European Journal of Educational Research
Volume 5, Issue 2, 85 - 100.
ISSN: 2165-8714
http://www.eu-jer.com/

Student Perception of Academic Achievement Factors at High School

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Abstract: Measuring the quality of the 'product' is elemental in education, and most studies depend on observational data about student achievement factors, focusing overwhelmingly on quantitative data namely achievement scores, school data like attendance, facilities, expenditure class size etc. But there is little evidence of learner perceptions. 553 students from two different universities, who graduated from 3 high school types, were asked to respond to two fundamental questions to reflect on school and classroom level achievement factors. 2294 responses produced eight categories in question one, teacher factors being the most preferred (n=424), followed by individual factors (n=404) and then family factors (n=395). As for liking towards a course, 1362 responses were produced, most frequent one being teacher's attitude (n=205). Results indicate student perspective of causes of achievement is somewhat different from those expressed in quantitative studies. Girls attributed more achievement to study habits, family support whereas boys attributed more to school and technology. More emphasis is needed on perceived achievement factors for a sound evaluation of effectiveness in school.

Keywords: *School effectiveness, individual factors, perception of achievement, teacher attitude*

To cite this article: Bahar, M. (2016). Student Perception of Academic Achievement Factors at High School. *European Journal of Educational Research*, *5*(2), 85-100. doi: 10.12973/eu-jer.5.2.85

Introduction

As schools are the basic sources of formal knowledge, their effect on student achievement gets great attention. Considering factors impacting on achievement, studies have focused on measuring what affects achievement, mostly quantitatively. However, reviewing the factors influencing learning, researchers found student or classroom processes affect student learning more than school factors (Wang, Haertel, and Walberg, 1990, 1993). Attempts to identify the causes and consequences of school climate could benefit from examining potential predictors (Griffith, 1999, 2000).

While early studies into the effectiveness of schools found decisive influence of SES on student achievement, studies in the following years found school effects as well, which implied school influence on student attainment. Numerous studies established differing school dimensions depending on type of study and study group as well as perceived cultural context of successful school, and there were even contradicting results depending on an understanding of what makes a school effective. Schools probably have several sources of 'effectiveness' which differ according to the outcome being considered (Gray, 2004).

Apparently, studies utilizing academic achievement and contextual factors usually have not discriminated among primary, secondary and high school effectiveness. Scheerens (2000) points to the insufficiency of effective school studies in developing countries. Studies of school effectiveness basically start in the 1990s (Arslan, Satici & Kuru, 2006) in Turkey.

Academic Achievement in Schools

Because academic achievement is basically seen as a main outcome of the school. Bashi,

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Sass, Katzir and Margolin (1990) see academic achievement as a main criterion in school effectiveness studies. Gaziel (1996) reports academic achievement is frequently given as school effectiveness indicator by shareholders in education. Although state achievement tests are administered to students, the results are used to measure school effectiveness (Nitko & Brookhart, 2011).

There are numerous factors within school that affect achievement and there is no consensus on this. The school staff, such as 'dedicated and qualified staff, teachers (McCaffrey, Lockwood, Koretz, Louis, & Hamilton, 2004), academic and administrative leadership (Grissom, Kalogrides & Loeb, 2014), school environment processes such as clear school goals (Townsend (1997), selectivity of school (Salchegger, 2016) and 'positive school climate (Dronkers & Robert, 2008; Townsend, 1997) have been seen among the most important elements for the effective school.

The number of studies about the relationships between academic and affective/social outcomes is very small (Gray, 2004). At the secondary level, results suggest that effects on academic and certain affective/social outcomes may be more linked, especially when it comes to attendance and behaviour. (Teddlie, Reynolds & Sammons, 2000).

Classroom Factors

The classroom is where most of the education goes and and the main components seem to be the student and the teacher. Results of studies on the effects of classroom-level factors showed effects of structured lessons, intellectually challenging teaching, a work-centered environment, limited focus within lessons, maximum communication between teachers and students, record keeping, parental involvement, and a positive climate at the classroom level on student achievement (Mortimore, Sammons, Stoll, Lewis, & Ecob, 1988), positive feedback, emphasis of key lesson points, checking for student comprehension, academic-related questioning, motivating students, and high expectations (Reynolds, Creemers, Stringfild, Teddlie, & Schaffer, 2002), and calm, learning-focused climate in the classroom (Opdenakker, Van Damme, De Farine, Van Landeghem, & Onghena, 2002).

Teacher's high expectations and student abilities (Hill & Rowe, 1998) were found to have influence in effectiveness. The research indicates that classroom level or teacher effects tend to be substantially larger than school effects (Scheerens & Bosker, 1997). School effectiveness research is increasingly showing that the influence of the teacher and of the learning environment exceeds that of the school (Darling-Hammond, 2000; Reynolds, 1997). Although relatively small, results by Lomos, Hofman and Bosker (2011) show that the relationship between professional community and student achievement is positive and significant. Study by Teodorovic (2011) shows behaviors and practices in classrooms are important to student achievement. Cheng and Mok (2008) found, in effective classrooms, students had positive learning attitudes, learning effectiveness and student's satisfaction.

Student

Student is the main input of the educational system. Theories about the links between outcomes and processes demand that additional factors be included to explain other outcomes of schooling (Gray, 2004).

Quantitative analyses take into account input that can be quantified: Therefore, Levacic (2007) describes pupil inputs as the characteristics of the individual pupil that affect their learning outcomes, further divided into as prior attainment and pupil characteristics, in particular, age, gender, ethnicity and family background.

Although most data on the simple correlation between school expenditures and achievement show a strongly positive affiliation, the strength of relationship disappears when one controls for differences in family background (Hanushek, 1989),

implying other variables should be considered. This goes hand in hand with achievement goals theory which dictates achievement level of individuals can differ even with the same intelligence and ability (Dweck, 1986; Dweck & Legget, 1988) and this stems from the different forms of motivation and goals (Elliot & Dweck, 1988). For example, Social Achievement Goals theory dictates social goals of students are the reasons to achieve academically (Cheng & Lam, 2013).

Study Habits

Student study practices affect achievement in differing ways, which may be influenced by a number of factors. Academic self-beliefs strongly correlated with previous study success and had a strong direct influence on test performance (Hailikari, Nevgi, & Komulainen, 2008). Effective school factors identified by Sammons, Hillman and Mortimore (1995) and Reynolds, Sammons, De Fraine, Townsend and Van Damme (2011) included learning environment, concentration on teaching and learning, high expectations, positive reinforcement, monitoring progress, purposeful teaching, and home-school partnership. Similarly, Munoz and Portes (2001) highlight psychosocial variables including achievement motivation, time management practices, and home/school variables such as who helps with homework, parent involvement in student's schooling, and how much the learner likes the school. In line with this, (D'Agostino, 2000) includes homework assignments as a factor in effectiveness.

Social Environment

High school students are influenced by the way their peers see things. This is evident in a number of studies as well. Kim and Hill (2015) found academic socialization as the strongest predictor of achievement for school-age children of all grade levels. McGaw, Piper, Banks and Evans, (1992) found elements of school effectiveness as positive relationship with learning, development of a positive self-concept, sense of self-discipline and self-worth, students' living skills. Classmates from relatively high family social status backgrounds contribute significantly to academic achievement, independent of one's own family socio-economic status or race (Caldas & Bankston, 1997). Sakigawa (2003) found parents' interest in child's study and existence of close friends in school contributed to achievement.

One reason studies may produce different results is what counts as achievement for policymakers. In Turkey high school students study for university entrance exam especially during the last two years of their high school education, which may weaken school's function on the student. Entrance to higher education in Turkey requires passing a central exam after which students select departments they want to study at, depending on their scores, which allows to gather students with similar achievements from different school types to study at the same department. High schools also differ in their selectivity as a result of a compulsory exam held at grade eight. Highest scoring students prefer very limited number of social sciences and science high schools, apart from high schools which are well-rooted in big cities. Other than these, there are Anatolian high schools, with greatly varying achievement levels, and Anatolian teacher training high schools. Yet, regulations and types have been changed in 2013, an indication of confusion in the policies of education officials. Even though there are also 'Anatolian' type vocational and technical high schools, their scores are not as high.

Rationale

There is a need to inquire the same basic question with the students to see achievement factors. This is because many quantitative and contextual factors do not take into account personal perceptions of academic achievement as seen by the students following an inductive method. Besides, achievement goals factors have been manipulated in some studies (Darnon, Dompnier & Poortvliet, 2012) implying the need to ask not leading questions. There is

need to take students' perspectives more into account and to give them a 'voice' (Creemers et al.,1998). There is a need to study school processes more (Balci, 2011). Non-academic life should also be taken into account in school effectiveness (Griffin, 1992). As relying only on quantitative data may negatively affect educational decisions, it is essential to get student opinions about achievement as well.

There are studies on specific effectiveness factors like the principal or the teacher, but other than a few small sample studies (Aksit, 2006; Bahar & Ulku, 2014; Balci, 1992; Bastepe, 2002; Bener, 2015) that rely on surveys and school contextual factors, there is not ample evidence of school effectiveness in Turkish context. Reynolds et al. (2011) mention the commitment to quantitative methods within effectiveness research and the absence of qualitative data. So, the need for qualitative data is evident. To contribute to the literature with this in mind, our research questions focused on:

1. What is the main factor in students' high school academic achievement?

2. What is the main factor in course achievement at high school?

Method

The study focused on student written responses ignoring dimensions of effective schooling in the literature, and achievement factors to ensure true student categories. In qualitative analysis we should try to suspend beliefs in familiar convictions and examine evidence in a new and critical way (Edson, 1988). Do not let assumptions blind you to the evidence of your data. Avoid preconceived ideas (Dey, 1993). Besides, a structured method was not preferred not to limit student responses. Results are later discussed with respect to school effectiveness literature.

Participants

The study included 553 students from various department in two universities. Students were in second, third and fourth year of education. All students provided their gender: boys:203, girls:350 all from three high school types (370 student provided their school types; regular=157, Anatolian high=101 and foreign language weighted high school (they have been abolished) =112). Because all students had achieved some standard achievement at high school (studying at a university requires passing a countrywide central exam), they had a clear idea of what added to their success.

Process

In the Turkish context, studies conducted on school effectiveness extensively used adapted questionnaires. However, considering the studies in different countries, factors may change to a good extent depending on educational goals and values. This puts the comprehensiveness and applicability of findings under question. This is why there is a need to start from the beginning, that is, studying inductively. We did not prefer high school students because they may be strongly influenced by the conditions they are currently in. This may adversely influence writing down important factors. However, we would expect they would remember the main factors after graduating from high school. So, students were requested to respond freely to the question of "What determined your school achievement?", in order of importance. Factors were limited to seven to ensure focusing on important factors of school achievement. Secondly, we asked "What made you like a course in high school?" Responses were limited to three. In the first place we did open coding, which is a way of a way of identifying important words, or groups of words, in the data and then labelling them accordingly (Birks & Mills, 2011, p.9). Secondly, intermediate coding was carried out and finally we made selective coding, final stage of grounded theory. When the student wrote *'my family environment,'* it was named under family (as it implied social environment), when he/she wrote *'my home was distant to school'*, '*transportation was difficult'* or *'school region'* it was categorized under (physical) environment. Under the

discussion part, these are regrouped into environment theme with reference to the literature. A qualitative data analysis specialist went over the themes to increase reliability.

Following grounded theory, frequency tables of themes and subthemes were drawn according to responses. Finally, we performed chi square test to see the difference in responses between boys and girls, another factor comparatively ignored in quantitative studies of school effectiveness. Source of difference was tested with the residuals: An adjusted residual higher than 1.96 indicates the number of cases in that cell is significantly larger than would be expected if the H_0 were true, with $p<.05$. (IBM, 2012).

Open ended questions were preferred, as they may help to reveal differences from other countries. Evidently, when students are faced with options students may not find the options they would actually like to prefer, a basic disadvantage of using options in items. This study will provide incentives into future studies in showing students' personal ideas which may be of quite a good help when studying predictors of academic achievement.

Results

Student responses for the first question produced the following results in order of frequency.

Table 1. Overall responses to the questions related to factors in school achievement as perceived by students in order of frequency.

	f	%	Cumulative Percent
Teacher	424	18,5	18,5
The Individual	404	17,6	36,1
Family	395	17,2	53,3
School	361	15,7	69,0
Friend	254	11,1	80,1
Study Program	250	10,9	91,0
Environment	108	4,7	95,7
External Support	98	4,3	100,0
Total	2294	100,0	

Students gave a total of 2294 responses to the 'high school achievement' question directed at them. Teacher factors (n=424) accounted for the most frequent response, while second most frequent response was about the individual (n=404). Next came family factors with a frequency of 395, school factors other than the teacher accounted for 361 of the responses. Students' friends and study programs accounted for 254 and 250 of the responses respectively. Environment, expressed independent of family or friend environment accounted for only 108 of the responses and external support, accounted for 98 of the responses.

To show visually, the data were graphed in Figure-1 in percentages.

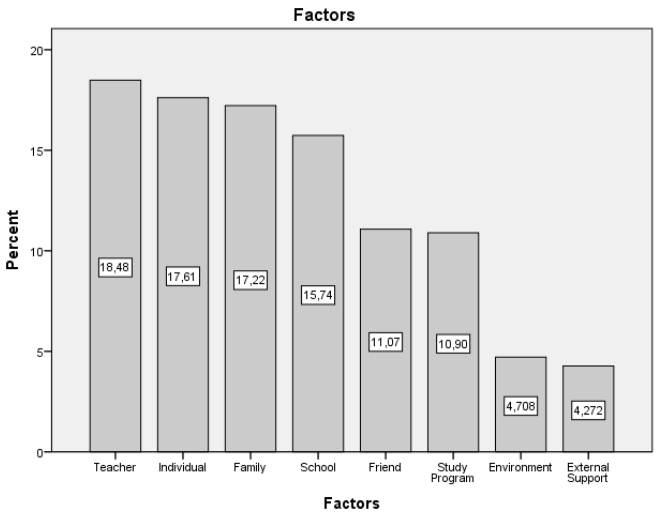

Figure 1. Overall Percentages of Answer Categories

Girls used 3668 words, whereas boys used 1983 words to express their perceptions, a finding showing the difference in expression of perceptions. A chi square test of independence was used to analyze the data with achievement factors as one variable and the gender of the participant as the second variable.

In table 2, there was significant difference between boys and girls with reference to main factors of study program and school $X^2(7, N=394) = 25,643$, p=001. Girls attributed more achievement than boys to "study program" factors (Z = -2,1), whereas boys significantly attributed more achievement to "school" than did girls (Z = 2,5).

Table 2. Chi Square Test for Gender Differences in Preference of Achievement Factors

		Gender		X^2	*p*
		Boys	Girls		
	Count	132	263	25,643	,001
Environment	Expected Count	141,9	253,1		
	Std. Residual	-,8	,6		
	Count	108	146		
External support	Expected Count	91,2	162,8		
	Std. Residual	1,8	-1,3		
	Count	133	271		
Family	Expected Count	145,1	258,9		
	Std. Residual	-1,0	,8		
	Count	44	64		
Friend	Expected Count	38,8	69,2		
	Std. Residual	,8	-,6		
	Count	70	180		
Individual	Expected Count	89,8	160,2		
	Std. Residual	**-2,1**	**1,6**		
	Count	33	65		
School	Expected Count	35,2	62,8		
	Std. Residual	-,4	,3		
	Count	158	203		
Study Program	Expected Count	129,7	231,3		
	Std. Residual	**2,5**	**-1,9**		
	Count	146	278		
Teacher	Expected Count	152,3	271,7		
	Std. Residual	-,5	,4		

In Table 3, teacher factor was the most frequent one. Many students wrote only *'Teacher'* and, other answers included *'Performance of the teacher', 'Teacher's success in his/her subject' 'Teachers' approach/attitude', 'Some teachers were efficient', 'Sufficiency of level of my teachers in their subject', 'Motivation of the teacher', 'Teacher's attitudes out of class', 'Teachers were interested in students' problems and lessons', 'Teacher's dialogue with the students', 'Support of some teachers', 'Quality teachers', 'Experience of the teacher', 'My mathematics teacher'* etc. As for sub terms of teacher there was no difference with respect to gender.

Individual factors were the most preferred explanatory factors among all others which need to be studied more in detail due to its ignored impact on student achievement in effective schooling studies. Students achieved because they had an interest to lessons or willingness to study. (*'I was aware of my responsibilities', 'Goals I set for myself', 'Individual study', 'My own efforts', 'IQ level', 'I was clever', 'Problems of adolescence', 'Adaptation', 'Change in my ideas', 'My personal responsibilities', 'The desire to be powerful', 'Wishes of youth', 'My bias', 'My psychological condition', 'I saw it as a step for my future career', 'Desire for a good life/future', 'The goal of a good university and department', 'It was the only way out', 'My own abilities',* etc.) Among individual reasons, more boys than girls associated technology with academic achievement Z= 2,6, X^2=18,991, p=<,017. But, in other sub categories there was no difference with respect to gender.

Family factors included all expressions that had the word "family" in the response. (*'My family motivated me', 'Family problems', 'Family support', 'Orderly family', 'My family was interested in my courses', 'Incredible support my family provided me despite poverty' etc.*). Family is an important factor in Turkish context, where comparatively strong relationships continue for a lifetime. For some studies Turkish culture shows characteristics of both individualism and collectivism constructs (Goregenli, 1997. Findings here are more inclined to being a collectivist culture. Student responses showed significant difference in sub term family support with respect to gender; girls (Z=-2,8, X^2=23,557,

Table 3. Subcategories of factors for 'school achievement' question

Teacher Factors				Individual Factors				Family Factors				School Factors			
Factor	f	%	Cum. %	Factor	f	%	Cum. %	Factor	f	%	Cum. %	Factor	f	%	Cum. %
Teacher	186	44	43,9	Interest and Desire	135	33,4	33,4	Family	181	45,8	45,8	Quality	69	19,1	19,1
Positive attitude and support	135	32	75,7	Goals	92	22,8	56,2	Family support	95	24,1	69,9	Classroom	67	18,6	37,7
Teacher quality	68	16	91,7	Psychological	55	13,6	69,8	Family environment	43	10,9	80,8	School	65	18	55,7
Teacher's explanation of subjects	35	8,3	100	My love	37	9,2	79	Family interest	28	7,1	87,9	Facilities	56	15,5	71,2
total	424	100		Responsibility	23	5,7	84,7	Finance	25	6,3	94,2	Administration	45	12,5	83,7
				Myself	22	5,4	90,1	Responsibility towards family	17	4,3	98,5	Environment	31	8,6	92,3
				Health	15	3,7	93,8	Sibling	6	1,5	100	Guidance	28	7,7	100
				Relationships	15	3,7	97,5	Total	395	100		Total	361	100	
				Technology	10	2,5	100								
				Total	404	100									

Friend Factors				Study Program Factor				Environment Factors				External Support F.			
Factor	f	%	Cum. %	Factor	f	%	Cum. %	Factor	f	%	Cum. %	Factor	f	%	Cum. %
Friend	141	56	55,5	Programmed study	115	46	46	Social	77	71,3	71,3	Cram school	92	93,9	93,9
Friend Circle	42	17	72	Intensive study	85	34	80	Physical	31	28,7	100	Materials	6	6,1	100
Relationships with Friends	38	15	87	Revision	21	8,4	88,4	Total	108	100		Total	98	100	
Good friends	18	7,1	94,1	Listening to the lesson	171	6,8	95,2								
Friend's Achievement	15	5,9	100	Taking notes	8	3,2	98,4								
Total	254	100		Making homework	4	1,6	100								
				Total	250	100									

p<,001) said family support affected their academic achievement more than boys.

School factors accounted for 15.7% of all responses regardless of teacher factors. (*'Class size', 'Discipline in school', 'General achievement of class', 'School was not good', 'Quality education', 'Dislike for school', 'Frequent changes in teaching staff' 'School materials were adequate' 'Administration, 'School size' 'Limited/Satisfactory facilities in school'* etc.) As for sub terms of school there was no change with respect to gender.

The **'friend'** factor (*'Achievement of my friends', 'Relationships with school friends', 'Studious friends of mine motivated me to study', 'My friends motivated me to study', 'Friend circle', 'Competition with friends'* etc.) accounted for 11.1% of all responses. Students studied more, or achieved higher with high achieving or good friends. Friendship formation and/or existence of friends contributed to student achievement. Students were attracted less by their friend's achievement (n=15) than by the relationships they had with them (n=38). As for sub terms of friends, there was no change with respect to gender.

Study Program is usually not included in achievement literature as opposed to responses here. Student responses show they give quite a good share to factors that stem from themselves. Programmed study (n=115) and intensive study (n=85) were the most preferred answers. (*'Regular study', 'Daily study', 'Method of study', 'Studying at home', 'Going over the lessons regularly', 'Disciplined/Systematized study', 'Solving questions', 'My being studious' Taking notes at class', 'Following the lesson', 'Correct methods',* etc.) As for sub terms of study program, there was no difference in answers with respect to gender.

Environment factors accounted for 4.7% of all responses but students wrote more about social environment (*'Environment in school', 'My uncle was the principal'* etc.) (n=77) than physical environment (*'My school was close to school', 'Transportation was difficult'* etc.) (n=31). As for sub terms of environment there was no difference in choices with respect to gender.

External factors had their part as well. Because university entrance exam is a must to enter universities in Turkey, tens of thousands of students get help from cram schools that provide extra study environment oftentimes with teachers experienced in test preparation. This appears to be one factor that adds to student achievement in Turkish context, especially when there is little support from the school and the family, especially for disadvantaged students. This factor accounted for 4.3% of all answers *('My cram school', 'I studied at cram school', 'I went to cram school to prepare for the exam', 'I liked the cram school'* etc.). As for sub terms of external support, there was no difference of preference with respect to gender.

Factors of Achievement in a Course

Students were expected to write down at most three responses for the question 'What determined your course achievement?' They wrote down a total of 1362 responses.

Table 4. Categories for Course Achievement

Factor	Frequency	Valid percent	Cumulative Percent
Teacher's attitude	205	15,1	15,1
Explanations in the course	202	14,8	29,9
My Interest	187	13,7	43,6
Study/Programmed Study	128	9,4	53,0
Course content	128	9,4	62,4
Being successful	125	9,2	71,6
My like for the course	104	7,6	79,2
Quality teacher	101	7,4	86,6
Environment	73	5,4	92,0
Talent	48	3,5	95,5
Family	28	2,1	97,6
Materials	22	1,6	99,2
Attendance	8	0,6	99,8
External support	3	0,2	100,0
Total	1362	100,0	

Most frequent response was about teacher attitude (n=205), followed by teacher's explanation in the course (n= 202). Classroom factors were teacher's attitude (*'Teacher's attitudes', 'The teacher's being genial', 'Teacher's dialogue', 'He made the class pleasant'* etc.), explanations in the course, course content, quality teacher and materials (*'Visual aids', 'Materials used in class'* etc.) with a total of 658 responses whereas student factors were interest, study/programmed study, being successful, my like for the course (*'I liked the course', 'I liked my teacher', 'I took pleasure from the course', 'I was happy in class'* etc.), talent (*'My talent for the course', 'My ability to understand', 'I easily understood', 'Mental factors'* etc.) and attendance totaled to 600 responses. Environment, family and external support amounted to 104 responses.

School Types and Student Responses

370 students (66.9%) out of 553 stated their schools (regular school=157, Anatolian high school=101 and Foreign language high school=112). Chi square tests conducted to find out if there were differences in responses with respect to school types produced no significant results. Students did not differ in any of the response categories when their school types were taken into account.

Conclusion

How one categorizes the data influences what determines factors in achievement. Apparently, advantage of choosing a group who graduated from high school has helped elicit comprehensive answers like *'Problems of adolescence', 'I had my ideals', 'I had self-confidence', 'My personal responsibilities', 'The desire to be powerful', 'My Bias', 'The way my teachers explained subjects'* etc. The following conclusion can be made with respect to analyses of student responses.

Individual factors are worth attention. Even though quantitative studies make little mention of students' individual factors, for learners they are among the most important factors. Evidently, non-quantifiable outputs are hard to measure: student anxieties, interests, likes, feelings of responsibility, physical health, psychological health, wishes all add up to student achievement. Walberg (1992) found student motivation, self-concept, study period and home program as important correlates of educational achievement. A study by Bruinsma and Jansen (2007) showed a student's ability, a student's expectancy, the study load and the number of self-study hours as important indicators of academic achievement. Study by Vieno, Perkins, Smith and Santinello (2005) found that 84% of the effect on climate was accounted for by individual-level factors, whereas 11% was accounted for by class-level factors and 4% by school-level factors.

In this study, students preferred to write study habits instead of homework, which is also reflected in a study of TIMSS (Trends in International Mathematics and Science Study) by Dettmers, Trautwein, & Ludtke (2009): At the student level, no clear-cut relationship was established between homework time and achievement across the 40 countries. On the other hand, Gustafson (2013) found increase of homework time will increase mean achievement, again in TIMSS data. Whereas it is more understandable for middle school students to value homework, present study shows students at high school give much importance to study programs instead of doing homework. This is understandable in Turkish context where student placement to university depends to a great extent on achievement at a compulsory national exam, the results of which influence total score of a student around 79%. The rest, %21, is decided by student's school achievement (OSYM, 2015). Instead of doing the homework students prefer to study for the exam, a problem addressed by teachers and school administrators as well. Another explanation may be that students at primary and secondary schools are more dependent on teachers in developing a study program or doing the homework but high school students can devise their own study programs that suit their needs. Considering the emphasis students put on individual factors in this study, it is difficult not to agree with

Hanushek (1989): According to the available evidence, one cannot be confident that hiring more educated teachers or having smaller classes will improve student performance.

Students seem to be more concerned with direct influences like 'the amount of time a teacher spends on a topic and the quality of the interactions teachers have with students' as opposed to 'policies adopted by a school, district, or state, and organizational features such as site-based management '(Wang, Haertel & Walberg, 1997). A lot of the answers students wrote had something to do with what McGaw et al. (1992) found: positive relationship with learning (*'I liked the lesson/teacher/learning'* etc.), development of a positive self-concept (*'I had a talent', 'I am clever'* etc.), sense of self-discipline (*'I was studious,' 'I studied regularly', 'Regular study', 'Hard work'* etc.) and self-worth.

Teacher is the most frequent response which is supported by a number of studies. School effectiveness research is increasingly showing that the influence of the teacher and of the learning level considerably exceeds that of the school (Reynolds, 1997). In a study that compared the US and Australia, dedicated and qualified staff was the most strongly supported by all groups (Townsend, 1997).

Many studies stress teachers, which is also supported by this study: Students placed great importance to teachers with the most frequent answer. The study makes a point in that student teacher interaction is more important for a student than the quality of teaching as the responses indicate: Students placed more emphasis on teacher's positive attitude and support (n=135) than on teacher's explanation of the subject and teacher quality (n=103 in total). So, a good teacher is the one who 'understands' the student, who forms good relationships, helps and supports them, which looks more important than having a quality teaching. What Driessen and Sleegers (2000) found in their study with elementary schoolers may have something to do with this: There was no effect of consistency of the teaching approach on academic achievement. Student gave most to their interest and liking a course, which means efforts should be made to get students to like a course. In students' eyes teaching is not handing down the information. Positive classroom conditions are related to cognitive learning feedback, re-enforcement and adaptive instruction (Scheerens & Bosker, 1997, p. 305).

Family factors were also important with third most frequency. The benefits of family involvement in improving students' academic performance have been well-documented (Wang, Haertel and Walberg, 1993). Turkish cultural context places a good amount of influence on family bonds as well. Strong relationships (*'Family support', 'Family motivation', 'Family trust', 'A serene family atmosphere'* etc.) between the family and the learner highly influences student achievement, many times for the positive. Enduring student and family relationships continue for a long time even after graduation from both high school and university, something a lot to do with students' feeling of responsibility towards the family. Students are 'aware' of the sacrifices either financially or psychologically that the family may have to make. On the other hand, when economic conditions are not good and the student can find an outlet he/she tries to utilize that path.

School, in general, was a not important factor for students. Students expressed their ideas in terms of what affects them: *'Class size, 'Quality', 'Discipline' 'Crowded Class', 'Socialization was encouraged', 'School facilities'* etc. School effects other than within class factors explain about 60 per cent of the variation in student performance and the remaining 40 per cent is due to the student characteristics and their environment (Cresswell, 2004). In the eyes of the students it's not the case. Students did not differ in their preference of factors with respect to their school type, which might be considered interesting. Because, some schools were regular while others were selective. Salchegger (2016) found effect of selectivity but student responses were not dependent on selectivity. This may imply there are not big

differences in the service schools are providing. This becomes more plausible considering the similarities in teacher intake and similar facilities in all public school types.

Classroom factors explain most of the achievement when all the teacher factors (teacher quality, teacher attitude and interest, teacher's explanation of the subject matter, etc.) are included in the classroom. Results agree with what Bruinsma and Jansen (2007) found: The classroom environment, positive stimulation from the home environment and support from peers affect student learning directly, but also indirectly through a student's ability, motivation, and responsiveness to instruction. On the other hand, the relationship between social support and attention and involvement in class was found to be negative and mediated by students' goals (Hernandez, Oubrayrie-Roussel, & Prêteur, 2016), which apparently means interaction in the classroom may influence student achievement in different ways. Another result of positive interaction in class is: Students are less likely to drop out of high schools where relationships between teachers and students are positive (Lee & Burkam, 2003).

Economic factors include external support (n=98), finance (n=25), technology (n=10), facilities (n=56), which constituted 8% of all responses. Economy of a country very much influences what makes a school effective. Cultures where students have to overcome economic burdens to continue education have to cope with disadvantages that hinder success at school. Students with low score on prior achievement motivation or general effort or student from economically disadvantaged families are more sensitive to the educational environment than those scoring higher on these characteristics (Opdenakker, 2003). That's why some students wrote 'economic conditions' as having effect on their achievement.

Friends accounted for about 11.1% (*friends, friend's achievement, relationships with friends, good friends, friend circle*) of all answers, a factor less visible in school effectiveness studies, something which may become more predictive at high school, the time when peer effect becomes more important for learners. Study by Neckerman (1996) suggests that stable environments promote stable relationships, which in turn, may promote greater continuity in behavioral patterns.

Environment factors encompass various responses: In the environment category, both physical and social (n=108), the word environment in school category (n=31), family environment (n=43), friend circle (n=42) there is a total of 224 environment related responses, which account for 9.7% of all answers. Samdal, Bronis and Bronis (1999) found in their study of data from the "Health Behaviour in School-aged Children Survey (HBSC)" of four countries that student satisfaction with school was the most influential predictor in the psychosocial school environment of student academic achievement for all countries but this included 11-15 year olds.

Administration is the least attention grabbing factor for students. The findings of Bruggencate, Luyten, Scheerens and Sleegers (2012) showed that school leader behavior affected student outcomes both indirectly and directly. Despite some mention of school administration (n=45), students do not see administrative factors, which implies students are not all aware of what importance school administration has on quality of education. So, for students, quality of school administration is somewhat a behind-the-doors factor or 'indirect influences' (Wang, Haertel & Walberg, 1997). Quality in the factor 'school' may refer to the school's being a selective one since selective schools have very high rate of university placement, as is the case in many countries. 'Facilities' (n=56) are usually about a school's being an advantaged one as opposed to disadvantaged schools. There is also little mention of *'Teaching staff'*, *'Quality teachers'*, which is less likely in regular schools.

Implications

This study contributes to the literature in a way to take into account the views of main input and output of the education: Students. Student responses indicate, in the first place, the questionnaires or scales developed to measure achievement factors, or motivators tend to ignore the differences, considering the expectation of measurement invariance with regard to gender for example. It seems natural to expect different responses from boys and girls, which is also evident in the number of words used to express their perceptions. There is a need to make a separation among effectiveness of primary, middle and high schools. Increasing positive student attitude would increase school effectiveness, and studies need to focus on this as well.

When eliciting achievement factors, most of which are quantitative, research needs to take into account the personal perception of students, because what helps them to learn better and to achieve higher lies to some extent with the learners themselves. Bashi, et al. (1990) see academic achievement as a main criterion in school effectiveness research but academic achievement is not the only outcome of school, which entails inclusion of other factors, especially those ignored in effectiveness studies.

Limitations of the Study and Suggestions for Future Research

This study makes mention of student written responses, which does not reflect other in-school shareholders' ideas about academic achievement. Besides, only those who have had some level of achievement have been included, i.e. university students, which mean underachieving students were not included. Apparently, high school students would give different answers than secondary or primary school students, a comparison of three levels should be made. The study also is limited with respect to selection bias in that students who were willing to become teachers were included in the study. So, another study that would include students from engineering, business or administrative sciences could yield different results. The study found no difference with regard to effect of selectivity of the school but another study may look into differences between public and private schools with respect to student responses.

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