional engagement does not significantly predict students' achievement in this study.

Keywords: Academic Achievement, School Engagement, Quality of School Life



Introduction

The universities have significant roles in development of the countries since they enable to produce knowledge, use related knowledge to produce new technology and gain qualified human resources. The academic success of college students are important for them, their families and society because potential of human resources who are academically successful and have qualified education is accepted as the most fundamental power required for development (Kumral, 2009; Bangchang, 2015). Academic success has been the center of interest in higher education level as it has been in other levels of education. That the low qualified education given at higher education level leads educators to search for the ways that might help to increase effectiveness of teaching (Senemoğlu, 1990; Ozfidan, & Ugurlu, 2015). It is necessary to define the factors affecting teaching process so as to be able to increase the effectiveness of higher education and achievements of the students.

The features of students and their families are mostly focused in the studies examining factors that affect students' achievement at the universities (Alcı, Erden & Baykal 2008; Bugge & Wikan, 2013; Alos, Caranto & David, 2015). Negative and positive features of instructors are defined based on students' opinions in the studies conducted on the features of instructors that affect students' achievement (Şen & Erişen, 2002; Kumral, 2009; Ozfidan, & de Miranda, 2017). In the studies that focus on schools, the effective features of schools are specified and the relationships of these features with the students' achievement are investigated (Macneil, Prater & Busch, 2009; Massoni, 2011).

School engagement of students have attracted the attentions of the many researches and educators since it is a psychological construct that is related with the students' achievement and is able to explain partially the information about the features of the students, instructors and schools that has been obtained so far (Astin, 1984; Zepke, Leach & Butler, 2010). School engagement is accepted as a significant prerequisite for developing students' achievements and experiences during college years and the meaning of it is discussed by the researchers and education institutions (Baron & Corbin, 2012).

Engagement indicates the active participation of the students in school in cognitive, emotional and behavioral ways. School engagement is defined as actively attending in learning and putting energy both physically and psychologically into the



academic activities rather than attending them superficially, being insensitive and uninterested. School engagement increases and develops when the motivation and academic competences of the individual are in accordance with the academic and social features of the school (Nora & Cabrera, 1993; Astin, 1984; Newmann, 1992, Finn, 1993; Zepke, Leach & Butler, 2010; Lewis, Huebner, Malone & Valois, 2011).

School engagement is known as psychological construct, which has multiple components such as behavioral, emotional and cognitive engagement. *Behavioral engagement* is accepted as important in obtaining success and preventing dropouts. Behavioral engagement requires to obey the classroom and school rules, to be stick to the classroom norms, to participate in out-of-class activities, to attend in learning and academic tasks, to put effort in learning, to ask questions and to attend in-class discussions. *Emotional engagement* is related with the positive or negative reactions towards classmates, instructors and school, having good relationships with instructors and friends and feeling a sense of belongingness to school and classroom. Cognitive engagement contains the traits such as being autonomous, valuing learning, specifying personal goals, putting effort so as to understand complicated ideas and acquire difficult skills, being flexible in problem solving, preferring studying hard, persevering in case of failures (Fredericks, Blumenfield & Paris, 2004; Appleton, Christenson, Kim & Reschly, 2006; Archambault, Janosz, Fallu & Bagani, 2009; Craft and Capraro, 2017).

School engagement has become a topic that is focused on the studies since it is a comprehensive construct that includes traits related with the school, students and instructors and affect students' achievement, process and outcomes of learning and teaching. Most of the researchers agree on that the school engagement positively affects academic performances of the students (Newmann, 1992; Fredericks, Blumenfield & Paris, 2004; Furlong & Christenson, 2008). Related researches find out that there are positive relationships between the school engagement and the achievement of the students (Klem & Connell, 2004; Graunke & Woosley, 2005; Lewis, Huebner, Malone & Valois, 2011).

One of the factors accepted as related with the school engagement and achievement of the students is their perceptions about quality of their school life. Similar to school engagement, quality of school life contains a lot of traits related with the school and teaching atmosphere at the schools. Quality of school life is



defined as sum of the perceptions of the students that are shaped by their experiences with the school and teaching process, factors related with the schools. It is thought that quality of school life includes the cognitive evaluations of the school atmosphere done by students and the all of the emotions of the students caused by the atmosphere of the school (Karazitsiaz, Power & Swanson, 2002). Williams and Batten (1981; as cited in Ainley, Reed & Miller, 1986) defines quality of school life based on five different components including achievement, opportunity, status, identity and teachers. According to Sarı (2007) teaching style of the teachers, teachers' communication with students and being good role models to the students are essential since they shape students emotions and attitudes towards classroom, school and education. Researches on quality of school life reveal that there are positive relationships between the students' perceptions about the quality of their school life and their school engagement (Osterman, 2000; McNely, Nonnemaker & Blum, 2002; Klem & Connell, 2004; Günüç, 2014; Bellici, 2015). Some of the studies on quality of school life and academic success show that there are positive relationships between quality of school life and students' achievement (Bourke & Smith, 1989; Mok & Flynn, 1997), while some of those studies find out that there is no relationship between these two variables (Ainley, 1995; as cited in Marks, 1998; Erden & Erdem, 2015).

When the studies on the factors affecting students' achievement are examined, it can be found out that related studies are conducted mostly on primary and high school students. There are limited number of studies examining the university students' achievement and the factors affecting their achievement. Furthermore, the studies conducted on university students focus much more on the effects of the features of the students or their families on the students' achievement than effects of the features of instructors and schools. Besides, the structures of school engagement and quality of school life have been overemphasized in related international literature since these two variables contain a lot of features related with the instructors and schools and they have relationships with students' achievement. However, there are a few studies in which the school engagement and the quality of school life are examined and these studies are conducted mostly on primary or high school students. In this study, analyzing the relationships between the quality of school life and students' achievement is regarded as important because there are contradictory results



regarding the relationship between these two variables. Therefore, it is essential to analyze the predictive roles of students' perceptions regarding their school lives and their school engagements on their achievement. The questions addressed in this study are given in the following.

1. Are the perceptions of the students on the quality of their school lives and their school engagement significant predictors of the students' achievement?
2. What are the components of the school engagement that best predict the students' achievement?

Methodology

Research Design

This study is conducted as a relational survey study because it is aimed to investigate the relationships among the school achievement, quality of school life and school engagement. In the relational studies, the variables are correlated with one another and the relationships among the variables are examined (Cohen, Manion & Morrison, 2007).

Participants

The study group consists of 204 students who are in the fourth grade at the Departments of Pre-School Education, Elementary Education, Psychological Services in Education, Secondary Social Sciences Education, and Special Education of the Faculty of Educational Sciences, Ankara University. The distribution of the students in terms of the gender and the departments is presented in Table 1.

Table 1. Distribution of The Study Group In Terms of Gender and Departments

Departments	Gender		Total
	Woman	Man	
Pre-School Education	52	3	55
Elementary Education	37	8	45
Psychological Services in Education	35	10	45
Special Education	21	23	44
Secondary Social Sciences Education	11	4	15
Total	156	48	204



Instrument Tools

The data that is necessary for the study is obtained by using the Quality of University Life Scale (Doğanay & Sarı, 2006) and Student School Engagement Scale (Günüç & Kuzu, 2015). The information related with the students' achievement is collected by asking students their grade points averages.

Quality of University Life Scale consists of 33 items and the scale has seven factors called as “Communication between instructors-students, Identity, Social Opportunities, Attendance to Decisions, Communication Among Students, Future, Classroom Atmosphere”. Seven factors together explain 45.82% of the variance. The Cronbach Alpha Reliability Coefficient calculated for the whole scale is 0.85. The coefficients obtained for the sub-scales change between 0.73 and 0.84 while the item-total test correlations change between 0.35 and 0.67. Results of the t-tests done between the highest and lowest 27% of the group show that all items are able to significantly discriminate the groups.

Students School Engagement Scale includes 41 items. The scale has six factors called as “Valuing School and Learning (Psychological Engagement-I), Sense of Belonging (Psychological Engagement-II), Cognitive Engagement, Peer Relations (Emotional Engagement-I), Relations with Faculty Members (Emotional Engagement-II), Behavioral Engagement”. Six factors together explain 58.809% of the variance. The Cronbach Alpha Reliability Coefficient calculated for the whole scale is 0.926. The coefficients obtained for the sub-scales change between 0.716 and 0.89 while the item-total test correlations change between 0.265 and 0.66.

Analysis of Data

The predictive roles of students' perceptions about the quality of their university lives and school engagement on academic achievement are analyzed by using standard regression analysis. Before conducting the regression analysis, the data is screened in terms of the assumptions and requirements such as normality, multi-collinearity, missing values, and outliers. The results of the screening the data show that the data does not include missing value. In order to analyze the one-directional outliers, total scores of the students are transformed into standardized values. The individuals whose standardized scores are below or above ± 3 standardized values are accepted as outliers and they are removed from the dataset. Four students who are considered as outliers based on Mahalanobis distances, which are calculated and their



significances are tested to examine multi-directional outliers. No problem is observed in the dataset in terms of multi-collinearity (VIF= 1.366, TV= 0.732). Univariate and multivariate normality are examined based on respectively coefficients of skewness-kurtosis and significance of Bartlett test (Tabachnick & Fidell, 2007; Çokluk, Şekercioğlu & Büyüköztürk, 2012). The skewness and kurtosis values, and the results of the Bartlett test given in Table 2 show that both univariate and multivariate normality assumption are held.

Table 2. Findings Regarding Uni-variate and Multivariate Normality

Variables	Skewness	Kurtosis
Academic Achievement	-0.616	0.488
Student School Engagement	-0.168	0.255
Quality of University Life	-0.134	0.220
Bartlett Test		
χ^2	91.874	
df	3	
p (p<0.05)	0.000	

Results

In this study, it is aimed to investigate the relationships among the students' academic achievements, their perceptions regarding the quality of university life, and their school engagement. In order to answer the first research question, a regression model in which the perceptions regarding the quality of the university life and school engagement are the predictor variables while the academic achievement is the dependent variable is formed. The statistics obtained for this regression model are given in Table 3.



Table 3. The Predictor Roles of Quality of University Life and School Engagement on Academic Achievement

Variable	B	Standard Error	Beta	T	p	r	Partial r
Intercept	62.648	3.569		17.422	0.00		
Engagement	0.135	0.025	0.419	5.468	0.00	0.348	0.360
Quality	-0.067	0.038	-0.137	-1.787	0.075	0.08	-0.125
R= 0.368	R ² =0.13						
F _(2,201) = 15.594	p = 0.00						

When the results presented in Table 3 are examined, it can be suggested that school engagement and perceptions regarding the quality of the university life has low level significant relationship with students' achievements, (R= 0.368, p>0.01). These two predictor variables explain approximately 14% of the variance in students' achievement. However, the results of the t-test showing the significance of the regression coefficients indicate that school engagement is a significant variable of the school achievement while the perceptions regarding the quality of the university life is not. The results of the regression analysis done to reveal the components that best predict the students' achievement are presented in Table 4.

Table 4. The Predictive Roles of the Components of the School Engagement on Students' Achievement

Variables	B	Beta	T	p	r	Partial r
Intercept	55.73		16.825	0.000		
Cognitive Engagement	0.164	0.183	2.321	0.021	0.35	0.16
Emotional Engagement-I	0.050	0.047	0.682	0.496	0.17	0.05
Emotional Engagement II	-0.002	-0.002	-0.026	0.979	0.18	-0.00
Behavioral Engagement	0.744	0.277	3.412	0.001	0.38	0.24
Valuing School and Learning	-0.09	-0.04	-0.580	0.562	0.12	-0.04
Sense of Belonging	0.080	0.075	1.025	0.307	0.16	0.07



$$R = 0.430, R^2 = 0.185$$

$$F_{(6,197)} = 7.428 \quad p = 0.00$$

The results given in Table 4 show that there is significant relationship between school engagement and achievement, ($R = 0.43$, $p > 0.01$). All of the sub-scales together explain 18% of the variance in students' achievement. The results of the t-tests indicate that cognitive and behavioral engagement variables are significant predictors of achievement while emotional engagement is not a significant predictor of achievement.

Discussion

In this study, it is revealed that school engagement of the students is a significant predictor of their school achievement. Similar with that result, in the study conducted by McNelly, Nonnemaker and Blum (2002), it is found out that the students having high school engagement are also more successful. In the study of Klem and Connell (2004), it is concluded that the primary and secondary school students whose levels of school engagement are high are more likely to have higher academic performance and school attendance index. Significant relationship between the school engagement scores and academic achievement of the students is obtained in the study conducted by Gününç (2014) on university students. The study of Bellici (2015) reveals that there is a significant difference between high and low performing students in terms of the school engagement levels and high performing students have higher school engagement.

It can be suggested that the finding of the positive relationship between the school engagement and academic achievement is parallel with the findings of the studies, which are dealing with motivation, engagement and achievement variables. Self-determination theory, which is one of the motivation theories, states that the needs of autonomy, competence and relatedness enable individuals to be motivated (Ryan and Deci, 2000). School and classroom environments gain importance in meeting those there fundamental psychological needs of the students. Students have classroom environments that either meet their needs or prevent them meeting their psychological needs. Student's engagement to school or classroom occurs when there is intersection between the motivation level of students and supportive atmosphere in the classroom. Supportive teacher-student interactions and meeting students



psychological needs enable students to engage to the learning environment (Osterman, 2000; Skinner & Pitzer, 2012; Wang & Eccles, 2013). It is considered that engagement mediates the relationship between motivation and achievement. Association of motivation with the positive social atmosphere leads to school engagement. Engagement of students enables them to participate in school and classroom activities more frequently, to put more cognitive effort in learning and to feel more sense of belonging. These behaviors increase the possibility of school achievement (Finn & Zimmer, 2012).

In this study, it is found that students' perceptions about the quality of university life do not significantly predict academic achievement. Similar with this finding, in the study conducted by Ainley (1995; as cited in Marks, 1998) it is found out that there is no significant relationship between students' achievement and their perceptions about the quality of school lives. In Erden and Erdem's (2015) study, there are not significant differences between low and high performing groups in terms of the scores obtained from Quality of School Life Scale. It is required to take students' school engagements into consideration while examining the relationship between quality of school life and the achievement. Ainley and Sheret (1992; as cited in Marks, 1998) state that when the affect of the school achievement variables is fixed, students having more positive attitudes towards school have lower possibility of dropout. Besides, Mark (1998) expresses that the positive attitude towards school is a significant predictor of school engagement. Researchers suggest that the perceptions of the students regarding their school lives and the school engagement are related with each other (Osterman, 2000; Wang & Holcombe, 2010). So, the school engagement of the students increases when they have positive attitudes towards school. As a result, engagement provides positive academic and social results. In this study, a medium level significant relationship is found between engagement and quality of school life, ($r=0.51$, $p<0.001$). It can be suggested that the patterns of the relationships among the variables indicate potential indirect relationships between achievement and quality of school life, which is mediated by the school engagement variable.

Results of this study indicate that behavioral and cognitive engagements significantly predict students' achievement. In parallel with this finding, Lewis, Huebner, Malone and Valois (2011) found that achievement has a medium level significant relationship with behavioral engagement and low level significant



relationship with cognitive engagement. Besides, the highest relationships are found among achievement, cognitive and behavioral engagement in the study conducted by Gününç (2014). The results of this study reveal that the positive behaviors of the students such as separating time to study, attending the classes, participating in the discussions during the courses, using problem solving strategies, persevering by using those strategies in case of coming across with difficulties increase students' school achievement.

Another important result of this study is that emotional engagement of students is not a significant predictor of achievement. Similarly, it is revealed that there is no significant relationship between these two variables in the studies of King (2013), and Lewis, Huebner, Malone and Valois (2011). Furthermore, in the study conducted by Park, Holloway, Arendtsz, Bempechat and Li (2012) on high school students, it is found out that there are not significant differences between low and high performing students in terms of emotional engagement. On the other hand, it is stated that achievement mediates the relationship between the perceived support and emotional engagement in that study. Researchers make comments on this finding by taking cognitive competences of students into consideration. The cognitive competences that high performing students have enable them to take more advantage of support given them by their teachers and friends. However, low performing students experience more difficulty and exhaustion since their skills necessary to complete the task are weaker. Even though low performing students have positive attitudes towards the classroom environment, it becomes more difficult for these students to benefit from positive classroom environment and to have sense of belonging. When positive and supportive classroom atmosphere is provided, high performing students have more emotional engagement to the classroom. In their study, Wang and Holcombe (2010) showed that the behavior of attending the courses partially explains the effect of the social support provided by teacher on the achievement. Besides, Gününç (2014) revealed that relations with friends and faculty members do not have significant relationship with achievement. However, based on the significant relationships among emotional engagement with cognitive and behavioral engagement, the researcher states that emotional engagement variable might have indirect relationship with the achievement. When the results of all of the related studies are taken into consideration, it might be suggested that increasing



cognitive and behavioral engagement might directly increase the achievement. The relationship between the emotional engagement and achievement might be mediated by the variables such as positive classroom and school environment (in terms of provided social support and communication), cognitive and behavioral engagement, the social and cognitive competences of students.

Conclusions and Recommendations

In this study, it is aimed to investigate the relationships among school engagement, quality of university life and achievement of students. Within this scope, a regression model in which the achievement is dependent variable, the school engagement and students' perceptions about the quality of their university lives are predictor variables is formed. The results of the regression analysis showed that school engagement of students significantly predict their achievement while the quality of their university lives does not significantly predict achievement. However, there is significant relationship between engagement and quality of school life.

Depending on the finding related with the significant relationship between quality of university life and school engagement, it is recommended to organize the school environment so that the school has an atmosphere positively affecting students' engagement. Therefore, providing students with more social and cultural opportunities, taking students' opinions during the decision processes of school, enabling students to take education that is suitable with their academic needs and career plans are recommended.

In the study, it is concluded that cognitive and behavioral engagement are significant predictors of achievement. That finding supports the importance of increasing their use of various strategies, the time and energy that students separate to study. So, it is suggested to use activities and assessments that enable students to understand the importance of the making effort, increasing their effort and using different strategies effectively. It is recommended teachers to construct a positive and supportive classroom environment so that the fundamental psychological needs of students are met. Besides, using a formative evaluation system focusing on the development of the students, the activities that can contribute to the attendances of the students and problem situations that enable students to use their higher level thinking skills are suggested to teachers to create a supportive and positive classroom environment.



References

- Ainley, J., Reed, R., & Miller, H. (1986). *School Organization and the Quality of Schooling: A Study of Victorian Government Secondary Schools*. Hawthorn: Australian Council for Educational Research Limited Radford House
- Alcı, B., Erden, M., & Baykal, A. (2010). Explanatory and Predictive Pattern of University Students' Mathematics Achievement and Their Perceived Problem Solving Abilities, Self Efficacy Perceptions, Metacognitive Self-regulation Strategies, and National University Entrance Examination Points. *Boğaziçi University Journal of Education*, 25(2), 53-68.
- Alos, S. B., Caranto, L. C., & David, J. T. (2015). Factors Affecting the Academic Performance of the Student Nurses of BSU. *International Journal of Nursing Science*, 5(2), 60-65.
- Appleton, J. J., Christenson, S. L., Kim, D., & Reschly, A. L. (2006). Measuring Cognitive and Psychological Engagement: Validation of The Student Engagement Instrument. *Journal of School Psychology*, 44, 427-445
- Archambault, I., Janosz, M., Fallu, J. S., & Pagani, L. S. (2009). Student Engagement and Its Relationship With Early High School Dropout. *Journal of Adolescence*, 32, 651-670.
- Astin, A. W. (1984). Student Involvement: A Developmental Theory for Higher Education. *Journal of College Student Development*, 40(5), 518-529.
- Bangchang, K. (2015). Factors Affecting Academic Performance of Undergraduate Students. *International Journal of Multidisciplinary Approach & Studies*, 2(6), 205-215.
- Baron, P. & Corbin, L. (2012). Student Engagement: Rhetoric and Reality. *Higher Education Research & Development*, 31(6), 759-772
- Bellici, N. (2015). Ortaokul Öğrencilerinde Okula Bağlanmanın Çeşitli Değişkenler Açısından İncelenmesi. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi*, 15(1), 48-65.
- Bourke, S., & Smith, M. (1989). *Quality of School Life and Intentions for Further Education: The Case of a Rural High School*. A paper presented at the Annual Conference of the Australian Association for Research in Education at Adelaide, South Australia.



- Bugge, L. S., & Wikan, G. (2013). Student Level Factors Influencing Performance and Study Progress. *The Online Journal of New Horizons in Education*, 3(2), 30-38.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research methods in education*. New York: Routledge Taylor & Francis Group.
- Craft, A. M., & Capraro, R. M. (2017). Science, Technology, Engineering, and Mathematics Project-Based Learning: Merging Rigor and Relevance to Increase Student Engagement. *International Journal of Education, Arts, and Science*, 3(6), 140-158.
- Çokluk, Ö., Şekercioğlu, G., & Büyüköztürk, Ş. (2012). *Sosyal Bilimler için Çok Değişkenli İstatistik SPSS ve LISREL Uygulamaları*. Ankara: Pegem Akademi Yayınları.
- Doğanay, A., & Sarı, M. (2006). Öğrencilerin Üniversitedeki Yaşam Kalitelerine İlişkin Algılarının Demokratik Yaşam Kültürü Çerçevesinde İncelenmesi. *Türk Eğitim Bilimleri Dergisi*, 2(4).
- Erden, A., & Erdem, M. (2013). İlköğretim Okullarında Okul Yaşamı Kalitesi: Van İli Örneği. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 28(3), 151-165.
- Finn, J. D & Zimmer, K. S. (2012) 'Student Engagement: What is it? Why does it matter? In S. L. Christenson, A.L. Reschly, & C. Wylie (Eds.), *Handbook of Research on Student Engagement* (pp. 97-131). New York: Springer Science.
- Finn, J. D. (1993). *School Engagement and Student At Risk*. Washington: National Center for Education Statistics.
- Fredericks, J. A., Blumenfield, P.C., & Paris, A.H. (2004). School Engagement: Potential of the Concept, State of the Evidence. *Review of Educational*, 74(1), 59-109.
- Furlong, M. J., & Christenson, S. L. (2008). Engaging Students at School with Learning: A Relevant Construct for All Students. *Psychology in the Schools*, 45, 365-368.
- Graunke, S. S., & Woosley, S. A. 2005. An Exploration of the Factors that Affect the Academic Success of College Sophomores. *College Student Journal*, 39, 367-376.



- Günüç, S. (2014). The Relationships Between Student Engagement and Their Academic Achievement. *International Journal on New Trends in Education and Their Implications*, 5(4), 216-231.
- Günüç, S., & Kuzu, A. (2015). Student Engagement Scale: Development, Reliability and Validity. *Assessment & Evaluation in Higher Education*, 40(4), 587-610.
- Karazitsiaz, A., Power, K. G., & Swanson, V. (2002). Quality of School Life: Development and Preliminary Standardisation of an Instrument Based on Performance Indicators in Scottish Secondary Schools. *School Effectiveness and School Improvement*, 12(3), 265-284.
- King, R. B. (2015). Sense of Relatedness Boosts Engagement, Achievement, and Well-Being: A Latent Growth Model Study. *Contemporary Educational Psychology*, 42, 26-38.
- Konan, N., Demir, H., & Karakuş, M. (2015). A study of Turkish adaptation of executive servant leadership scale into Turkish. *Electronic International Journal of Education, Arts and Science*, 1(1), 135-155.
- Klem, A. M., & Connell, J.P. (2004). Relationships Matter: Linking Teacher Support to Student Engagement and Achievement. *Journal of School Health*, 1-47.
- Kumral, O. (2009). Öğretmen Adaylarının Öğretim Elemanlarının Davranışlarına Yönelik Algıları. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi*, 1(25), 92-102.
- Lewis, A. D., Huebner, E. S., Malone, P. S., & Valois, R. F. (2011). Life Satisfaction and Student Engagement in Adolescents. *Journal of Youth Adolescence*, 40, 249-262.
- Macneil, A. J., Prater, D. L., & Busch, S. (2009). The Effects of School Culture and Climate on Student Achievement. *International Journal of Leadership in Education*, 12(1), 73-84.
- Marks, G. (1998). *Attitudes to School Life: Their Influences and Their Effects on Achievement and Leaving School*. Australia: Australian Council for Educational Research Ltd.
- Massoni, E. (2011). Positive Effects of Extra Curricular Activities on Students. *ESSAI*, 9(27), 1-4.



- McNeely, C. A., Nonnemaker, J. M., & Blum, R. W. (2002). Promoting School Connectedness: Evidence from the National Longitudinal Study of Adolescent Health. *Journal of School Health*, 72(4).
- Mok, M. C., & Flynn, M. (1997). Determinants of Students' Quality of School Life: A Path Model. *Learning Environments Research*, 5, 275-300.
- Newmann, F. M. (1992). *Student Engagement and Achievement in American Secondary Schools*. Washington: Office of Educational Research and Improvement.
- Nora, A., & Cabrera, A. F. (1993). The Construct Validity of Institutional Commitment: A Confirmatory Factor Analysis. *Research in Higher Education*, 34(2), 243-262.
- Osterman, K. F., (2000). Students' Need for Belonging in the School Community. *Review of Educational Research*, 70(3), 323-367.
- Ozfidan, B., & de Miranda, M. A. (2017). K12 Teacher Credentialing Containing Engineering Content in the USA. *Eurasia Journal of Mathematics, Science and Technology Education*, 14(1), 3-13. doi: 10.12973/ejmste/76888
- Ozfidan, B., & Ugurlu, O. (2015). The Idea of Race and Racial Differences. *Electronic International Journal of Education, Arts, and Science*, 1(1), 85-98
- Park S, Holloway S. D, Arendtsz A., Bempechat J., & Li, J. (2012). What Makes Students Engaged in Learning? A Time-use Study of Within- and Between Individual Predictors of Emotional Engagement in Low-performing High Schools. *Journal of Youth and Adolescence*, 41(3), 390-401.
- Ryan, R. M., & Deci, E. L. (2000a). Intrinsic and Extrinsic Motivations: Classic Definitions and New Directions. *Contemporary Educational Psychology* 25, 54-67.
- Sarı, M. (2007). *Demokratik Değerlerin Kazanımı Sürecinde Örtük Program: Düşük ve Yüksek Okul Yaşam Kalitesine Sahip İki İlköğretim Okulunda Nitel Bir Çalışma*. Yayınlanmamış Doktora Tezi. Çukurova Üniversitesi.
- Şen, H. Ş., & Erişen, Y. (2002). Öğretmen Yetiştiren Kurumlarda Öğretim Elemanlarının Etkili Öğretmenlik Özellikleri. *Gazi Eğitim Fakültesi Dergisi*, 22(1), 99-116.



- Senemoğlu, N. (1990). Öğrenci Giriş Nitelikleri ile Öğretme ve Öğrenme Süreci Özelliklerinin Matematik Derslerindeki Öğrenme Düzeyini Yordama Gücü. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi*, 5, 259-270.
- Skinner, E. A., & Pitzer, J. (2012). Developmental Dynamics of Engagement, Coping, and Everyday Resilience. In S. L. Christenson, A.L. Reschly, & C. Wylie (Eds.), *Handbook of Research on Student Engagement* (pp. 21-44). New York: Springer Science.
- Tabachnick, B. G., & Fidel, L. S. (2007). *Using Multivariate Statistics*. MA: Allyn & Bacon, Inc.
- Wang, M. T., & Eccles, J. S. (2013). School Context, Achievement Motivation, and Academic Engagement: A Longitudinal Study of School Engagement Using Multidimensional Perspective. *Learning and Instruction*, 28, 12-23.
- Wang, M. T., & Holcombe, R. (2010). Adolescents' Perceptions of School Environment, Engagement, and Academic Achievement in Middle School. *American Educational Research Journal*, 47, 633–662.
- Zepke, N., Leach, L., & Butler, P. (2010). Engagement in Post Compulsory Education: Students' Motivation and Action. *Research in Post-Compulsory Education*, 15(1), 1-17.