A Scale Development Study on the Schools Areas to be Improved

Esen Altunay, University of Ege, Turkey
Piştav Piştav Akmeşe, University of Ege, Turkey
Gül Şahin, University of Ege, Turkey
Yunus Emre Ağaçdiken, University of Ege, Turkey
Erdal Toprakçı, University of Ege, Turkey

Abstract
Since all individuals in society do not have sufficient conditions in terms of education, there are significant differences in the achievement levels of students in different regions. In order to cope with this problem it can be provided enhancing the quality of learning environments, the restructuring of the school system based on the qualifications of the school system, increasing the quantity and quality of the academic staff and the integration of information and communication technologies into the training programs. Therefore, changes should be made in the educational system for improving the quality of school and teaching. However, the success of change initiatives is generally low. As the process of change can be successful, employees should be informed about the change and their concerns should be addressed and the goals of change must be unified with the purposes of the employees. The study aims to determine the perceptions of primary and secondary school teachers and their administrators about the areas of their schools to be improved and to state whether these perceptions differ in terms of some variables. The design of this research is a descriptive survey model. In this study, a scale was developed as a data collection tool. The study sample consisted of 1539 primary and secondary school teachers and administrators who have worked in the metropolitan districts of Izmir in the public schools in the 2018-2019 academic year.

Keywords: School improvement, administrator, teacher

Introduction

Since all individuals in society do not have sufficient conditions in terms of education, there are significant differences in the achievement levels of students in different regions. In order to cope with this problem, it can be provided enhancing the quality of learning environments, the restructuring of the school system based on the qualifications of the school system, increasing the quantity and quality of the academic staff and the integration of information and communication technologies into the training programs (TSV, 2015). Therefore, changes should be made in the educational system to improve the quality of school and teaching. However, the success of change initiatives is generally low (Kondakçı, Zayim, & Çalışkan, 2010). As the process of change can be successful, employees should be informed about the change and their concerns should be addressed and the goals of change must be unified with the purposes of the employees. When critical situations are overcome and administrators have full support, resistance to change is broken and the change is successful (Töremen, 2002; Altunay, Arlı, & Yalçınkaya, 2012). In this direction, the determination of the situation for the improvement of a school that can realize the change, the use and application level of school development strategies and the factors affecting the school improvement process should be taken into account. For the continuity of improvement, it is necessary to share and learn new things and to appreciate the people who develop themselves. Therefore, determining the factors that affect school and teaching quality is of great importance for the administration of change, school improvement and increasing of the quality.

School administrators and teachers' internal evaluation of the schools they work in provides important benefits both for their development and school. Because school employees have to cope with the obstacles that arise in the process of education and training directly. As the first step of school improvement, it can be provided that school administrators and teachers make a self-assessment about their schools and share information about the inadequacies of structure and human resources to improve the school qualifications under the guidance of these results. In general, it can be seen that the majority of the practices on school improvement carried out unplanned in schools are also negatively affected by the fact that basic and social change is not taken into consideration, the necessary preparation is not made, the measures are not taken and the systematic process is not carried out. In this context, planned improvement in the school involves a regular, consistent and continuous progress to increase the quality of work-life without reducing productivity; the acclaimed, accepted, and conscious movement in the desired direction (Erkal, 1995). The concept of "improvement" in school improvement is perceived as the process of achieving effectiveness and change management. The concept of school improvement can often be confused with the concept of school effectiveness and can be used interchangeably (Halsall, 1998). However, school effectiveness and school improvement approach come from different sources in intellectual, methodological and theoretical dimensions. The concept of school improvement is against the imposition of innovation from top to bottom with a reactive approach; it prefers the change from bottom to top (Reynolds, 1995; Chapman et al. 2011). However, the literature has been developed together. In this context, according to the learning process described by Senge (2016) for learning organization theory can be taken into account the development capacity of the school; the design of practices the school improvement and the determination of priority improvement areas can be made the school a

learning institution by providing learning from experiences.

Organizational improvement is not only the person, the technology or the structure and process in the organization but the change of them as a whole. In this study, Barnard's (1964) concept of organization based on cooperation, on the basis of open social system theory (Katz and Kahn, 1966) and learning organization theory (Senge, 2016), it has been tried to determine the areas where characteristics of individuals in the school organization (students, teachers, administrators and parents) and relating to the characteristics of the institutional process. During the workshop in the scope of the project, participants were asked to express their views on the inadequacies of schools as open-ended. Because there are a limited number of researches about school improvement and the content of the concept changes over time, it is hoped that the development of a data collection tool needs to be improved to identify the areas of the schools of primary and secondary school teachers and school administrators and the findings on the improvement of schools will contribute to the field.

Purpose of the Research

The study aims to develop a data collection tool and determine the perceptions of primary and secondary school teachers and their administrators/principals about the areas of their schools to be improved.
1. What are the areas of schools to be improved?
2. What are the views of primary and secondary school teachers and administrators/principals about the areas of their schools to be improved?

Method

Model

The design of this research is a descriptive survey model. A scale was developed to reveal the present situation.

Population and Sample

The study population was consisted of 14.941 primary and secondary school teachers and administrators/principals who have worked in the metropolitan districts of İzmir in the public schools in the 2018-2019 academic year. For the basic application of the study, the proportional cluster method was used. The distribution of the sample according to individual characteristics is given in Table 1.

Table 1. Distribution of Sample by Individual Characteristics

Individual Characteristics		N	%
Seniority	1-6 year	100	6,5
	7-12 year	262	17,0
	13-18 year	319	20,7
	19-24 year	470	30,5
	25 year and over	388	25,2
Duration of Working	1-5 year	771	50,1
	6-10 year	410	26,6
	11-15 year	185	12,0
	16 year and over	173	11,2
Gender	Female	1159	75,3
	Male	380	24,7
Age	26-30 age	95	6,2
	31-35 age	212	13,8
	36-40 age	285	18,5
	41-45 age	325	21,1
	46-50 age	312	20,3
	51-55 age	216	14,0
	56 age and over	94	6,1
Total		1539	100,0

When the distribution of the sample in Table 1 according to individual characteristics is examined, it is seen that the number of the participants is 1539. The majority of the participants were female (n =1159; % 75.3), had 19-24 years seniority (n = 470; 30.5%), had been working in their schools for 1-5 years (n = 771; 50.1%) and the ages of teachers and administrators/principals were between 40-50 years (41-45 years n = 325, 21.1%; 46-50 years n = 312, 20.3%).

Data Collection Tool

In this research, a scale was developed as a data collection tool. In the first phase of the scale development, the related area had been searched and the areas where schools need to be improved were determined. In the literature review process, scales in the field were examined. In the scope of a research-development (R&D) project, a workshop was conducted in order to determine the areas where schools need to be improved. Raw data contained a total of 65 pages of suggestions obtained in writing form from the 89 school administrators and teachers who attended to the workshop about the areas where their schools need to be improved. The raw data obtained from the primary and secondary school teachers and administrators were analyzed and a scale of the draft was prepared by writing the 118 items including school improvement areas.

At the preparation stage of the draft scale, the scale was first examined by seven faculty members from different universities and departments of Educational Sciences for the validity of language and content (scope) and two teachers were consulted for the clarity. By making necessary corrections in terms of content and expression, the number of items was reduced to 102 and for first tour validity analysis in the pilot application, the scale was distributed to 800 participants. The data of 580 scales were

used among collected scales. As a result of validity and reliability analyses, the scale was reduced to 82 items. For the second tour criterion-related validity and reliability application of the draft scale, 780 scales were distributed and analyzed. Finally, 2100 scales were distributed for the basic application. Data of 1539 participants were used.

Validity and Reliability

For the validity and reliability studies of the scale, the pre-application was applied to 580 participants and the construct validity and reliability analyzes of the scale were performed. Kaiser-Meyer-Olkin (KMO) coefficient and Barlett spherity test were calculated to determine the suitability of data for factor analysis and KMO value was found to be .98 and Bartlett test result ($x^2 = 113691,961$; p = 0.000) was found to be significant. Because of the seven-dimensional structure of the scale, it has been found that the EFA was collected under seven factors as a result of the Maximum Likelihood method and the variance explained by the seven factors related to the scale was 69%. Items loads of draft scale prepared with 102 items and Scree plot chart were examined, seven sub-dimensions were defined because they were conceptually interpretable seven factors. Barnard's concept of cooperative organization (1964), open social system theory (Katz and Kahn, 1966) and learning organization theory (Senge, 2016) were used for naming dimensions. As a result of the repeated factor analysis, it was decided that the scale form should be 82 items.

As a result of the explanatory factor analysis (EFA), the dimensions of the ASNI perception scale were called such as; the first factor "School administrators/principals" had 42,195% of the total variance; the second factor "Students" had 9,639% of total variance; the third factor "Teachers" had 6,823% of the total variance; the fourth factor "Physical-Technical Facilities" had 3,969% of the total variance; the fifth factor "Targets and Way of Determination" had 2,915% of the total variance; the sixth factor "Parents of Students " had 2.339% of the total variance; the seventh factor "Institutional process" had 1,707% of the total variance. According to the results of the analysis, the reliability values for the dimensions are shown in Table 2.

Table 2. Results of reliability analysis of scale factors

Factors of ASNI scale	Distribution of substances according to factors	Factor loads	Calculated Reliability Coefficients
Students	1. - 15. between items	,317-,464	,951
Teachers	16.-37. between items	,524-,668	,972
School Administrators/Principals	38.-51. between items	,340-,-700	,978
Parents of Students		,395-528	,937
Physical-Technical Facilities	60.-66. between items	,357-,579	,901
Targets and Way of Determination	67.-74. between items	,536-,657	,955
Institutional Process	75-82. between items	,558-698	,957
Total			,972

For the reliability of 82 items of the ASNI Perception Scale, Cronbach's Alpha internal consistency coefficient was calculated separately for the whole scale and each subscale. the According to the analysis of the internal consistency coefficients of the ASNI Perception Scale, Cronbach's Alpha values of ranged from .90 to .97. In addition, the relationship between the subscales of the draft scale was investigated and the correlation coefficients between the factors were presented in Table 3. As a result of the analysis, it was observed that the dimensions were in a positive and significant relationship with each other.

Table 3. Correlations between factors of ASNIP Scale

	Students	Teachers	School Administrators	Physical-Technical Facilities	Targets and Way of Determination	Institutional Process	Parents od Students
Students	1	,405**	,305**	,278**	,395**	,359**	,475**
Teachers	,405**	1	,512**	,313**	,509**	,659**	,234**
School Administrators/Principals	,305**	,512**	1	,413**	,646**	,746**	,311**
Physical-Technical Facilities	,278**	,313**	,413**	1	,484**	,406**	,387**
Targets and Way of determination	,395**	,509**	,646**	,484**	1	,618**	,364**
Institutional Process	,359**	,659**	,746**	,406**	,618**	1	,302**
Parents od Students	,475**	,234**	,311**	,387**	,364**	,302**	1

** $p < 0.01$ level is significant. (Correlation is significant at the 0.01 level (2-tailed).

As a result of the confirmatory factor analysis (CFA) of the ASNI perception scale, it was observed that the structure revealed in the EFA was confirmed. This result also shows that the dimensions of the scale are statistically verified. The model obtained with CFA is given in Figure 1 and Table 4.
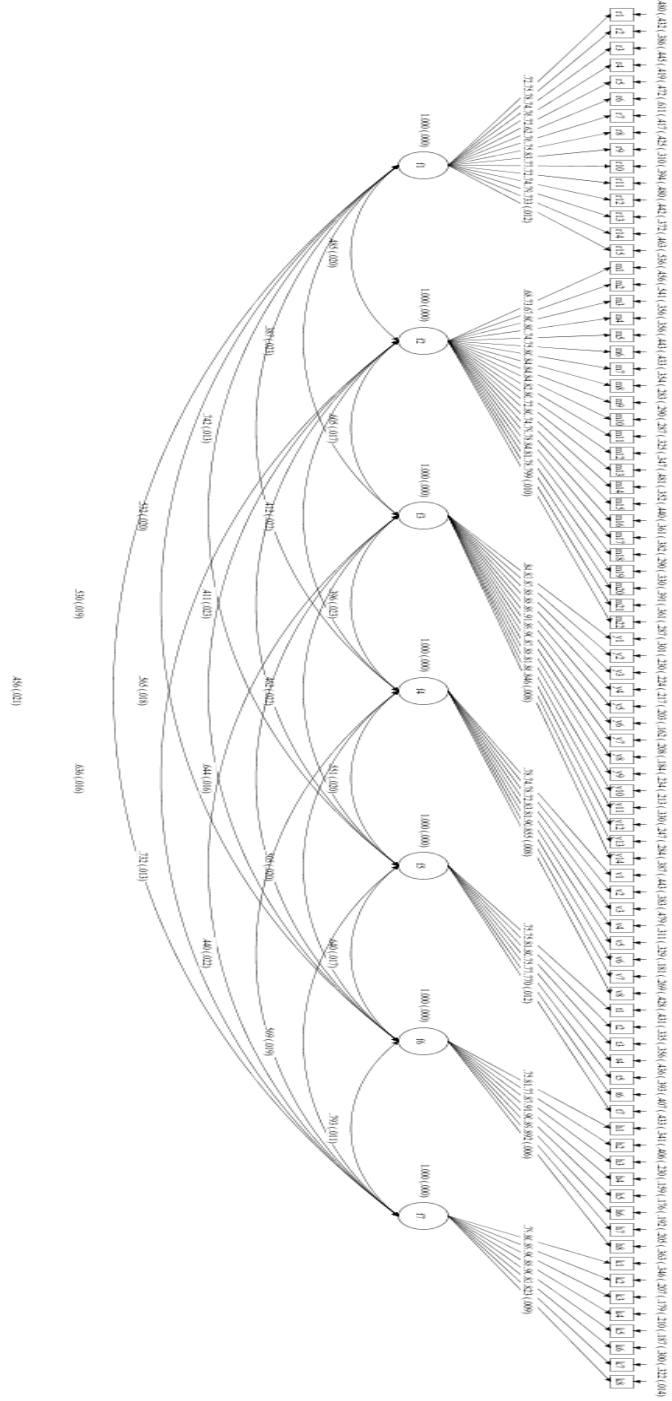
Figure 1. CFA Standardize Results

In Figure 1, the model obtained in MPlus program output was tested in the confirmatory factor analysis of the ASNI Perception scale. Calculated loads are presented in Table 4.

Table 4. DFA t values of ASNIP Scale

Dimensions	Substances	T values	R^2
Students	R1	0.558^{**}	0.520
	R2	0.606^{**}	0.568
	R3	0.645^{**}	0.614
	R4	0.583^{**}	0.555
	R5	0.627^{**}	0.581
	R6	0.634^{**}	0.528
	R7	0.513^{**}	0.389
	R8	0.621^{**}	0.583
	R9	0.623^{**}	0.575
	R10	0.658^{**}	0.690
	R11	0.683^{**}	0.606
	R12	0.561^{**}	0.520
	R13	0.610^{**}	0.558
	R14	0.619^{**}	0.628
	R15	0.579^{**}	0.537
Teachers	M1	0.448^{**}	0.644
	M2	0.570^{**}	0.557
	M3	0.607^{**}	0.567
	M4	0.596^{**}	0.646
	M5	0.565^{**}	0.717
	M6	0.621^{**}	0.710
	M7	0.594^{**}	0.713
	M8	0.612^{**}	0.675
	M9	0.643^{**}	0.653
	M10	0.666^{**}	0.519
	M11	0.605^{**}	0.648
	M12	0.604^{**}	0.560
	M13	0.577^{**}	0.639
	M14	0.585^{**}	0.618
	M15	0.620^{**}	0.710
	M16	0.655^{**}	0.670
	M17	0.614^{**}	0.609
	M18	0.665^{**}	0.639
	M19	0.617^{**}	0.644
	M20	0.654^{**}	0.557
	M21	0.569^{**}	0.567
	M22	0.628^{**}	0.646
School Administrators/ Principals	Y1	0.775^{**}	0.713
	Y2	0.733^{**}	0.699
	Y3	0.742^{**}	0.770
	Y4	0.736^{**}	0.776
	Y5	0.714^{**}	0.783
	Y6	0.764^{**}	0.797
	Y7	0.781^{**}	0.838

	Y8	0.759**	0.792
	Y9	0.767**	0.816
	Y10	0.803**	0.766
	Y11	0.852**	0.787
	Y12	0.706**	0.670
	Y13	0.778**	0.753
	Y14	0.730**	0.716
Parents of Students	V1	0.747**	0.613
	V2	0.650**	0.557
	V3	0.678**	0.617
	V4	0.618**	0.521
	V5	0.745**	0.689
	V6	0.729**	0.671
	V7	0.795**	0.819
	V8	0.793**	0.731
Physical-Technical Facilities	T1	0.797**	0.572
	T2	0.792**	0.569
	T3	0.915**	0.665
	T4	0.813**	0.644
	T5	0.856**	0.564
	T6	0.913**	0.607
	T7	0.861**	0.593
Targets and Way of Determination	H1	0.673**	0.567
	H2	0.707**	0.659
	H3	0.718**	0.594
	H4	0.736**	0.770
	H5	0.745**	0.841
	H6	0.746**	0.824
	H7	0.749**	0.808
	H8	0.769**	0.795
Institutional Process	K1	0.649**	0.637
	K2	0.635**	0.654
	K3	0.775**	0.793
	K4	0.779**	0.821
	K5	0.766**	0.790
	K6	0.766**	0.813
	K7	0.666**	0.700
	K8	0.736**	0.678

** $p < 0.01$ level is significant.

As shown in Table 4, according to the CFA results, the compliance of the seven-dimensional model of the ASNI perception scale with the data set was confirmed by the analysis of the Mplus 6.1 program. Goodness of fit indexes of the model were obtained in confirmatory factor analysis: $X^2 = 14639.241$; $X^2 / df = 4.54$; $p = 0.00$; CFI = 0.908; TLI = 0.905, S-RMR = 0.041 and RMSEA = 0.048. When the goodness values of fit of the model stated were examined, it was determined that the measurement model was an acceptable model.

After giving the final shape of the scale of perception of areas where schools should be improved, criterion-related validity studies were conducted with Effective School

Scale (ESS) developed by Balcı (1993: cited in Balcı, 2014). Among the sub-dimensions and on a total scores basis of the Pearson moments product correlation coefficients of "Effective School Scale" developed by Balcı (2014) (r = 257-, 487; p <.001) and OGGAÖ were found statistically low and medium level significant relationship for the criterion-related validity study. Between total scores of two scales were found statistically a moderate level (r=,494; p<,001) significant relationship.

Data Analysis

The data were obtained from the sample for the exploratory and confirmatory factor analysis of the scale was tested using Mplus 6.1 software program. As the skewness and kurtosis values were examined before the analysis varied in the range of + 1 / -1, it was concluded that the normal distribution assumption was met. Also, SPSS 21.00 statistical package program was used to analyze the data. The arithmetic mean and standard deviation analysis was used to determine the perceptions of the participants.

Conclusions

The findings of the study were presented under two main headings: the psychometric findings of the perception scale related to the areas of the schools to be improved and the perceptions of primary and secondary school teachers and school administrators about the areas.

1. Psychometric findings of perception scale related to the areas where schools should be improved

In this study, psychometric measurements of the scale of perception of the areas that need to be improved for primary and secondary school teachers and administrators/principals were tried to be done. For the validity analysis, exploratory factor analysis (EFA), confirmatory factor analysis (CFA) and criterion-related validity analysis were performed. Cronbach's Alpha internal consistency coefficients were calculated for reliability. Factor structure of the perception of areas in which schools need to be developed was examined with EFA. In addition, the goodness of fit (CFI = 0.908; TLI = 0.905; S-RMR = 0.041 and RMSEA = 0.048) obtained from the CFA to investigate whether the factor structure of the scale was valid was found to be within acceptable limits (Jöreskog & Sörbom, 1993; Şimşek; 2007).

To test the criterion-related validity of the scale of perception of areas in which schools need to be developed, the correlation between the measurement tools of similar structures were examined. After it was determined that the seven-factor structure of the scale was valid at the level of primary and secondary school teachers and administrator (principals) in the research, similarly the relationship between this scale and "Effective School Scale" which was developed by Balcı (2014), applied and used in many studies in the field of Educational Administration in the past was examined.

The scale of perception of the areas in which schools need to be improved (ASNIPS) consists of 82 items and includes seven dimensions: teachers, school administrators, students, parents, objectives, physical-technical facilities and institutional process. According to the opinions of teachers and school administrators, "teacher", which is

the first dimension of the scale of perception of areas that schools need to be developed, indicates the areas that should be developed for teachers in schools. The participants who have high scores in this dimension think that teachers are sufficient and effective in their schools. The participants with low scores in this dimension state that teachers are weak in terms of communication, pedagogical competence and learning culture.

The second factor of the scale of perception of the areas in which schools need to be improved (ASNIPS) is the "school administrators/principals". According to the views of teachers and school administrators, this dimension indicates the areas that need to be improved for school administrators. The attendants who have high scores in this dimension consider that the administrators in their schools are sufficient and effective. The participants having low scores in this dimension state that school administrators are weak in terms of human and material resources management.

The third factor of the scale of perception of the areas in which schools need to be improved (ASNIPS) is "students". This dimension indicates the areas that need to be improved for students in schools according to the viewpoints of teachers and school administrators. The participants who have high scores in this dimension think that students have high cognitive, affective and psychomotor competencies in their schools. The attendants with low scores in this dimension think that the students are weak in terms of their cognitive, affective and dynamic competences.

The fourth factor of the scale of perception of the areas in which schools need to be improved (ASNIPS) is "physical-technical" possibilities. This dimension indicates the areas that need to be improved for physical-technical opportunities in schools according to the opinions of teachers and school administrators. In this dimension the participants with high scores state that the physical-technical facilities in their schools are sufficient and effective. The participants who have low scores in this dimension think that the physical-technical facilities in their schools are weak.

The fifth factor of the scale of perception of the areas in which schools need to be developed (ASNIPS) is "parents of students". This dimension indicates the areas to be improved for the parents of the students in schools according to the ideas of teachers and school administrators. The attendants who have high scores in this dimension think that the parents of the students in their schools are supportive of the students and the school. On the other hand, the participants having low scores in this dimension express that their parents are weak in supporting the student and the school.

The sixth factor of the scale of perception of areas where schools need to be developed (ASNIPS) is the institutional processes ". This dimension indicates the areas that should be developed for institutional processes in schools according to the opinions of teachers and school administrators. The participants with high scores in this dimension think that the institutional processes in their schools are sufficient and and effective. The participants who have low scores in this dimension state that the institutional processes are weak.

The last factor of the scale of perception of the areas in which schools need to be developed (ASNIPS) is "targets and way of determination. According to the viewpoints of teachers and school administrators, this dimension indicates the areas

that need to be developed on purpose in schools. The attendants who have high scores in this dimension think that the goals in their schools are sufficient, efficient and effective. The participants having low scores in this dimension express that the schools are weak in terms of goals and the way these aims are determined.

2. The areas of schools that need to be improved according to teachers and school administrators

The opinions of the primary and secondary school teachers and administrators about the areas where schools need to be improved were analyzed and the findings were given in Table 5.

Table 5. The areas of schools that need to be improved according to teachers and school administrators

School Improvement Dimensions	Mean	SS/Std. Deviation
Students	3,378	,6253
Teachers	3,939	,6179
School Administrator/Principal	3,969	,7691
Parents of Students	3,039	,7521
Physical-Technical Facilities	2,804	,9021
Targets and way of determination	3,642	,7583
Institutional Process	3,763	,7491
School Improvement	3,586	,5660

The opinions of primary and secondary school teachers and administrators about the areas that schools should be improved are at the "High" level. When the average scores of primary and secondary school teachers and administrators regarding the areas that need to be improved in schools are examined, the average of the scores of determining the needs of school improvement is as follows from the least needed criteria to the most needed; "School Administrators/Principals" (X=3,969), "Teacher" (X = 3,939), "Institutional Process" (X=3,763), "Targets and way of determination" (X = 3,642), "Students" (X = 3.378), "Parents of Students" (X=3,039) and "Physical-Technical Opportunities" (X=2,804). The participants stated that the most inadequate area was "Physical-technical facilities" sub-dimension in schools and it is necessary to be improved and the most adequate area was "school administrator" sub-dimension. In other words, according to the perceptions of primary and secondary school teachers and school administrators/principals, considering this ranking, the criteria of "Physical-technical opportunities" (X = 2,804) need to be improved at the most and the criteria of school administrators/principlas need to be improved at least (X = 3,969) among the criteria of the needs of schools improvement.

In line with the findings obtained in this research, some application and research suggestions may be presented. When the researches related to the areas that schools need to be developed are examined, it can be said that physical technical opportunities, the performance and motivation of students, the professional development of teachers and administrators, the contribution of parents of students to school goals, and the activities to support cooperation with school members should be emphasized. It will be useful to conduct experimental studies examining how the

different practices of school development affect students' motivation towards school and achievement. In this way, which ones of the school development practices contribute to school members can be understood more clearly.

Because of the physical areas of the buildings of schools' being limited and the low level of parents' awareness to support education, teachers can develop creative solutions to develop physical and technical conditions in a positive way, improve themselves in this matter and increase their cooperation with the school's environment.

Teachers and administrators' scores related to their schools can be examined according to their individual and professional characteristics and problem-solving skills can be developed together to find the source of their problems and solve them.

According to the teachers' self-assessment, the causes of the problems can be determined in detail and teachers can participate in the decisions for the school development process. In addition, social activities and educational activities can be done for all members of the school.

Finally, school members may be advised to carry out learning and teaching activities that support the school development process. For this reason, it may be effective to use activities that increase the motivation of teachers in this process.

Acknowledgements

References

Altunay, E., Arlı, D. ve Yalçınkaya, M. (2012). İlköğretim Okullarında Değişim Yönetimine İlişkin Nitel Bir Çalışma (TKY Çalışmalarında Ödül Alan/Almayan Okullar Örneği) (A Qualitative Study On Change Management in Primary Schools Award Winning and Non-Award Winning Schools Case in Study of TQM), *Kuram ve Uygulamada Eğitim Bilimleri (KUYEB) Dergisi, 12*(2), 713-730. ISSN: 1303-0485. Retrieved from www.edam.com.tr/kuyeb

Balcı, A. (2014). *Örgütsel Gelişme Kuram ve Uygulama (Organizational Development Theory and Practice).* Genişletilmiş ve Gözden Geçirilmiş Dördüncü Baskı. Ankara: Pegem Akademi.

Balcı, A. (2014). *Etkili Okul ve Okul Geliştirme: Kuram, Uygulama ve Araştırma (Effective School and School Improvement: Theory, Practice and Research).* 7. Baskı. Ankara: PegemA Yayınları.

Barnard, C.I. (1964). *The Functions of the Executive.* Cambridge, MA: Harward University Press.

Chapman, C. Armstrong, P. Harris, A. Muijs, D.Reynolds, D. & Sammons, P (Eds). (2011). *School Effectiveness and Improvement Research, Policy and Practice: Challenging the Orthodoxy?* London, Routledge.

Erkal, M. E. (1995). *Sosyoloji (Toplumbilimi) (Sociology).* İstanbul: Der Yayınları.

Halsall, R. (1998). *Teacher Research and School Improvement.* Buckingham: Open University Press.

Jöreskog, K. G. & Sörbom, D. (1993). *LISREL 8: Structural Equation Modeling with the SIMPLIS Command Language.* Lincolnwood: Scientific Software International.

Katz, D. & Kahn, R.L. (1966). *The Social Psychology of Organizatio*ns. New York: Wiley.

Kondakçı, Y., Zayim, M. & Çalışkan, Ö. (2010). Okul Yöneticilerinin Değişime Hazır Olma Tutumlarının Okulun Öğretim Düzeyi, Yöneticilerin Deneyimi ve Okul Büyüklüğü Bağlamında İncelenmesi (Investigation of School Administrators' Attitudes to Readiness of Change in the context of School Teaching Level, Administrators' Experience and School Size). *İnönü Üniversitesi Eğitim Fakültesi Dergisi, 11*(2), 155-175.

Reynolds, D. (1995). Linking School Effectiveness Knowledge and School Improvement Practice. In Dimmock, C. (1995). Ed. *School-Based Management and School Effectiveness.* London and New York: Routledge

Senge, P. (2016). *Beşinci Disiplin: Öğrenen Organizasyon Sanatı ve Uygulaması. (The Fifth Discipline: The Art and Practice of the Learning Organization).* Çevirenler Ayşegül İldeniz, Ahmet Doğukan, Barış Pala. 17. Baskı. İstanbul: Yapı Kredi Kültür Sanat Yayıncılık.

Şimşek, Ö. F. (2007). *Yapısal Eşitlik Modellemesine Giriş (Temel İlkeler ve LISREL Uygulamaları) (Introduction to Structural Equation Modeling (Basic Principles and LISREL Applications).)* Ankara: Ekinoks.

Töremen, F. (2002). Eğitim Örgütlerinde Değişimin Engel ve Nedenleri (Barriers and Causes of Change in Educational Organizations), *Fırat Üniversitesi Sosyal Bilimler Dergisi, 12*(1), 185-202.

TSV (2015). *Türkiye'nin Stratejik Vizyonu 2023 Projesi (2006-2023, Türkiye). (Turkey's Strategic Vision 2023 Project)*. Retrieved from http://www.tsv2023.org/

Contact email: esenaltunay@yahoo.com or esen.altunay@ege.edu.tr