Available online at www.sciencedirect.com

SciVerse ScienceDirect

Procedia - Social and Behavioral Sciences 46 (2012) 2398 – 2402

Procedia
Social and Behavioral Sciences

WCES 2012

A contextual analysis of factors tend to be effective school system in Turkey

Mustafa Ozmusul[a] *

[a]Hacettepe University, Educational Sciences, Ankara 06800,Turkey

Abstract

All educational policies need to take into consideration the factors which affect the performance of school system. To address this, the purpose of this study was to investigate the factors tend to be effective school system in Turkey, as derived from the PISA 2009 survey. The factors were determined by considerable variations which were derived from PISA in explaining student performance. The dimensions of this study were resources, policies and practices; organization of schooling and the learning environment. The main findings were supplied from official PISA 2009 reports presented by OECD, and then those were extended through an analysis of literature and concerned recent research findings. The contribution of this study can play a significant role to understand effective school concept and its meaningful factors, and to determine what the steps are needed in developing effective school system in Turkey. Also the results for Turkey can be useful for other countries, and can be used to make comparative studies in terms of effective school system.

Keywords: Effective, school, factors, Turkey, PISA;

1. Introduction

One of the main aims of countries has unquestionably been to establish effective school systems, because it is vital to create and maintain the human capital, not only for today's skills, but also tomorrow's world which entails new skills. In another saying, the inputs entering the education system must product demanded outcomes. From this perspective, all countries concerned in tomorrow's world, should prepare their young to gain basic skills for tomorrow which will be based on new learning needs throughout formal education, work life and lifelong learning. Also important is to emphasize prevention of either the risks or additional costs which can be incurred from insufficient basic skills is considered.

How can countries establish an effective school system? Moreover, what should they do? And which factors should be taken into account to develop it? The first job of studies, policies and implementations should answer these questions in order to enlighten the issue of creating and maintain effective school system. However, to view this issue from an international perspective, countries should compare themselves with international data; above all they should know what the situation of their school system is. Effective or not at international level? To address this,

* Mustafa OZMUSUL. Tel.: +90-505-573-0026
E-mail address: mustafaozmusul@yahoo.com

1877-0428 © 2012 Published by Elsevier Ltd. Selection and/or peer review under responsibility of Prof. Dr. Hüseyin Uzunboylu
Open access under CC BY-NC-ND license. doi:10.1016/j.sbspro.2012.05.492

PISA data presented by OECD since 2001 has been used; it has been a vital indicator for countries to monitor and evaluate the performance of their school system and to develop policies to enhance their system.

There are several explanations for school being considered "better" than others. Namely some schools have high student averages while some have low. Postlethwaite and Ross (1992,9-10) explained this issue with four categorical reasons: First is that some schools are located in privileged areas where students come from homes in which parents give importance to their children's education, try to help their children to learn better, show interest in school activities, provide materials such as books in the home, and so on. Second is that schools have high performance are better equipped than schools that have low performance. Examples are classroom features, and educational materials both in class and school library etc. Third reason is that schools with high average student performance have good teachers who know their subject well, demand a lot of from students, know how to develop material to be learned, keep good order in the classroom, receive feedback from students upon the objectives the students have mastered in a systematic way, and give help to those who have some problems on some objectives, have superior understanding on the aims of education system, and know better which strategies are most conducive to these aims. And the fourth is that schools with high performance on scores are ones that are well managed by principals who help the teachers by presenting enthusiastic and creative leadership on the issue of school pedagogy and educational and social climate.

In addition, Lezotte (1991) correlated seven characteristics related to effective schools as follows: *clear school mission; high expectations for success; instructional leadership; opportunity to learn and time on task; safe and orderly environment; positive home-school relations; and frequent monitoring of student progress.*

In the PISA 2009 study (OECD, 2010, 47), effective school is defined by trained and talented personnel, adequate educational resources and facilities and motivated students ready to learn and that all are combined in a right way.

According to a synthesis of research on unusually effective schools made by Levine and Lezotte (1990) indicated that three considerable issues were addressed: *1) the viability of the effective school concept in contemporary school reform; (2) the correlation between recent research and basic findings; (3) and the congruency of school level practices with research on classroom and district practices and policies*.

In addition to common factors of effective school system from an international perspective; when considering that both features of the education system and social, economic and cultural background can differ from one country to another, the factors can change. For that, effective school system seems an issue which should be approached from each country's perspective.

In this study, a contextual analysis aims to investigate the factors of the effective school system in Turkey using PISA 2009 data. Positive and statistically significant factors were selected among findings which were derived from PISA in explaining student performance. Furthermore, the dimensions of this study were resources, policies and practices; organization of schooling and the learning environment. The main findings were supplied from official PISA 2009 reports presented by OECD, and then those were extended through an analysis of literature and concerned recent research findings.

This study can play a significant role in filling the gaps in understanding what the effective school concept is, what the factors have an effect on establishing effective school system, and what the steps are needed in developing effective school system in Turkey. In addition, the results for Turkey can be useful for other countries, and assist to make comparative studies in terms of effective school system.

2. Method

In this study, the PISA 2009 data which were derived from excel tables on http://dx.doi.org/10.1787/888932382216, were used mostly. The factors which made significant change in reading scores statistically, which were indicated on those tables in bold, were determined and stated their situation of change in score, correlation or explaining variance. Furthermore, the factors were presented after accounting for the socio-economic and demographic background of students and schools.

In addition, the factors which are stated in *resources, policies and practices* are based on the views of school principals, derived from school questionnaires. Also the factors which are presented in the *organization of*

schooling, that are *students' learning time, and percentage of students attending after-school lessons (enrichment)* are based on students' views derived from student questionnaire while *resources invested in education,* and *index of schools' extra-curricular activities* are based on the views of school principals derived from school questionnaire. Finally, the other factors which are stated in the *learning environment* are based on students' views derived from student questionnaire.

3. Resources, Policies and Practices

When analyzing the relationship between the schools with high academic selectivity for school admittance and reading performance, the change in score is 72,2 in Turkey, while the OECD average is 17,3. After accounting *Socio-Economic and Demographic Background of Students and Schools* (SSSEDB), the change in the score is 24,5 in Turkey, while The OECD average is 7,6 (OECD, 2011).

In the school governance, *school competes with other schools for students in the same area* becomes an important factor that affects the student performance. Namely, it indicates that the change in score is 102,5 in Turkey, while The OECD average is 14,9. When SSSEDB is taken into account, the change is 24,3 in Turkey; however, the change is 0,9 but not significant statistically in the OECD average (OECD, 2011).

S*chool uses student assessments to compare with other schools or district or national performance* in the assessment and accountability policies, as a factor that affects the student performance, indicates that the change in score is 66,3 in Turkey, while The OECD average is 5,5. After accounting SSSEDB the change is -15,3 in Turkey and 1,8 in the OECD average, but both these are not significant statistically (OECD, 2011).

However*,* in the assessment and accountability policies, *schools' accountability to parents: only relative to other students in the school* affects the student performance, and it indicates the change in score is 71,5 in Turkey; while The OECD average is 0,7 but not significant significantly. After accounting SSSEDB, the change is 21,1 in Turkey but not significant statistically.

The other factor that affects the reading performance in the assessment and accountability policies is *school posts achievement data publicly, and it* indicates that change in score is 43,3 in Turkey, while The OECD average is 13,7. When SSSEDB is taken into account, the change is 24,4 in Turkey and 4,0 in the OECD average (OECD, 2011).

One of the factors indicating the change in score in the PISA 2009 study is index *of school responsibility for resource allocation.* This index consists of six items which are *selecting teachers for hire; dismissing teachers; establishing teachers' starting salaries; determining teachers' salaries increases formulating the school budget; and deciding on budget allocations within the school*. The index was developed from responses of school principals whether *principals, teachers, school governing board, regional or local education authority or national education authority* has important responsibility for the items. For the index, the ratio of the number of responsibility that *principals* and/or *teachers* have for these six items to the number of responsibility that *regional or local education authority* and/or *national education authority* have for these six items was estimated. (OECD, 2010, 123). When investigated the relationship between the index and student performance, it seems that the index explains 0,4% of the variance in the student performance in Turkey, and 1% in the OECD average.

4. Organization of schooling

When analyzing within-school variance expressed as a percentage of the average of the within-school variance in student performance; it seems that the variance in the performance is explained by *resources invested in education as* 0,2% in Turkey*, and* as 0,8% in the OECD average.

The relationship between s*tudents' learning time at school in language of instruction lessons i*n resources invested in education, and student performance indicates that change in score is only 0,7 in Turkey, while The OECD average is -0,2. After accounting SSSEDB, the change is 0,3 in Turkey and -0,1 in the OECD average (OECD, 2011).

The another factor that affects the reading performance in resources invested in education is p*ercentage of students attending after-school lessons (enrichment)*, and it indicates that change in score is 1,5 in Turkey while The

OECD average is -0,2. After accounting SSSEDB, the change is 0,9 in Turkey and -0,3 in the OECD average (OECD, 2011).

One of the indexes used to explain the relationship between factors and student performance in the PISA 2009 study is *index of schools' extra-curricular activities*. This index was derived from responses of school principals of which activities to students were offered in the school. These activities are as follows*: i) Band, orchestra or choir; ii) school play or school musical; iii) school yearbook, newspaper or magazine; iv) volunteering or service activities; v) book club; vi) debating club or debating activities; vii) school club or school competition for foreign language mathematics or science; viii) <academic club>; ix) art club or art activities; x) sporting team or sporting activities; xi) lectures and/ or seminars; xii) collaboration with local libraries; xiii) collaboration with local newspapers; and xiv) <country specific item>* (OECD, 2010, 124). *Index of schools' extra-curricular activities* by national quarters of this index, explains significantly that change in score is 17,4 for Turkey, while The OECD average is 18. This index also explains 3,8% of variance in student performance for Turkey, and 3,7% for The OECD average (OECD, 2011).

5. The learning environment

In the PISA 2009 study, some statements in learning environment were combined for preparing index *of teacher-student relations.* The index was developed according to the levels of student's agreement with those statements. They are as follows*: i) I get along well with most of my teachers; ii) most of my teachers are interested in my well-being; iii) most of my teachers really listen to what I have to say; iv) if I need extra help, I will receive it from my teachers; and v) most of my teachers treat me fairly* (OECD, 2010, 121). This index indicates that change in score is 4,8 in Turkey, while The OECD average is 9,8. After accounting SSSEDB, the change is 4,3 in Turkey and 8,2 in the OECD average (OECD, 2011). In addition, by national quarters of this index indicates that change in score is 5,6 for Turkey, while The OECD average is 12,2. This index also explains 0,6 % of variance in student performance for Turkey, and 2,2% for The OECD average (OECD, 2011).

Index of teachers' stimulation of students' reading engagement and reading skills and performance, as an index affecting student performance, was developed from the students' responses to what occurred in their lessons of language. Those are as follows*: i) the teacher asks students to explain the meaning of a text; ii) the teacher asks questions that challenge students to get a better understanding of a text; iii) the teacher gives students enough time to think about their answers; iv) the teacher recommends a book or author to read; v) the teacher encourages students to express their opinion about a text; vi) the teacher helps students relate the stories they read to their lives; and vii) the teacher shows students how the information in texts builds on what they already know.* By national quarters of this index indicates that a change in score is 7,5 in Turkey, while The OECD average is 6,2. This index also explains 1% of variance in student performance for Turkey, and 0,7% for The OECD average (OECD, 2011).

In addition, *disciplinary climate* is an important index of learning environment in the PISA 2009 study. While it was developed, the responses of students related to what happened in their lessons of the language of instruction were used. The items asked students are as follows: i*) students don't listen to what the teacher says; ii) there is noise and disorder; iii) the teacher has to wait a long time for the students to <quieten down>; iv) students cannot work well; and v) students don't start working for a long time after the lesson begins*. When analyzing the relationship between *index of disciplinary climate* and student performance, it seems that change in score is 76,6 in Turkey, while The OECD average is 28,6. After accounting SSSEDB, the change is 2,8, but not significant statistically, in Turkey; and the change is 4,8 for The OECD average (OECD, 2011). Furthermore, by national quarters of this index indicates that change in score is 13,4 in Turkey, while The OECD average is 14,3. This index also explains 2,2% of variance in student performance for Turkey, and 2,6% for The OECD average (OECD, 2011).

In addition, the situation of parents' expectations is included in learning environment as a factor affecting student performance in PISA 2009. And *parents expect the school to set high academic standards and pressure for students to achieve them* indicates that change in score is 76,3 for Turkey, while The OECD average is 26,9. After accounting SSSEDB, the change is -1,8 for Turkey and 2,9 for The OECD average (OECD, 2011).

5. Results

According to PISA 2009 data, indicating an international perspective, in Turkey, the factors affecting school system are respectively as follows: *school competes with other schools for students in the same area; index of disciplinary climate*; *parents expect the school to set high academic standards and pressure for students to achieve them; school with high academic selectivity for school admittance; schools' accountability to parents: only relative to other students in the school* ; *school uses student assessments to compare with other schools or district or national performance*; s*chool posts achievement data publicly*; and index *of schools' extra-curricular activities* indicate that change in score is from 102,5 to 17,4. However, *index of teachers' stimulation of students' reading engagement and reading skills and performance*; i*ndex of teacher-student relations; percentage of students attending after-school lessons (enrichment); students' learning time at school in language of instruction lessons* in resources invested in education indicates that change in score respectively from 7,5 to 0,7. Index *of school responsibility for resource allocation; and resources invested in education* within-school variance expressed as a percentage of the average of within-school variance, in student performance, explains respectively 0,4% and % 0,2 of total variance in student performance.

Moreover, after accounting the students' and the schools' socio-economic and demographic background, the relationship between student performance and those which are i*ndex of disciplinary climate; parents expect the school to set high academic standards and pressure for students to achieve them;* and *school uses student assessments to compare with other schools or district or national performance* are not significant statistically.

Also statistically significant relationships are found, when students' and those which are schools' socio-economic and demographic background is taken into account, between student performance and those which are *school with high academic selectivity for school admittance; school posts achievement data publicly; school competes with other schools for students in the same area; schools' accountability to parents: only relative to other students in the school.* Those factors indicate that change in score is respectively from 24,5. to 21,1. In addition, the change in score is from 4,3 to 0,3, When analyzing the relationship between student performance and those which are *index of teacher-student relations*, *percentage of students attending after-school lessons (enrichment);* and *students' learning time at school in language of instruction lessons.*

In conclusion, in this study there was an approach to the effective school system from the factors affecting student performance at international level. Within this approach, the factors tend to be effective school system in Turkey were analyzed, using PISA 2009 data, in terms of the resources, policies and practices; organization of schooling and the learning environment. Nevertheless, the findings related to those factors and their effect level after estimating *Socio-Economic and Demographic Background of Students and Schools* (SSSEDB) were indicated, and compared to the OECD average. When make a general comparison, it seems that those factors have usually stronger effect on student performance in Turkey than the OECD average. In the steps for developing effective school system in Turkey, it entails that some factors should be taken into account so much, because their effect levels vary with the OECD average relatively.

References

OECD. (2011). PISA 2009 Database: What Students Know and Can Do: Student Performance in Reading, Mathematics and Science. http://dx.doi.org/10.1787/888932381399

OECD (2010), PISA 2009 Results: What Makes a School Successful? – Resources, Policies and Practices (Volume IV) http://dx.doi.org/10.1787/9789264091559-en

Postlethwaite, T.N and Ross, K. N. (1992). *Effective schools in reading: implications for educational planners.: an exploratory study. 9-10* International Association for the Evaluation of Educational Achievement Report. *http://eric.ed.gov/PDFS/ED360614.pdf*

Lezotte, L. (1991). Correlates of effective schools: The first and second generation. Okemos, MI: Effective Schools Products, Ltd.