

SCHOOL ENVIRONMENT AND SELF CONCEPT AS PREDICTORS OF ACADEMIC ACHIEVEMENT

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Abstract

Keywords:

School Environment

Self Concept

Academic Achievement

Predictive Variable

Present world is statistically and technologically advanced. It is driven by high aspiration, motivation and the unsatiating desire to excel in all walks of life including education. Today's students and their parents are more concerned about their higher academic achievements. Academic achievement is determined by many variables and the most important among them are school environment and the students' self concept. The present empirical research has taken these two variables as independent variables and evaluated their impact on the students' academic achievement. The study has also analysed the differences in academic achievement in regard to community and gender variables. Results have indicated significant influence of the independent variables on the dependent variable.

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1. Introduction

In the fast paced globalised world people have realised that only receiving education is not enough but it is the quality of education that matters most. The quality education enhances the academic performance of a student. The major goal of the school is to work towards the attainment of academic excellence by students (Adeyemo ,2012)[1]. Academic achievement of students especially at secondary school level is crucial as it is not only directly related to the quality of higher education but determines the career of the student. Learning outcomes have become a phenomenon of interest to all concerned and scholars have been working hard to untangle factors that militate against good academic performance.

Ajewole and Okebukola (2000)[2] reported a number of factors like school climate, quality of learning environment, study habits, availability of resource materials, teaching methods which contribute to the students' academic achievement in school. Out of these factors school environment is most significant. Kothari Commission (1964-66)[3] also realised the importance of healthy school environment and said that, "The destiny of India is now being shaped in her classrooms". Therefore working towards achieving the propitious classroom environment should be prior concern over education system. The learning environment of the classrooms is the product of overall school environment. Byoung (2012)[4] explored that supportive school environment enriched with enough learning facilities, and favourable climate makes students more comfortable, more concentrated on their academic activities that resulted in high academic performance. School environment

exerts its influence on students' performance through curricular aspects, teaching techniques and interpersonal relationships (Lawrence,2012)[5]. Haroon (1999)[6] in his research observed that quality of facilities available in a school not only affects educational outcomes but also the well being of pupils and the teachers. Eric (2005)[7] based on the findings of his research noted that a supportive and caring school environment fosters academic success and the students are less likely to involve in violence and other behavioural problems. Lawrence (2012) concluded that healthy school environment with modern optimum facilities makes the student feel comfortable and motivated to their studies leading to high academic performance. Similarly, Farombi (1998)[8] observed that school environment which lacks in good instructional materials,

discipline, physical facilities, teacher quality causes negative influence on students' academic achievement.

Student's self perception is another important variable which plays a significant role in leading student's efforts towards academic performance. As elaborated by Marsh and Seeshing (1997)[9] self concept is the set of perceptions that the individual has about himself; the set of characteristics, attributes, qualities and deficiencies, capacities and limits, values and relationships that the individual knows to be descriptive of himself and which he perceives as data concerning his identity. Ormrod (2000)[10] identified three factors, which influence the students to form a positive or negative self-concept. These factors are (i) their own prior behaviors and performance (ii) the behaviors of other individuals toward them (iii) the expectations that others hold for their future performance. Academic self concept and its relationship have also been explored by the researchers. Haque and Sarwat (1998)[11], Sabir (1999)[12], and Shafique (2002)[13] in their studies found a strong correlation between academic self-concept and academic achievement. Marsh and Martin (2011)[14] observed that self-concept has a direct and indirect effect on subsequent achievement. Pujar and Gaonkar (2000)[15] analyzed the influence of age and type of family on self-concept of adolescents belonging to high and low achieving English medium high school students and revealed that mode of expression of self-concept among both high and low achieving adolescents improved with age and the self-concept of students from nuclear families was higher than that of those from the joint families. Manger and Eikeland (2006)[16] in their study found that schoolboys showed significantly higher mathematics self-concept and achievement than girls. Punithavathi (2011)[17] observed a significant correlation between self-concept and academic achievement of students at the secondary school level.

It is quite evident from the findings of the researches cited above that school environment and self concept are two important variables closely associated to the academic achievement of adolescents. Learning environment to a large extent influences the behaviour of the student which in turn influences his/her academic performance. A good school environment is expected to develop a positive self concept among students and thus may prove to be beneficial for the outcomes of education both in terms of quality and better academic achievement. In the present

study an attempt has been made to study the influence of School Environment and Self Concept on the Academic Achievement of secondary school students.

The gender and community differences have also been made to make the study more pertinent and relevant to the needs of heterogeneous Indian society. Muslims are the largest minority group in India and lag behind with their counterparts in educational, social and economic areas.

2. OBJECTIVES:

1. To find out the effect of self concept and school environment on academic achievement among total sample.
2. To compare the academic achievement of Muslim & non Muslim, male & female adolescent groups.
3. To evaluate the influence of self concept among Muslim & non Muslim, male & female sample groups.
4. To find out the influence of school environment among Muslim & non Muslim, male & female sample groups.

3. HYPOTHESES

1. There would be no significant influence of self concept and school environment on academic achievement of total sample.
2. There would be no significant difference in academic achievement among Muslim & non Muslim, male & female sample groups.
3. There would be no significant difference in Self Concept among Muslim & non Muslim, male & female sample groups.
4. There would be no significant difference in School Environment among Muslim & non Muslim, male & female sample groups.

5. RESEARCH METHOD

In the present study the target population was the Muslim and non Muslim adolescents studying in secondary schools of Aligarh city. Out of 283 students randomly selected 144 were Non

Muslim adolescents and 139 were Muslim adolescents. 150 were male adolescents while 133 were female students.

Research Tools Used:

1. Self Concept Questionnaire:

The self concept questionnaire developed by Saraswat (2011)[18] was used by the researcher. This questionnaire provides six separate dimensions of self concept i.e physical, social, intellectual, moral, educational and temperamental self concept. Reliability was found by test retest method and was calculated to be 0.91. Expert opinion was obtained to establish validity. The content and construct validity were established.

2. School Environment Inventory:

The researcher used School Environment Inventory developed by Misra (2012)[19]. It has items belonging to 6 dimensions of school environment: creative stimulation, cognitive encouragement, permissiveness, acceptance, rejection, control. The inventory has been found to possess content validity.

Reliability: The split half reliabilities for various dimensions were calculated. These are as follows:

Dimension	Reliability Coefficient
Creative Stimulation	0.919
Cognitive Encouragement	0.797
Acceptance	0.823
Permissiveness	0.673
Rejection	0.781
Control	0.762

3. **Academic Achievement:** the achievement marks of students of Class X board exams were taken from school records.

Statistical Techniques used:

Multiple regression was used to know the influence of predictive variables on the criterion variable while 2 way ANOVA was used for knowing the significant difference between the means of different groups.

5. RESULT AND ANALYSIS:

Table 1. Regression analysis among Criterion (academic achievement) and Predictive Variables for Total Sample

Predictive Variables	R	R ²	R ² Change	F Change
Self Concept	0.652	0.424	0.424	207.248**
School Environment	0.733	0.537	0.112	67.993**

Table 1.2. Summary of ANOVA for regression

Source of Variation	Sum of Squares	df	Mean Square	F ratio
Regression	40389.491	2	20194.745	162.326**
Residual	34834.301	280	124.408	
Total	75223.792	282		

Table 1.3 Regression Coefficients

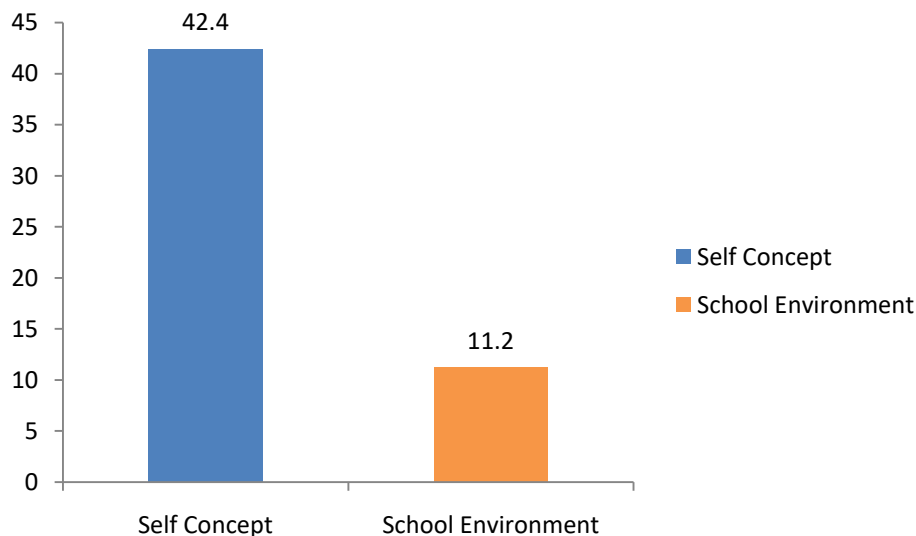
Predictive Variables	Unstandardised Coefficients		Standardised Coefficients	t value
	B	Std Error	Beta	
Constant	7.420	4.664		1.591
Self Concept	0.283	0.027	0.479	10.491**
School Environment	0.179	0.022	0.377	8.246**

An assay of the above tables divulges that both the independent variables i.e self concept and school environment are found to be the significant predictors of academic achievement. The magnitude of predictability is found to be 53.7% accounted for two predictive variables self concept and school environment (table 1). Self Concept emerges as the most important variable

whose contribution is 42.4% in sharing the variance in academic achievement whereas second variable school environment shares (11.2%) variance in the criterion variable. Both the values of R^2 are significant at 0.01 level of confidence ($F= 207.248$ & 67.993).

The ANOVA table 1.2 discloses that the model of prediction in academic achievement explains significant variance due to regression as can be inferred by the F ratio (162.326). It means that the two predictors i.e self concept and school environment can be used to predict academic achievement. Moreover, Table 1.3 shows that the regression coefficients for self concept (10.491) and for school environment are significantly positive indicating that variations due to both the predictive variables (8.246) will cause significant positive change in criterion variable i.e academic achievement. H_0 is thus rejected.

The relative percentage contribution of two predictive variables in terms of shared common variance in criterion variable (academic achievement) for the sample can be graphically represented as follows:



Percentage contribution of Predictive Variables on the Criterion Variable (Academic Achievement)

Table 2. Difference in Academic Achievement based on Community and Gender variables for total sample.

Source of Variance	Mean	N	Sum of Squares	df	Mean Square	F value	Sig	
Community	Muslim	74.06	139	1410.972	1	1410.972	6.433**	0.012
	non Muslim	76.94	144					
Gender	Male	69.31	150	13042.75	1	13040.75	59.468**	0.00
	Female	82.53	133					
Interaction (Community x Gender)				381.250	1	381.250	1.738	0.188
Error				61191.305	279	219.324		
Total				1689568.52	283			

It is evident from the table 2 that there exists a significant difference between the academic achievement of Muslim and non Muslim adolescents. The calculated F value is significant at 0.01 level of confidence. It is also obvious from the same table that the mean value of Muslim group (74.06) is lesser than non Muslim group (76.94) indicating higher academic achievement among non Muslim students. These findings are also in accordance with the research findings of Alam (2001)[20] and Shakir (2013) [21]who also found higher academic achievement of non Muslims as compared to Muslim adolescents Results are on expected lines and further confirms the findings of various reports of Government and Non Government organizations that Indian Muslims in general are backward educationally, socially and economically. Backwardness restricts the person to avail the opportunities of quality education in good schools. They also lack in needed material support as well as parental guidance.

The table also reveals F value (59.468) for male and female group to be significant at 0.01 level of confidence. The mean value for female students (82.53) is much higher than that of male students (69.31). It shows that female students were found to achieve more marks as compared to male students. In view of social changes taking place in vibrant Indian society, females are performing well and out numbering their male counterparts in various areas including education.

It is because of their sincerity, discipline, hard working temperament and the desire to excel in the field of education and fulfil their life goals and aspirations.

The obtained result corroborates with the findings of the study conducted by Joshi & Srivastava (2009)[22] who found female adolescents to achieve higher than males while in contrast to it the findings of Mishra (2005)[23] who revealed males to achieve more than females. However, Rajani (2004)[24] Panday & Ahmad (2008)[25], Nuthana and Yenagi (2009)[26] reported that gender had no significant influence on academic achievement.

Furthermore, it is also evident from the same table that the interactional effect of community and gender having F value 1.738 is insignificant. Hence Ho₂ is rejected.

Table 3. Difference in Self Concept based on Community and Gender variables for Total sample

Source of Variance	Mean	N	Sum of Squares	df	Mean Square	F value	Sig	
Community	Muslim	172.35	139	8506.019	1	8506.019	12.025**	0.001
	Non Muslim	182.19	144					
Gender	Male	171.85	150	11670.875	1	11670.875	16.499**	0.000
	Female	183.56	133					
Interaction (Community x Gender)			795.562	1	795.562	1.125	0.290	
Error			197356.213	279	707.370			
Total			9118187.00	283				

An examination of the table 3 indicates a significant difference between Muslim and non Muslim students on the measure of self concept. The F value (12.025) was found to be significant at 0.01

level of confidence. This signifies that non Muslim adolescents possessed better self concept than the Muslim adolescents as the calculated mean value for non Muslim (182.19) respondents was found to be greater than that of Muslim respondents (172.35). The lower self concept among Muslim adolescents seems to be justified on the basis of socio economic background of the Muslim students. Muslim students because of poor socio economic condition do not enjoy the supportive, stimulative and encouraging and psychologically safe home environment which is extremely essential for shaping the positive self concept of the individual.

The table also exhibits significant difference between the self concept of male and female students as the F value (16.499) was found to be significant at 0.01 level of confidence. The obtained mean value of male adolescents (171.85) which was found to be less than those of female adolescents (183.56). It can be concluded that self concept of female adolescents was higher than males. The finding gets support from the results of Saraswat (1982)[27] who also found relatively better self concept among female students than male students. Contrary to this finding Khan (2015)[28] and Haussler & Hoffman (2002) [29] reported better self concept among males. On the other hand Afreen (2015)[30], Sikhwari (2014)[31], Nuthana and Yenagi (2009)[26] found no significant difference between male and female adolescents on the measure of self concept. Ho3 is thus rejected.

Furthermore, the interaction graph between gender and community having F value 1.125 came to be insignificant.

Table 4. Difference in School Environment of Total Sample between Community and Gender

Source of Variance	Mean	N	Sum of Squares	df	Mean Square	F value	Sig	
Community	Muslim	180.17	139	4184.550	1	4184.550	3.558*	0.05
	Non Muslim	185.63	144					
Gender	Male	173.77	150	28837.748	1	28837.748	26.772**	0.00
	Female	193.29	133					

Interaction (Community x Gender)	168.131	1	168.131	0.156	0.693
Error	300529.668	279	1077.167		
Total	9803558.00	283			

A perusal of the table-4 divulged that F value (3.558) for Muslim and non Muslim adolescents in regard to school environment was significant at 0.05 level of confidence. It means there exists, a significant difference between Muslim and non Muslim students as far as their attitude towards school environment is concerned. On the basis of the obtained mean values of Muslims (180.17) and non Muslims (185.63) it is inferred that the attitude of non Muslim students towards the school environment was better as compared to Muslim adolescents. Musheer (2015)[32] and Afreen (2015)[30] in their studies also found better perception of non Muslim students towards school than Muslim students.

The table also depicts that the F value 26.772 for male and female adolescents was significant at 0.01 level of confidence. It indicates that male and female respondents significantly differ with each other on the measure of school environment. The mean values for both the genders show that females (193.29) were found to be more adjusted to school parameters than male (173.77) students. The obtained result is in accordance to the finding of Biag & Sanchez (2013)[33] who revealed better perception of female students towards school than male students. Further the F value 0.156 which didn't reach the significance level shows the interactional effect of community and gender to be insignificant. Consequently Ho4 is rejected.

6. CONCLUSION AND SUGGESTIONS:

Findings of the present study have made it clear that two independent variables i.e school environment and self concept are crucial in deciding the academic achievement of the secondary school students. Out of these two factors the contribution of self concept came out to be 42.4% followed by school environment being 11.2%.

- The study revealed that the academic achievement of Muslim adolescents was found to be lower as compared to the non Muslim adolescents. Gender difference was also found in favour of girls adolescents. Girls in general performed better and showed higher academic achievement than their counterpart male students

- In regard to the self concept variable, the study found a significant difference between Muslim and non Muslim adolescents. The self concept of Muslim students was found to be lower as compared to the non Muslim students. Moreover the difference between male and female adolescents was also significant. The self concept of Muslim and non Muslim girls was better than their boys counterparts.

- The attitude of the non-Muslim adolescents towards school environment was observed to be better than the Muslim adolescents. The perception of female adolescents towards school environment was also found to be better than the adolescent boys.

The findings of the present study have its wider implications. The following suggestions are of crucial importance in this regard:

- The most important drawback of our education system is that students fail to know their own personality i.e their strength and weakness. They are unaware about their personality characteristics and the abilities and capabilities. It is extremely difficult for adolescents to develop a better self concept in absence of self knowledge. For this purpose there exist a need for guidance and counselling for adolescents studying at secondary school stage.

- Frequent parent teacher meetings in this regard may prove to be beneficial if parents are made to know about the potentials of their children and guided to groom them in the light of accurate knowledge of their inherent characteristics.

- Teachers need to adopt purely democratic attitude and provide freedom to all students to express their opinion and remove their concern through discussion in the classroom.

- Psychologically safe and secure environment always helps the individual for experimenting the new things and ways to deal their academic, social and other problems.

- A healthy school environment is essential for overall progress of the students. Students' centric administration, teaching and organization of co-curricular activities boost the morale of students and help in generating learning environment.

- School environment basically reflects the planning and strategies made by the school authorities and ways in which they are being implemented. Effective planning covering cognitive, affective and psychomotor aspects of the students prove to be effective and students' achievements are enhanced.

- Regular counselling of the weaker students and minority students and their parents is significant to help solve their problems.

- The active cooperation of the government, school authorities, teachers, parents, community members is essential to create a propitious school environment for fullest development of student's potential.

References

- [1] Adeyemo, S.A. (2012). The relationship among school environment, student approaches to learning and their academic achievement in senior secondary school physics. *International Journal of Educational Research and technology*. Vol 3 Issue 1. ISSN 0976 – 4089
- [2] Ajewole, G.A. & Okebukola, F.O. (2000). Improving socio-cultural aspect of classroom learning environment in enhancing students performance in biology. *Annual Conference Proceedings of Science Teachers Association of Nigeria*, (pp127-130). Jos: HEBN Publishers Plc.
- [3] Report of The Education Commission (1964-66). Education and the National Development, Ministry of Education, Government of India, NCERT, New Delhi.
- [4] Byoung-suk, K. (2012). Landscape Performance Research; School Environment & Students' Performance, *Paper from Landscape Architecture Foundation* retrieved from <https://lafoundation.org/news-events/blog/2012/06/19/lp-school-environments/>
- [5] Lawrence, A.S. and Vimala, A. (2012). School Environment & Academic Performance of Standard Six Students, *Journal of Educational and Industrial Studies in the World*, vol. 2, issue 3 article 22.
- [6] Haroon, Y. (1999). Fundamentals of School Physical Plant. *Ibadan Alafas (Nig.)*.
- [7] Eric, S. (2005). The Role of Supportive School Environment in Promoting Success, an Article from Development Studies Centre (DSC); *Developing Safe and Healthy Kids*, Published in *Getting Result*.
- [8] Farombi, J.G. (1998). Resource concentration, utilization and management as correlates of students' learning outcomes: a study in School Quality in Oyo State. Unpublished Ph.D. Thesis, university of Ibadan.
- [9] Marsh, H., & Seeshing, A. (1997). Causal effects of academic self-concept on academic achievement: structural equation of longitudinal data. *Journal of Educational Psychology*, 89(1), 41-54.

- [10]Ormrod, J. E. 2000. Educational Psychology: Developing Learners. Prentice-Hall, Inc, New Jersey, USA. pp. 80-83
- [11] Haque, A. and K. Sarwat. 1998. Age, gender, and achievement effects on academic self-concept of high school children. *Pakistan Journal of Psychological Research*, 13: 35-42
- [12] Sabir, F. (1999). Academic Self-concept and Achievement among University Students as Related to their Psychological Adjustment. (*Unpublished M.Phil Thesis*). National Institute of Psychology, Quaid-e-Azam University, Islamabad, Pakistan.
- [13] Shafique, A. (2002). Relationship between Academic Self-concept and Academic Achievement among School Children. National Institute of Psychology, Quaid-e-Azam University, Islamabad., Pakistan.
- [14]Marsh H.W. and Martin, A.J. (2011). Academic Self-concept and Academic Achievement: Relations and Causal Ordering. *British Journal of Educational Psychology*, 81, pp. 59-77.
- [15] Pujar, L. and Gaonkar V. (2000). A Study to Know the Influence of Age and Type of Family on Self-concept of Adolescent Belonging to High and Low Achievers Group. *Indian Psychological Review*, 54(1-2), pp. 24-26.
- [16] Manger, T. and Eikeland, O. (2006). The Effect of Mathematics Self-Concept on Girls' and Boys' Mathematical Achievement. *School Psychology International*, 19(1), pp. 5-18.
- [17] Punithavathi, P. (2011). Creativity, Self-concept and Academic Achievement among Students at the Secondary Level, *M.Ed. Thesis, Tamilnadu Teachers Education University, Chennai*
- [18] Saraswat, R.K (2011). *Self Concept Questionnaire*. Agra, National Psychological Corporation.
- [19] Misra,K.S. (2012). *School Environment Inventory*. Agra, National Psychological Corporation.
- [20] Alam, M.M. (2001). Academic Achievement in Relationship to Socio- Economic Status, Anxiety Level and Achievement Motivation: A Comparative Study of Muslim and Non-Muslim School Children of Uttar Pradesh'. Ph.D. Education, Aligarh Muslim University, Guide : Mrs. Qamar Jahan.
- [21] Shakir,M. (2013). A Comparative Study of the Academic Achievement of Muslim And Non Muslim Senior Secondary School Students In Relation To Their Academic Anxiety. *Excellence International Journal Of Education And Research. Vol 1. Issue 4.*
- [22] Joshi,S and Srivastava,R. (2009). Self-esteem and Academic Achievement of Adolescents. *Journal of the Indian Academy of Applied Psychology. Vol. 35, Special Issue, 33-39.*
- [23] Mishra (2005). Students/School Achievement Causes and Cures. Discovery publishing House, New Delhi.

- [24] Rajani, M. (2004). Study habits of intermediate students in relation to their certain psychosociological factors, Ph.D. education, Sir Venkateswara University, Andhra Pradesh.
- [25] Pandey, S.N. and Ahmad, F. (2008). Significance of difference between male and female adolescents on academic achievement, intelligence and socio-economic status. *J. Commu. Guid. Res.*, 25: 34-39.
- [26] Nuthana P.G. & Yenagi G.V. (2009). Influence of study habits, self concept on achievement of boys and girls. *Karnataka Journal of Agricultural Sciences* Vol.22 No 51135-1138
- [27] Saraswat, R.K. (1982). A Study Of Self-Concept In -Relation To Adjustment, Values, Academic Achievement, Socio-Economic Status And Sex Of High School Students Of Delhi. *PhD. Thesis IIT Delhi* retrieved on 25/08/2017 from <http://eprint.iitd.ac.in/bitstream/2074/5671/1/TH-1025.pdf>
- [28] Khan, A., Fleva, E., & Qazi, T. (2015). Role of Self-Esteem and General Self-Efficacy in Teachers' Efficacy in Primary Schools. *Psychology*, 6, 117-125. <http://dx.doi.org/10.4236/psych.2015.61010>.
- [29] Häussler, P. and Hoffmann, L. (2002), An intervention study to enhance girls' interest, self-concept, and achievement in physics classes. *J. Res. Sci. Teach.*, 39: 870–888. doi:10.1002/tea.10048
- [30] Afreen, S. (2015). A Comparative study of Self Concept, Personality Trait, Intelligence, Aspiration level and vocational Interest among Boys & Girls at Secondary school level. *Unpublished PhD Education, Aligarh Muslim University, Aligarh.*
- [31] Sikhwari, T.D.(2014). A Study of the Relationship between Motivation, Self-concept and Academic Achievement of Students at a University in Limpopo Province, South Africa. *Int J Edu Sci*, 6(1): 19-25 (2014)
- [32] Musheer,Z. (2015). Perception of Secondary Level Students towards Their School Climate: A Case Study of A.M.U Schools. *International Journal of Marketing, Financial Services & Management Research* .Vol.4 (8), AUGUST (2015), pp. 111-121.
- [33] Biag & Sanchez (2013). Examining Students' Perceptions of the School Environment: Sequoia High School's School Climate Survey. John. W Gardner Centre for youth and their communities. Retrieved on 15/08/2017 from <https://gardnercenter.stanford.edu/sites/default/files/School%20Climate%20Survey%20Issue%20Brief.pdf>.