Education and Science

Vol 44 (2019) No 199 321-336

# Examining the Factors Affecting the School Engagement of At-risk Students Attending Disadvantaged Schools

Esra Karabağ Köse [1]

## Abstract

The current study seeks to investigate which factors affect the school engagement of at-risk students attending disadvantaged district schools. To this end, we used linear regression, logistic prediction, and structural regression modeling to analyze the effects of several in-school and out-of-school variables on students' school engagement. The study sample was comprised of 359 students enrolled in middle schools located in the Çinçin neighborhood of the Altındağ district of Ankara, Turkey. The majority of inhabitants in this neighborhood are either Romani or immigrants with very low income levels and whose school age children do not attend school. This neighbor is notorious for its high crime rate, broken families, and security problems, all factors that put the children living in this neighborhood at great risk. The findings of the current study reveal that such out-of-school variables as parents' employment and education status, family unity, and the number of siblings do not significantly affect children's school engagement whereas gender and grade level do. On the other hand, when an integrated regression model that included the school life quality was constructed, children's grade level was found to lose its statistical significance. The final model indicated that the most important predictors of disadvantaged students' school engagement were quality of school life and, most importantly, teachers.

## Keywords

Disadvantaged Schools
At-risk Students
School Engagement

## Article Info

Received: 04.25.2018
Accepted: 05.15.2019
Online Published: 07.12.2019

DOI: 10.15390/EB.2019.7893

## Introduction

Failure in ensuring equal opportunity to have access to qualified education make it very difficult for disadvantaged students to be successful in life and the transformation of socioeconomic and sociocultural positions. The results revealed by PISA researches investigating both the academic performance and the affective state of students at school show that the equality of opportunity in having access to education is one of the most important problems of education in Turkey and that especially for students who are socioeconomically disadvantaged, low school engagement, absenteeism, low academic performance and high drop-out rates seem to be serious problems (Ataç, 2017; OECD, 2017; Oral & Mcgivney, 2014). Students' school engagement is important as it is a precursor of absenteeism, drop-out, low school achievement. The phenomenon of school engagement which is defined as students' feeling belonging to school, adopting school's objectives and willingness to take part in school processes occurs at cognitive, affective and behavioral dimensions (Finn, 1993; Fredricks, Blumenfeld,

[1] Kırıkkale University, Faculty of Education, Department of Educational Sciences, Turkey, esrakarabag@gmail.com

& Paris, 2004). School engagement is closely associated with student-teacher-administrator interaction, students' expectations from education, curriculum and school environment (Arastaman, 2009) and is effective on many critical elements of the education process ranging from the quality of school life, absenteeism, drop-out rates to academic achievement (Archambault, Janosz, Fallu, & Pagani, 2009; Kalaycı & Özdemir, 2013; Zieman & Benson, 1981).

Research on school engagement (Fall & Roberts, 2012; OECD, 2017; Zieman & Benson, 1981) has showed that the students with high school engagement have also high school attendance and academic achievement and their drop-out risk is relatively lower. School engagement is of particular importance in terms of school attendance. According to Finn (1993), one of the most important variables affecting the school engagement of students is socioeconomic level differentiation. One of the important indicators of the socioeconomic level is the district of residence. In terms of school processes and outputs, it is known that the effect of school district and the family is of vital importance (Duncan, 1994; Mickelson, 2016; Kruger, Witziers, & Sleegers, 2007; Luyten, Visscher, & Witziers, 2005). In this respect, investigation of the school engagement of the at-risk students attending schools located in socioeconomically disadvantaged districts where absenteeism and drop-out rates are generally high seems to be important to reduce high drop-out rates in these districts and to ensure equality of opportunity in education.

The Çinçin district, where the current study was conducted, has been subject to a large number of studies and theses in the different fields of social sciences due to its unique sociological characteristics and is defined as the slum residential area. In this district, majority of the inhabitants are gypsies and immigrants from other regions whose income levels are very low and many of the school age children do not attend schools, crime rates are high, there are many split families and security problems; as a result, the children living in this district are under great risk (Açıkgöz, 2014; Eryavaş, 2009; Kara, 2012; Tekin-Karagöz & Mamur, 2015). In this socioeconomically and socio-culturally disadvantaged district, very high rates of school dropouts are observed and children in the age of compulsory education, especially in multi-child families, cannot continue education at the rate of 50% (Eryavaş, 2009). In addition to the risks of absenteeism and school drop-out, the district also hosts many risk factors stemming from out-of-school social environments; thus, the school is the most important means of ensuring social integration and vertical mobility in the district. Therefore, the school engagement of the students in this district and their remaining within the school are not only important for them but also for the larger community.

School engagement of students is an important phenomenon in terms of various risk factors directly or indirectly related to the school and for education policy makers as a preventive monitoring and intervention area. According to O'Toole and Due (2015), school engagement of students at risk differs from that of other students from cognitive, affective and behavioral respects. The concept of at-risk child or at-risk student can be defined differently in different disciplines, but in the fields of psychology and sociology, it is linked with the terms such as negligence, abuse, child worker and being pushed into crime while in the field of education, it is mostly related to the terms such as school drop-out, absenteeism, school failure (Nalbant & Babaoğlan, 2016). Children at risk are confronted with many problems such as alcohol and substance abuse, working under heavy conditions, negligence and abuse and being pushed into crime (Çoban, 2015). In addition to in-school processes, school engagement can also affect factors related to students' out-of-school life such as crime involvement, substance abuse, violence and suicidality (Blum, 2005; Caraway, Tucker, Reinke, & Hall, 2003), all of which make the multi-dimensional investigation of school engagement of at-risk students more important.

Another important aspect of school engagement of disadvantaged students concerns parent-school relationship. Given the important effects of school-parent-society relationship on students' school engagement (McDowall & Schaughency, 2016; Murray, 2009), it can be argued that poor school-society relationships in disadvantaged districts can be detrimental to students' school engagement. Another important point to be considered in relation to parents is that in the district where the current study was conducted there is a serious problem of spilt families. It is known that negative influences

can be incurred by the fragmentation of the family especially due to such reasons as violence and divorce on children's educational processes (Şentürk, 2012).

Given that the quality of education in Turkey is related to parents' characteristics by up to 52% (Yıldırım, 2009), the school becomes more important in terms of making students grown up in disadvantaged districts without sufficient parental support citizens useful to their society. In this connection, it seems to be important to conduct an impact analysis of in-school and out-of-school variables within an integrated model.

Numerous social support mechanisms are being implemented by the Ministry of Education, the Ministry of Family and Social Policies, the Ministry of Youth and Sports, the Ministry of Interior Affairs and local authorities in order to raise the welfare level of at-risk children and children living in disadvantaged districts (Köse & Öztürk, 2018; Kurtulmuş, 1988). According to Kurtulmuş (1995), one of the main aims of social assistance is to increase equality of opportunity for disadvantaged children and the strengthening of the family is at least as important as education policies. Priority is given to these children in the projects funded by national and international organizations such as Development Agencies, European Union, UNICEF, UNESCO (European Commission, 2019; Gençlik ve Spor Bakanlığı, 2018). According to Agasisti, Avvisati, Borgonovi, and Longobardi (2018), it is possible to increase the persistence of disadvantaged students required to be involved in school processes through school and classroom-based approaches. For these children to break the limits imposed by their socio-cultural environment and for increasing the equality of opportunity in education for them, the most important responsibility and duty to be fulfilled by the school is to improve the quality of school life for these children. The quality of school life is a concept that is closely associated with students' satisfaction with their school life and can make important contributions to the happiness of students. Research on the quality of school life has revealed that there is a strong correlation between students' school engagement and this variable (Argon & İsmetoğlu, 2016; Kalaycı & Özdemir, 2013; Lee, Zhang, & Song, 2011; Özdemir, 2017). Making up the sub-dimensions of school engagement, factors such as sense of belonging, liking school, receiving attention and support from teachers and believing that school will make them academically successful (Blum, 2005) are closely related to with sub-dimensions of the school life quality such as positive and negative feelings, status, teacher-student interaction, achievement and opportunities (Mok & Flynn, 2002). Therefore, investigation of the school life quality of students at high risk who are considered to be disadvantaged groups and among whom schooling rate; even in the compulsory schooling age, is very low (Eryavaş, 2009) seems to be of vital importance.

According to Maddox and Prinz (2003), school engagement of students is influenced not only by the school environment but also by factors such as family environment, socioeconomic and sociocultural status, gender and age. Many studies also show that variables related to family and social environment are determinants of school engagement (Ainley, Foreman, & Sheret, 2013; Bellici, 2015; Fall & Roberts, 2012; Finn, 1993). PISA surveys, which examine students' sociological affiliation and school engagement, also reveal important findings in this connection. In particular, the composition of multiple disadvantages can lead to very large differences by up to 90% at the level of school engagement (OECD, 2000). In the current research focusing on the school engagement of the students who are at the lowest socioeconomic and socio-cultural levels, the educational and employment status of the parents and the number of siblings (OECD, 2017) which can be considered as important determinants of the social status of students were also included. One of the factors having impact on the student's education life is the unity of family (Şentürk, 2012). It is important to test the unity of the family as a variable in the model for this district, where the problem of fragmented family is widespread. A great amount of research focusing on school engagement or school life quality has revealed that impacts of the variables related to socioeconomic level and family (Arastaman, 2009; Brewster & Bowen, 2004; Finn, 1993; OECD, 2017). Moreover, in order to make the research model stronger and to allow multi-dimensional evaluations, the gender and grade level variables having been reported to result in differentiation in students' school engagement (Bellici, 2015; Finn, 1993; Maddox & Prinz, 2003; Sağlam & İkiz, 2017) were also included in the model.

In the context of the above literature on the concepts covered in the present research, the main hypothesis of the study can be stated as follows: as in-school variables, school life quality and grade level and as out-of-school variables, demographic features of the family will significantly affect the school engagement of the at-risk students attending disadvantaged district schools. Thus, the purpose of the current study is to perform a multi-dimensional investigation of in-school and out-of-school factors affecting the school engagement of the at-risk students attending disadvantaged district schools. For this purpose, the effects of the students' demographic features (gender, grade level, mother and father's education level, mother and father's employment status, unity of the family, the number of siblings) and their perceptions of school life quality within an integrated model by using linear regression, logistic prediction and structural regression model were examined.

## Method

### *Research Model*

In the current study structured according to the relational survey model, linear regression model, logistic regression model and structural regression model was constructed to explore in-school and out-of-school variables affecting the students' school engagement. In this regard, the variables assumed to have effect on the students' school engagement which are school life quality, gender, grade level, mother and father's employment status, mother and father's education level, unity of the family and the number of siblings were evaluated with linear regression analysis, multinominal logistic regression analysis and structural regression model.

### *Universe and Sample*

The students attending the middle schools located in the Çinçin District in the Altındağ Province of the city of Ankara in 2015-2016 school year constitute the universe of the current study. The sample of the study is comprised of 359 students selected from the universe by using the stratified random sampling method. The demographic features of the participants; except for the missing data, are presented in Table 1.

**Table 1.** The Demographic Features of the Participants

| **Dependents** | | **N** | **%** |
|---|---|---|---|
| Grade Level | 5th grade | 89 | 25.4 |
| | 6th grade | 76 | 21.7 |
| | 7th grade | 89 | 25.4 |
| | 8th grade | 97 | 27.6 |
| Gender | Female | 180 | 51.3 |
| | Male | 171 | 48.7 |
| Number of Siblings | One sibling | 31 | 27.1 |
| | Two or three sibling | 236 | 48.4 |
| | Four or more siblings | 84 | 24.5 |
| Unity of Family | Split family | 46 | 13.1 |
| | United family | 305 | 86.9 |
| Mother's Education | Elementary school (ES) | 141 | 40.2 |
| | Middle school (MS) | 144 | 41.0 |
| | High school (HS) | 66 | 18.8 |
| Father's Education | Elementary school | 95 | 27.1 |
| | Middle school | 170 | 48.4 |
| | High school | 86 | 24.5 |
| Mother's Employment | Working | 58 | 16.5 |
| | Nonworking | 293 | 83.5 |
| Father's Employment | Working | 276 | 78.6 |
| | Nonworking | 75 | 21.4 |

As can be seen in Table 1, the education levels of the participating students' mothers and fathers are low in general; their mother do not usually work and a significant part of their fathers are unemployed. In terms of the number of siblings, the families have many children in general and in terms of unity of the family, in many of the families, the mother and the father are separated. According to the data issued by the Turkish Statistical Institute (TÜİK, 2011), including the deaths, the ratio of those separated from their spouses in the age group of 15-60 is 3.94% on average in the country while the same ratio is 13.1% in this district, which clearly shows the high level of split families.

The demographic features of the participants seem to be in compliance with those reported in the literature in relation to socio-cultural profile of the district including education, employment and family unity characteristics. Thus, the demographic features of the participants indicate that they are in the high risk group in terms of school engagement.

***Measurement Tools***

In the current study, as the measurement tools, the student school engagement scale and the school life quality scale were used.

*The School Engagement Scale:* The scale developed by Arastaman (2006) as a five-point Likert scale is made up of 27 items. Cronbach's alpha coefficients for the sub-factors of the original scale ranged between .65 and .83. Cronbach's alpha coefficients for the sub-factors of the current study ranged between .71 and .84. According to results of exploratory factor analysis (EFA), the total variance explained by 5 factors was found to be 56.92%. The results of the Confirmatory Factor Analysis conducted to confirm the structure of the sub-factors yielded fit indices at good levels [$\chi 2/sd= 1.72$; GFI = .90; CFI = .95; NFI= .89; RMSEA = .045]. Thus, it can be said that the five-factor measurement model is in compliance with the collected data.

*The School Life Quality Scale:* The scale developed by Sarı (2012) as a five-point Likert scale is made up of 35 items. Cronbach's alpha coefficients for the sub-factors of the original scale ranged between .69 and .83. Cronbach's alpha coefficients for the sub-factors of the current study ranged between .69 and .84. According to results of EFA, the total variance explained by the sub-dimensions was found to be 47.03%. The results of the Confirmatory Factor Analysis conducted to elicit additional support for the construct validity of the scale yielded fit indices at acceptable levels [$\chi 2/sd= 1.79$; GFI = .87; CFI = .88; NFI= .78; RMSEA = .047]. Particularly the Chi-square Goodness-of-fit Test ($\chi 2$) and the Root Mean Square Error of Approximation (RMSEA) indicate a perfect fit. Thus, it can be said that the five-factor measurement model complies with the collected data.

***Data Collection and Analysis***

The researcher conducted the data collection process after having received the necessary permission from the relevant bodies. Together with the school administration, the researcher devised the necessary plans and specified the classes in which the surveys were to be distributed. The students who were to receive the surveys were informed about the study's details by the researcher and data were collected together with the classroom teachers. Participation was fully voluntary and it took the students volunteering to participate approximately 15 minutes to complete the survey. Once collected, the surveys were subject to a pre-examination to eliminate those that included missing responses or were completed incorrectly. The remaining surveys were analyzed using SPSS 20 and Amos 18. Upon analysis, it was found that the missing data were randomly distributed and constituted less than 5% of the sample size. The expectation maximization (EM) algorithm was used to replace missing values. After eliminating eight surveys containing missing data for the variables of *gender* and *class*, a total of 351 surveys were analyzed.

In the current study, a three-staged process including the linear and logistic regression analyses and the structural regression model was followed. In the first stage, the linear regression analysis between the continuous variables was run and in the second stage, the logistic regression analysis was conducted including the demographic variables. In the last stage, with the significant variables of the logistic regression, the structural regression model was constructed and the path analysis was run. The

main reason for using logistic regression analysis in the second phase is the flexibility it provides in meeting the regression assumptions in multivariate analysis. The logistic regression model is a sound analysis method in terms of simultaneously investigating numerous continuous and categorical variables that have a potential to affect the dependent variable within an integrated model (Tabachnick & Fidell, 2007). Eight demographic predictors and five school life quality predictors were added and then the ordered logistic regression analysis was run to determine the membership of the outcome to one of the three categories (low, middle and high school engagement). The demographic predictors are gender, grade level, mother and father's education level, mother and father's employment status, integrity of the family and the number of siblings. The school life quality variables are student, teacher, administration, emotion and status. In the continuous predictors, the missing data were completed by using EM algorithm. As there were missing data in the scales completed by 8 students, they were excluded from the data set and thus the data of 351 students were used in the analyses.

The students' school engagement which makes up the dependent variable of the study was turned into a categorical variable following a two-staged cluster analysis. The clusters obtained as a result of the cluster analysis and the values related to these clusters are shown in Table 2.

**Table 2.** School Engagement Two-staged Clustering Analysis Results

| **Cluster** | **N** | **%** | **$\bar{X}$** | **SS** |
|---|---|---|---|---|
| Low | 60 | 24.3 | 2.57 | .52 |
| Medium | 144 | 45.3 | 3.68 | .27 |
| High | 147 | 30.4 | 4.58 | .27 |
| Total | 351 | 100 | 3.87 | .79 |

As can be seen in Table 2, the students are divided into three groups according to their school engagement levels as low, medium and high. The general mean score for the students' school engagement was found to be high.

In the current study, in order to test the basic regression hypotheses, normality and homogeneity of the distribution, autocorrelation between variables and multicollinearity were examined and the data set was found to be satisfying the required hypotheses. The highest r value for the multicollinearity values was found to be .49. For the autocorrelation, Durbin-Watson value was found to be (DW=1.8<4). The skewness and Kurtosis values for the data distribution were found to be between -2 and +2 and histogram and p-plot graphs were found to be defining a linear correlation. The greatest variance inflation value related to the data was found to be (VIF=1.38). In the second stage logistic regression analysis, except one of them, all the independent variables were found to be nominal and ordinal categorical variables; thus, linear and multicollinearity analyses were not performed (Tabachnick & Fidell, 2007).

For the goodness-of-fit index of the Multinominal Logistic Regression model, in the model in which all the predictors are gathered together Deviation and Pearson criteria were evaluated together. The explanation power of the constructed model was tested with Cox & Snell, McFadden and Nagelkerke $R^2$values. As a result, the explanation power of the independent variables in predicting the school engagement groups was found to be weak. The independent variables' correct classification ratio of the school engagement groups was found to be 63% on average. This ratio was found to be 74% for the group with high school engagement, 63% for the group with medium school engagement and 35% for the group with low school engagement. The construct validity of the measurement tools used in the current study was tested through exploratory and confirmatory factor analyses (CFA). For the internal reliability, Cronbach Alpha coefficients of the sub-dimensions were calculated.

## Results

In the current study, first linear regression analysis was conducted to evaluate the relationship between school engagement and school life quality. As a result of this analysis, it was found that school life quality is a significant predictor of school engagement ($\beta$=.44; p<.01). According to the model, school life quality explains 19% of the variance in school engagement. In the second stage, the demographic features were included in the model to have a stronger model and multinominal logistic regression analysis was run.

The results of the logistic regression analysis conducted with the use of the demographic predictors and school life quality predictors in tandem yielded a good model fit according to the deviation criterion $\chi^2$(664, N=351)=554.36, p=.99). According to Tabachnick and Fidell (2007, s. 486), for the significance of the statistical model, the deviation value should not be significant at the level of .05. The values related to model fit are given in Table 3.

**Table 3.** Likelihood Ratio Tests related to the Predicted Model

| Fit Data of the Model | | | | | Fit index | | Pseudo | R2 |
|---|---|---|---|---|---|---|---|---|
| Model | -2 Log Likelihood | $\chi^2$ | sd | p | | p | Cox and Snell | .38 |
| Intercept Only | 724.457 | | | | Pearson | .346 | Nagelkerke | .44 |
| Final | 555.007 | 169.450 | 36 | .000 | Deviation | .999 | McFadden | .23 |

While the first model in which demographic predictors were used was found to be significant ($\chi^2$ (340, N=351)=370.43, p=,12, Nagelkerke $R^2$=.12), then with the addition of 5 school life quality predictors, the so-called $R^2$ value significantly increased (Nagelkerke $R^2$=.44). When the log-likelihood ratios of the models including and not including the life quality variables were compared, it was found that these variables led to statistically significant improvement in the model $\chi^2$(10, N=351)=131.61, p<.05). The contribution of the variables to the model are given in Table 4.

**Table 4.** Prediction of Student School Engagement as a Function of Demographic Variables and School Life Quality

| **Effect** | **$\chi^2$ to Remove** | **sd** | **p** | **Model $\chi^2$** |
|---|---|---|---|---|
| Demographics | | | | |
| Gender | 11.017 | 2 | .004 | |
| The number of siblings | 2.409 | 4 | .661 | |
| Grade level | 9.196 | 6 | .163 | |
| Mother's Education Level | 5.180 | 4 | .269 | |
| Father's Education Level | 6.360 | 4 | .174 | |
| Mother's Employment Status | .662 | 2 | .718 | |
| Father's Employment Status | 2.928 | 2 | .231 | |
| Unity of the Family | .343 | 2 | .843 | |
| All the Demographic Variables | | | | 38.487 |
| School Life Quality | | | | |
| Student | 2.602 | 2 | .272 | |
| Teacher | 44.404 | 2 | .000 | |
| Administration | 7.516 | 2 | .023 | |
| Emotion | .839 | 2 | .658 | |
| Status | 8.175 | 2 | .017 | |
| All the variables | | | | 170.097 |

Table 4 shows that contribution of each variable to the model by comparing the models including and not including the life quality predictors. When the likelihood ratios belonging to the variables were examined, the values of the teacher, administration and status dimensions of the school life quality and that of the gender variable were found to be significant and these four predictors were found to have significantly improved the model ($p<.05$). That is, the students' school engagement was predicted by the gender variable and the school life quality variables.

The values related to chi-square tests, likelihood ratios and 95% confidence intervals are shown in Table 5.

**Table 5.** Logistic Regression Analysis of School Engagement as a Function of Demographic Variables and Life Quality*

| Variables | | B | Wald Chi-Square | Odds Ratio | 95% Confidance Interval for Odss Ratio | |
|---|---|---|---|---|---|---|
| | | | | | Lower | Upper |
| Medium Level | Student | -.343 | 2.316 | .710 | .457 | 1.104 |
| | Teacher | .645 | 5.843 | 1.905 | 1.130 | 3.213 |
| | Administration | .487 | 4.812 | 1.628 | 1.053 | 2.516 |
| | Emotion | .012 | .002 | 1.012 | .611 | 1.675 |
| | Status | .146 | .511 | 1.157 | .776 | 1.725 |
| | 5th grade vs. 8th grade | -.095 | .037 | .910 | .348 | 2.375 |
| | 6th grade vs. 8th grade | 1.086 | 3.790 | 2.963 | .993 | 8.847 |
| | 7th grade vs. 8th grade | .604 | 1.876 | 1.830 | .771 | 4.343 |
| | Female vs. male | .025 | .005 | 1.025 | .507 | 2.073 |
| | Working mother vs. nonworking mother | .022 | .002 | 1.023 | .414 | 2.526 |
| | Working father vs. nonworking father | -.646 | 1.928 | .524 | .211 | 1.304 |
| | ES graduate mother vs. HS graduate mother | .828 | 2.328 | 2.290 | .790 | 6.637 |
| | MS graduate mother vs. HS graduate mother | .747 | 2.300 | 2.110 | .804 | 5.538 |
| | ES graduate father vs. HS graduate father | -.894 | 2.245 | .409 | .127 | 1.317 |
| | MS graduate father vs. HS graduate father | -1.033 | 4.337 | .356 | .135 | .941 |
| | One sibling vs. four or more siblings | .573 | .664 | 1.773 | .447 | 7.031 |
| | Two or three siblings vs. four or more siblings | .342 | .622 | 1.408 | .602 | 3.293 |
| | Broken marriage vs. united family | -.148 | .092 | .862 | .332 | 2.243 |
| | (Constant) | -2.058 | 2.276 | | | |
| High Level | Student | -.372 | 2.208 | .689 | .422 | 1.126 |
| | Teacher | 1.750 | 31.731 | 5.755 | 3.130 | 10.579 |
| | Administration | .639 | 7.185 | 1.895 | 1.187 | 3.023 |
| | Emotion | .172 | .380 | 1.188 | .688 | 2.051 |
| | Status | .585 | 6.058 | 1.795 | 1.127 | 2.860 |
| | 5th grade vs. 8th grade | .358 | .425 | 1.431 | .487 | 4.202 |
| | 6th grade vs. 8th grade | .917 | 2.141 | 2.503 | .732 | 8.551 |
| | 7th grade vs. 8th grade | .987 | 3.657 | 2.684 | .976 | 7.385 |
| | Female vs. male | .937 | 5.327 | 2.553 | 1.152 | 5.657 |

**Table 5.** Continued

| Variables | B | Wald Chi-Square | Odds Ratio | 95% Confidance Interval for Odss Ratio | |
|---|---|---|---|---|---|
| | | | | Lower | Upper |
| Working mother vs. nonworking mother | -.295 | .299 | .744 | .259 | 2.142 |
| Working father vs. nonworking father | -.863 | 2.709 | .422 | .151 | 1.179 |
| ES graduate mother vs. HS graduate mother | .354 | .322 | 1.425 | .419 | 4.852 |
| MS graduate mother vs. HS graduate mother | -.031 | .003 | .970 | .319 | 2.949 |
| ES graduate father vs. HS graduate father | -1.278 | 3.536 | .279 | .074 | 1.056 |
| MS graduate father vs. HS graduate father | -1.212 | 4.731 | .298 | .100 | .887 |
| One sibling vs. four or more siblings | .019 | .001 | 1.019 | .204 | 5.089 |
| Two or three siblings vs. four or more siblings | .441 | .836 | 1.554 | .604 | 4.002 |
| Split family vs. united family | .083 | .022 | 1.086 | .359 | 3.287 |
| (Constant) | -8.768 | 28.358 | | . | . |

* As the reference group, the group of students whose school engagement was found to be low was taken.

As can be seen in Table 5, the female students demonstrated higher school engagement and the likelihood of the male students' demonstrating lower school engagement is 2.5 times higher. On the other hand, the teacher-related dimension of school life quality increases the likelihood of the students' school engagement by six times.

In the third stage of the study, in order to evaluate the model fit of the variables whose contributions in the logistic regression model were found to be significant, the structural regression model in which school engagement is defined as the continuous variable was tested. The values related to the model are shown in Figure 1.

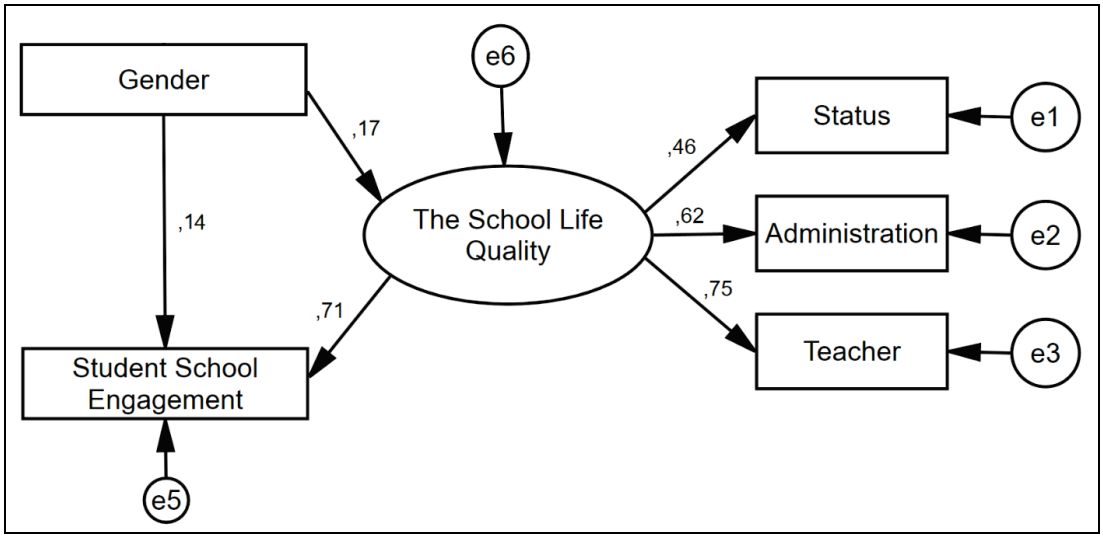


**Figure 1.** Path Analysis Results related to the Research Model

It is seen that the fit indices of the model defining the effect of the school life quality and gender variables on school engagement are at perfect level [$\chi^2$/sd=1.36; RMSEA=.03; SRMR=.02; CFI=.99; GFI=.99; AGFI=.97; IFI=.99; TLI=.99 NFI=.98].

## Discussion

When the research findings are generally evaluated, it is seen that the school engagement level of the students attending disadvantaged district schools is high. When the general literature on school engagement is reviewed, it is seen that in general students demonstrate medium level of school engagement (Arastaman, 2009; Özdemir, 2017). Thus, the finding of the current study seems to be different from the literature, which might be because disadvantaged students can find secure environments and healthy socialization opportunities which they cannot find in their out-of-school social lives and family environments in their schools. In a study by Arastaman (2009), it was found that the school engagement of the students whose family incomes are high are low. These findings are supported by a previous study (Gutiérrez, Tomás, Romero, & Barrica, 2017) that found students from the lower-middle socioeconomic class to have high school engagement. Similar to the current study's sample, a large amount of literature indicates that schools have a much greater impact on disadvantaged students than they do on students from higher socioeconomic classes. Accordingly, the findings indicating disadvantaged students to be more responsive to the effects of education are consistent with the highlighted literature (Coleman et al., 1966; Reynolds et al., 2014; Sammons, 2010). According to Eryavaş (2009), as many children have to work at early ages in this district, they cannot continue their education. The attitudes of families towards continuing their children's are very low and especially in families with many children, the ratio of the children who cannot have access to education even though they are at the compulsory school age is nearly 50%. Therefore, it is highly understandable that the school engagement of the students exposed to challenging living conditions due to their district of residence and confronted with great risks is higher than the normal. The students' high school engagement indicates that the school and education need to be allocated an important place within policies aiming to support the social transformation process in such and similar districts. Moreover, as students in such districts are devoid of family and social support, the responsibilities and duties of the school increase. On the other hand, the size of the target population makes the policies related to supporting of disadvantaged students a strategic priority. In 2012, it was reported that nearly 292,000 students in the age group of 6-14 years old, which is the compulsory schooling period, cannot continue their education (TÜİK, 2013). Moreover, the Turkish government declared 2018 a "Year of War Against Child Labor" (Başbakanlık, 2018). All these show that difficult living conditions pose a serious threat to the education of a large part of child population.

The results of the current study show that the school engagement likelihood of the female students in the disadvantaged district schools is 2.5 times more than that of the male students. Similar finding has been reported by many authors in the literature (Arastaman, 2009; Fernandez-Lasarte, Goñi, Camino, & Ramos-Díaz, 2019; Maddox & Prinz, 2003; Sağlam & İkiz, 2017). Thus, priority should be given to take some measures to enhance male students' school engagement at schools. On the other hand, the significantly higher school engagement of female students are a great opportunity to overcome social problems related to the schooling of girls, especially for cultural reasons. Similarly, high school commitment of female students should be considered as an important opportunity in the cultural transformation and social integration of disadvantaged communities which have high risk factors such as crime, security and drug addiction, living such the regions where the research was conducted.

While many studies have showed that students' school engagement is affected by variables such as mother and father's education and employment status, grade level, the number of siblings (Finn, 1993; Garcia-Reid, Peterson, & Reid, 2015; Gutiérrez et al., 2017; Maddox & Prinz, 2003), the current study did not find the effect of these variables insignificant. This shows that there is no differentiation between the students' school engagement levels on the basis of their family characteristics and this might be because of the common weakness of their socioeconomic and socio-cultural conditions. Consequently, the conclusions of the current study further emphasize the importance of in-school processes for at-risk students. As highlighted in several core studies (e.g., Coleman Report), while higher levels of education and development in one's family and greater society reduce schools'

influence on student achievement, a decline in social development increases schools' influence on students (Coleman et al., 1966; Heyneman & Loxley, 1983). Similarly, findings indicating that the effects of socioeconomic disadvantages can be mitigated through in-school applications (Charalambous, Kyriakides, & Creemers, 2018; Strand, 2014) illustrate the importance of school-level policies and their scope. This increases the importance of in-school processes for these students. Moreover, research also shows that as students' progress from elementary school through middle school, their school engagement decreases (Bellici, 2015; Finn, 1993). This finding is also supported by the current study. On the other hand, inclusion of the school life quality variable in the model resulted in the grade level variable's losing its significant effect on school engagement. Thus, one way of increasing students' school engagement that decreases with increasing grade level is to enhance their school life quality.

The findings of the current research show that school life quality has a significant effect on the school engagement of disadvantaged students. One of the most important findings of the study is the highly significant effect of the teacher dimension of school life quality on the students' school engagement. These findings clearly point out that teacher-student interaction is of particular importance for at-risk children in disadvantaged school districts. The effect of strong relationships established by students with their school administrators and teachers on the students' school engagement and attitudes and behaviors has been strongly emphasized in the literature (Blazar & Kraft, 2017; Brewster & Bowen, 2004; Cemalcılar, 2010; Nichols, 2008). Additionally, the vast majority of studies (Garcia-Reid et al., 2015) have found that teachers' influence on student engagement is similar to that of other factors, such as family and peers. Conversely, since it is known that disadvantaged students are more receptive to education as long as they are offered meaningful opportunities, it may be asserted that in order to increase these students' engagement even further, student-teacher relationships should be at the center of all school activities (Reynolds et al., 2014; Smyth & Fasoli, 2007). Thus, teachers should be supported to enhance their interaction with disadvantaged children at risk, which seems to be more important than all the other educational policies related to school life quality.

Providing even further support for this conclusion are several ecumenical studies (Gustafsson, Nilsen, & Hansen, 2018; Heyneman & Loxley, 1983) comprising a multitude of countries that emphasize how disadvantaged students' academic achievement is positively affected when education systems are properly equipped to compensate for adversity. Previous studies (Ferguson, Horwood, & Boden, 2008; Wallin, 2007) have found that student-teacher interactions in schools located in areas of lower socioeconomic levels are of relatively lower quality and that problems like teacher inadequacy and high teacher turnover rates are among the leading causes of school drop-out. When the current study's conclusions are evaluated together with the findings of previous studies, the necessity of developing specific central and local policies governing both the selection and appointment of teachers employed in these and similar areas becomes ever more apparent.

The findings revealing it necessary to consider schools and, more importantly, teachers as an important policy area in and of themselves in policies seeking to support social change and vertical mobility in at-risk areas receiving high levels of immigration is one of the original contributions that this study offers to the literature on high-risk students. That said, just as further qualitative studies on areas receiving internal and external immigration are needed, so too are longitudinal studies that examine and tracking systems that record the effects of schools and education on high-risk students' sustained resilience and their progression into working life.

## Conclusion and Suggestions

In light of the findings of the data, the main results obtained can be summarized as follows. For the at-risk students attending disadvantaged district schools; (1) the school engagement was found to be high, (2) the female students' school engagement was found to be significantly higher than that of the male students, (3) mother and father's education level and employment status, unity of the family, the number of siblings which are out-of-school variables were found to be not influential on school engagement, (4) though the grade level variable was found to be influential on school engagement, school life quality reduces this effect, (5) school life quality and particularly student-teacher interaction was found to have the greatest effect on school engagement. On the basis of these results, following suggestions can be made for policy makers and implementers; (1) the high level of school engagement found for the at-risk students can be utilized to make these students useful citizens of the society, (2) more importance can be attached to male students while developing measures to enhance school engagement, (3) precautions should be taken to increase students' school life quality, (4) primary emphasis should be put on in-school processes and especially teacher-oriented policies to enhance students' school engagement and (5) special policies should be developed and implemented for the selection and training of the teachers who will work in disadvantaged districts where at-risk students are educated. For researchers, it can be suggested that research models including the student's personality characteristics, peer relations and achievement level can be tested in relation to in-school processes. Moreover, such studies should be supported by adding qualitative dimension so that a social reality can be better evaluated.

## References


Açıkgöz, A. T. (2014). *Kentsel dönüşümün ekonomik, mekânsal, sosyal etkileri ve kamunun rolü: Ankara Gültepe (Çinçin) örneği* (Unpublished master's thesis). Gazi University, Ankara.

Agasisti, T., Avvisati, F., Borgonovi, F., & Longobardi, S. (2018). Academic resilience: What schools and countries do to help disadvantaged students succeed in PISA. Paris: OECD Publishing.

Ainley, J., Foreman, J., & Sheret, M. (2013). High school factors that influence students to remain in school. *The Journal of Educational Research, 85*(2), 69-80. doi:10.1080/00220671.1991.10702816

Arastaman, G. (2006). *Ankara ili lise birinci sınıf öğrencilerinin okula bağlılık durumlarına ilişkin öğrenci, öğretmen ve yöneticilerin görüşleri* (Unpublished master's thesis). Ankara University, Ankara.

Arastaman, G. (2009). Lise birinci sınıf öğrencilerinin okula bağlılık durumlarına ilişkin öğrenci, öğretmen ve yöneticilerin görüşleri. *Pamukkale Üniversitesi Eğitim Fakültesi Dergisi, 26*, 102-112.

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*(3), 651-670.

Argon, T., & İsmetoğlu, M. (2016). Öğrencilerin lise yaşam kalitesi algıları ile okula bağlılık düzeyleri arasındaki ilişki. *Eğitim ve Öğretim Araştırmaları Dergisi, 5*(27), 238-250.

Ataç, E. (2017). Türkiye'de eğitim eşitsizliğini okumak: İstatistikler ve coğrafi dağılımlar. *Eğitim ve Bilim, 42*(192), 59-86. doi:10.15390/EB.2017.7124

Başbakanlık, (2018). *2018 çocuk işçiliği ile mücadele yılı genelgesi.* Retrieved from: http://www.resmigazete.gov.tr/eskiler/2018/02/20180220-3.pdf

Bellici, N. (2015). Ortaokul öğrencilerinde okula bağlanmanın çeşitli değişkenler açısından incelenmesi. *Abant İzzet Baysal Üniversitesi Eğitim Fakültesi Dergisi, 15*(1), 48-65.

Blazar, D., & Kraft, M. A. (2017). Teacher and teaching effects on students' attitudes and behaviors. *Educational Evaluation and Policy Analysis, 39*(1), 146-170. doi:10.3102/0162373716670260

Blum, R. (2005). *School connectedness: Improving students' lives.* Baltimore, MD: Johns Hopkins Bloomberg School of Public Health.

Brewster, A. B., & Bowen, G. L. (2004). Teacher support and the school engagement of latino middle and high school students at risk of school failure. *Child and Adolescent Social Work Journal, 21*(1), 47-67. doi:10.1023/B:CASW.0000012348.83939.6b

Caraway, K., Tucker, C. M., Reinke, W. M., & Hall, C. (2003). Self-efficacy, goal orientation and fear of failure as predictors of school engagement in high school students. *Psychology in the Schools, 40*(4), 417-427. doi:10.1002/pits.10092

Cemalcılar, Z. (2010). Schools as socialisation contexts: Understanding the impact of school climate factors on students' sense of school belonging. *Applied Psychology: An International Review, 59*(2), 243-272. doi:10.1111/j.1464-0597.2009.00389.x

Charalambous, E., Kyriakides, L., & Creemers, B. P. M. (2018). Promoting quality and equity in socially disadvantaged schools: A group- randomisation study. *Studies in Educational Evaluation, 57*, 42-52. doi:10.1016/j.stueduc.2016.06.001

Coleman, J. S., Campbell, E. Q., Hobson, C. J., McPartland, J., Mood, A. M., Weinfeld, F. D., & York, R. L. (1966). *Equality of educational opportunity.* U.S. Department of Health, Education, and Welfare. Retrieved from http://files.eric.ed.gov/fulltext/ED012275.pdf

Çoban, S. (2015). Türkiye'de risk altındaki çocuklar ve çocuk suçluluğu üzerine bir değerlendirme. *Sosyoloji Konferansları, 52*(2015-2), 791-810. doi:10.18368/IU/sk.24682

Duncan, G. J. (1994). Families and neighbors as sources of disadvantage in the schooling decisions of white and black adolescents. *American Journal of Education, 103*(1), 20-53.

Eryavaş, Ö. (2009). *Gecekondu alanlarının dönüşümü: Ankara Gültepe Mahallesi örneği* (Unpublished master's thesis). Ankara University, Ankara.

European Commission. (2019). *Erasmus+ programme guide*. Retrieved from: https://ec.europa.eu/programmes/erasmus-plus/sites/erasmusplus2/files/erasmus-plus-programme-guide-2019_en_0.pdf

Fall, A. M., & Roberts, G. (2012). High school dropouts: Interactions between social context, self perceptions, school engagement, and student dropout. *Journal of Adolescence, 35*(4), 787-798. doi:10.1016/j.adolescence.2011.11.004

Ferguson, D. M., Horwood, L. J., & Boden, J. M. (2008). The transmisson of social inequality: Examination of the linkages between family socioeconomic status in childhood and educational achievement in young adulthood. *Research in Social Stratification and Mobility, 26*(3), 277-295. doi:10.1016/j.rssm.2008.05.001

Fernandez-Lasarte, O., Goñi, E., Camino, I., & Ramos-Díaz, E. (2019). Perceived social support and school engagement in secondary students. *Revista Espanola De Pedagogia, 77*(272), 123-141.

Finn, J. D. (1993). *Student engagement and student at risk*. Washington, DC: National Center For Education Statistics. Retrieved from: https://files.eric.ed.gov/fulltext/ED362322.pdf

Fredricks, J. A., Blumenfeld, P. C., & Paris, A. H. (2004). School engagement: Potential of the concept, state of the evidence. *Review of Educational Research, 74*(1), 59-109.

Garcia-Reid, P., Peterson, C. H., & Reid, R. J. (2015). Parent and teacher support among Latino immigrant youth: Effects on school engagement and school trouble avoidance. *Education and Urban Society, 47*(3), 328-343. doi:10.1177/0013124513495278

Gençlik ve Spor Bakanlığı, (2018). *Gençlik projeleri destek programı*. Retrieved from: http://www.gsb.gov.tr/Public/Edit/images/GSB/GPDP/2018-01/2018-I_Ozel_Cagri_Uygulama_Kilavuzu.pdf

Gustafsson, J. E., Nilsen, T., & Hansen, K. Y. (2018). School characteristics moderating the relation between student socio-economic status and mathematics achievement in grade 8. Evidence from 50 countries in TIMSS 2011. *Studies in Educational Evaluation, 57*, 16-30. doi:10.1016/j.stueduc.2016.09.004

Gutiérrez, M., Tomás, J. M, Romero, I., & Barrica, J. M. (2017). Perceived social support, school engagement and satisfaction with school. *Revista de Psicodidáctica, 22*(2), 111-117. doi:10.1016/j.psicod.2017.01.001.

Heyneman, S. P., & Loxley, W. A. (1983). The effect of primary-school quality on academic achievement across twenty-nine high- and low-income countries. *The American Journal of Sociology, 88*(6), 1162-1194.

Kalaycı H., & Özdemir M. (2013). Lise öğrencilerinin okul yaşamının niteliğine ilişkin algılarının okul bağlılıkları üzerine etkisi. *GEFAD, 33*(2), 293-315.

Kara, M. (2012). *Gecekondu dönüşüm projelerinin konut sorununun çözümündeki rolü: Ankara ili Gültepe ve Yatıkmusluk mahalleleri örneği* (Unpublished doctoral dissertation). Süleyman Demirel University, Isparta.

Köse, M. F., & Öztürk, M. A. (2018). Project funds as a management model and alignment of eu funded special education projects with national policies in Turkey. *Educational Policy Analysis and Strategic Research, 13*(4), 153-163. doi:10.29329/epasr.2018.178.9

Kruger, M. L., Witziers, B., & Sleegers, P. (2007). The impact of school leadership on school level factors: Validation of a causal model. *School Effectiveness and School Improvement, 18*(1), 1-20.

Kurtulmuş, S. (1988). Aile ödeneklerinin mukayeseli bir analizi. *İstanbul Üniversitesi İktisat Fakültesi Mecmuası, 46*, 243-257.

Kurtulmuş, S. (1995). Modern bir sosyal güvenlik vasıtası olarak aile ödenekleri. *Sosyal Siyaset Konferansları Dergisi, 40*, 145-159.

Lee, J. C., Zhang, Z., & Song, H. (2011). Effects of quality of school life and classroom environment on student engagement: A Chinese study. *Educational Practice and Theory, 33*(1), 5-27. doi:10.7459/ept/33.1.02

Luyten, H., Visscher, A., & Witziers, B. (2005). School effectiveness research: From a review of the criticism to recommendations for further development. *School Effectiveness and School Improvement, 16*(3), 249-279.

Maddox, S. J., & Prinz, R. J. (2003). School bonding in children and adolescents: Conceptualization, assessment, and associated variables. *Clinical Child and Family Psychology Review, 6*(1), 31-49.

McDowall, P. S., & Schaughency, E. (2016) Elementary school parent engagement efforts: Relations with educator perceptions and school characteristics. *The Journal of Educational Research, 110*(4), 348-365. doi:10.1080/00220671.2015.1103687

Mickelson, R. A. (2016). *School integration and K-12 outcomes: An updated quick synthesis of the social science evidence*. The National Coalition on School Diversity Research Brief. Retrieved from https://files.eric.ed.gov/fulltext/ED571629.pdf

Mok, M. M. C., & Flynn, M. (2002). Determinants of students' quality of school life: A path model. *Learning Environments Research, 5*(3), 275-300. doi:10.1023/A:1021924322950

Murray, C. (2009). Parent and teacher relationships as predictors of school engagement and functioning among low-income urban youth. *The Journal of Early Adolescence, 29*(3), 376-404. doi:10.1177/0272431608322940

Nalbant, A., & Babaoğlan, E. (2016). Risk altındaki öğrenciler: Yozgat örneği. *E-Uluslararası Eğitim Araştırmaları Dergisi, 7*(3), 11-30. doi:10.19160/e-ijer.35964

Nichols, S. L. (2008). An exploration of students' belongingness beliefs in one middle school. *The Journal of Experimental Education, 76*(2), 145-169.

OECD. (2000). *Student engagement at school a sense of belonging and participation results from PISA 2000*. Paris: PISA OECD Publishing.

OECD. (2017). *PISA 2015 results (Volume III): students' well-being*. Paris: PISA OECD Publishing. doi:10.1787/9789264273856-en

Oral, I., & Mcgivney, E. J. (2014). *Türkiye eğitim sisteminde eşitlik ve akademik başarı*. İstanbul: ERG.

O'Toole, N., & Due, C. (2015). School engagement for academically at-risk students: A participatory research project. *The Australian Educational Researcher, 42*(1), 1-17. doi:10.1007/s13384-014-0145-0

Özdemir, M. (2017). Sosyal adalet liderliği, okula yönelik tutum ve okul bağlılığı arasındaki ilişkilerin incelenmesi. *Eğitim ve Bilim, 42*(191), 267-281. doi:10.15390/EB.2017.6281

Reynolds, D., Sammons, P., De Fraine, B., Van Damme, J., Townsend, T., Teddlie, C., & Stringfield, S. (2014). Educational effectiveness research (EER): A state-of-the-art review. *School Effectiveness and School Improvement, 25*(2), 197-230. doi:10.1080/09243453.2014.885450

Sağlam, M., & İkiz, E. (2017). Ortaokul öğrencilerinin şiddet eğilimleri ile okula bağlılık düzeyleri arasındaki ilişkinin incelenmesi. *İlköğretim Online, 16*(3), 1235-1246. doi:10.17051/ilkonline.2017.330253

Sammons, P. (2010). Equity and educational effectiveness. In P. Peterson, E. Baker, & B. McGaw (Eds.), *International encyclopedia of education leadership and management, politics and governance* (pp. 51-57). Oxford: Elsevier.

Sarı, M. (2012). Okul yaşamının değerlendirilmesi: Okul yaşam kalitesi ölçeğinin geçerlik ve güvenirliği. *Hacettepe Üniversitesi Eğitim Fakültesi Dergisi, 42*, 344-355.

Smyth, J., & Fasoli, L. (2007). Climbing over the rocks in the road to student engagement and learning in a challenging high school in Australia. *Educational Research, 49*(3), 273-295. doi:10.1080/00131880701550565

Strand, S. (2014). School effects and ethnic, gender and socio-economic gaps in educational achievement at age 11. *Oxford Review of Education, 40*(2), 223-245. doi:10.1080/03054985.2014.891980

Şentürk, Ü. (2012). Parçalanmış aile çocuklarının eğitimdeki başarı/başarısızlık durumu (Malatya örneği 2006). *Sosyal Politika Çalışmaları, 7*(29), 105-127.

Tabachnick, B. G., & Fidel, L. S. (2007). *Using Multivariate Statistics*. Boston: Pearson.

Tekin-Karagöz, C., & Mamur, N. (2015). Risk altındaki kız çocukların gelecek ve meslek algılarının çizdikleri resimlere yansıma biçimleri. *Eğitimde Nitel Araştırmalar Dergisi, 3*(1), 26-53. doi:14689/issn.2148-2624.1.3c1s2m

TÜİK. (2011). Nüfus ve konut araştırması 2011. Retrieved from http://www.tuik.gov.tr/

TÜİK. (2013). Çocuk İşgücü Anketi Sonuçları 2012. TÜİK Haber Bülteni, 13659. Retrieved from http://www.tuik.gov.tr/PreHaberBultenleri.do?id=13659

Wallin, D. C. (2007). Policy window or hazy dream? Policy and practice innovations for creating effective learning environments in rural schools. *Canadian Journal of Educational Administration and Policy, 63.*

Yıldırım K. (2009). *Uluslararası öğrenci değerlendirme programı (PISA) 2006 yılı verilerine göre Türkiye'de eğitimin kalitesini belirleyen temel faktörler* (Unpublished doctoral dissertation). Gazi University, Ankara.

Zieman, G. L., & Benson, G. P. (1981). School perceptions of truant adolescent girls. *Behavioral Disorders, 6*(4), 197-205.