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# IMPACT OF THE PRIOR SCHOOL ENVIRONMENT ON ACADEMIC ACHIEVEMENT OF STUDENTS AT THE SECONDARY STAGE IN PUNJAB (PAKISTAN)

Muhammad Arshad Dahar<sup>\*</sup>, Riffat Tahira Dahar<sup>\*\*</sup> & Rashida Ahmad Dahar<sup>\*\*\*</sup>

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## Abstract

This study investigates the impact of the prior school environment on academic achievement of students at the secondary stage in Punjab (Pakistan). School environment is a very important school resource input. All the indicators of school environment collectively produce an academic environment that is helpful for the student achievement. The present school environment of a session is the prior school environment for the next session. Therefore, this study used mean of the prior five years results of SSC examination. Population of the study comprised all secondary and higher secondary schools and secondary students in Punjab. Overall, a total of 288 schools, and then 20 students from each school were randomly selected as the sample of the study. The longitudinal data of academic achievement in the form of aggregate marks of the annual examinations of the Classes VI, VII, & VIII as prior achievement and that of the Class X as academic achievement of the same students through “Result Sheet”. The data were summarized at school level and then analyzed collectively. Pearson correlation was used to find out the relationship (association) of the prior school environment with academic achievement. Furthermore, Stepwise Regression analysis with linear function was used to find out the differential impact (causal-relationship) of the prior school environment on academic achievement. The results of the study show that the prior school environment is an important predictor of academic achievement for arts students; however, it has some insignificant positive impact on academic achievement of science students. The insignificant and weak causal-relationship for science students may be improved if the indicators of school environment are properly defined and improved up to the higher standards. Prior school environment is very helpful in producing the present school environment. In this way, both the present and the prior school environments are important. The policy implications of the study are that the prior school environment provides the accelerating or the declining trend of academic achievement of students.

**Keywords:** prior school environment; relationship (association); impact; academic achievement;

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# **IMPACT OF THE PRIOR SCHOOL ENVIRONMENT ON ACADEMIC ACHIEVEMENT OF STUDENTS AT SECONDARY STAGE IN PUNJAB (PAKISTAN)**

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Prior school environment (PSEn) is a cumulative function of all the school resource inputs, the entire education process and the mean student achievement of many past years of a school. The teaching learning process, commitment of leadership, teachers and students, discipline, design and condition of building with cross-ventilation, arrangements to control the bitterness of climate, school grounds, medical facilities and arrangement for physical health, all are the indicators of school environment. However, all these indicators of school environment contribute to produce academic achievement of students. Therefore, academic environment is generally taken as the prior school environment. A better PSEn attracts the efficient students with better prior ability; however, students and parents don't like the schools with a weak PSEn. The students with better prior ability show good results and the students with weak prior ability show worse results in the stage or the level of education. In this way, schools with better PSEn mostly perform better and schools with weak PSEn perform worse. Furthermore, most of the weak students also show comparatively better performance in the schools of better PSEn where they have chances to learn with the better peers' group. However, they have not chances to work with efficient students in the weak prior school environment.

As already stated that the better PSEn attracts the efficient student with better prior ability, therefore, the efficient students use the SRIs efficiently and get better achievement. In this way, the prior school environment is an indicator of the use of SRIs in the schools. The effective use of SRIs is very important in the education process; however, it depends upon the students' ability to use them. Furthermore, the efficient use of SRIs is an indicator of better student achievement and inefficient use of SRIs is an indicator of the weak student achievement. Therefore, PSEn is a very important school resource input (SRIs). Therefore, PSEn has an important role in the education process; however, its role has not been investigated through research in Pakistan.

Furthermore, the government is spending enough in the education sector and the quality of education has a declining trend in Pakistan; particularly science education that is reaching its lowest ebb (Government of Pakistan, 2002). Government of Pakistan (2009) also insisted on maximizing the effects of resource inputs. In this way, there is a strong emphasis on the pursuit of educational resource achievement in the ongoing educational reforms in the country.

Therefore, it is the dire need to investigate the role of PSEn in the education process in producing the academic achievement. This study provides an overview of the current state of knowledge and investigates the relationship between PSEn and academic achievement of students at secondary stage in Punjab (Pakistan).

## **Review of Literature**

School Environment is the result of combined efforts of all SRIs in producing student achievement. Likewise, prior school environment (PSEn) plays an important role in the education process. Parents, of course, consider school environment at the time of admission

of their children into schools. There are some kinds of school environment as physical, social, natural climate and academic. Tableman (ed., 2004) stated the following categories of school environment.

1. A physical environment that is welcoming and conducive to learning
2. A social environment that promotes communication and interaction
3. An affective environment that promotes a sense of belonging and self-esteem
4. An academic environment that promotes learning and self-fulfillment

A better academic environment is very helpful for leadership, teachers and students. The Dakar EFA strategy was formulated to create a healthy, safe, and inclusive educational environment with the fair allocation of resource inputs. It is likely that this environment is favorable to the quality of learning with the distinct levels of attainment for all. (Government of Pakistan, 2001)

In Pakistan, previous class 10<sup>th</sup> results of schools are taken as academic school environment. However, the mean of prior five years' results is a better indicator of academic environment. Many studies attempted to investigate whether the prior school environment (PSEn) of schools has an impact on academic achievement of students.

Coon, Carey, Fulker & Defries (1993) investigated the influences of school environment on academic achievement. Academic achievement was measured as the scores of adopted and non-adopted children. The study described that the relationship between the characteristics of school environment and academic achievement by two methods. First was developed from the direct influences of school environment. However, second was developed from the placement of students into the prior ability based school environments. The study concluded that many inter-correlated individual factors of school environment had a small effect on the student achievement.

Wilson, Abbott, Joireman & Stroh (2002) also found that school environment and partnerships affected student achievement indirectly through the constructivist teaching. The study also found that there was the direct pathway from school environment to student achievement.

Afterwards, Tableman (ed., 2004) introduced two variables of school environment i.e. school culture and school climate. The study concluded that these variables were the useful terms for intangible factors to influence learning. Likewise, Yousaf (2005) described that the school related environment can play a more central and important role in shaping the engagement practice of students. However, it does not generate positive characteristics to stimulate students for higher education. Similarly, Adesoji and Olatunbosun (2008) described that school environment and teacher related factors had powerful and positive influence on student achievement in chemistry.

Concisely, these studies investigated the role of PSEn in different ways by using the different aspects and variables. Coon, Carey, Fulker & Defries (1993) concluded that many inter-correlated individual factors of PSEn have a small effect on student achievement. Likewise,

Wilson, Abbott, Joireman & Stroh (2002) found a direct pathway from school environment to student achievement. Similarly, Tableman (ed., 2004) concluded that school culture and school climate were the useful terms for the intangible factors to influence learning. Yousaf (2005) also concluded that PSEn can play a more central and important role in shaping engagement practice of students. Afterwards, Adesoji and Olatunbosun (2008) described that the school environment and teacher related factors have powerful and positive influence on student achievement. Finally, it is concluded that a better PSEn supports the students in the teaching learning process. Therefore, PSEn plays an important role in the student learning process. However, bad PSEn is not helpful to the students.

## **Objectives of the Study**

1. To identify the prior school environment at the secondary stage
2. To identify the academic achievement at secondary stage
3. To find out the differential impact between the prior school environment on the academic achievement.

## **Methodology**

Population of the study comprised of all the 4801 secondary schools and all the secondary students in Punjab. A total of 288 secondary and higher secondary schools and 20 students from each school were the sample of the study. However, a total of 4860 students participated in the study. An instrument “Result Sheet” was developed. The study used the value added approach to find out what the education process had added in the prior achievement at the secondary stage. The study used the longitudinal data of academic achievement of the same students. Mean of the annual marks of the classes VI, VII & VIII (session 2003-06) was used as the prior achievement (PA) of the students. Mean of the prior five years results of SSC examination (2002-2006) was taken as the prior school environment (PSEn). However, marks of class X (The Annual SSC Examination 2008) were used as academic achievement of the secondary stage (session 2006-08). The data were collected personally through the result sheet. The collected data were summarized at the school level. Then the summarized data showing the between school variation were carried into the SPSS data file to analyze the data. The Pearson Correlation Coefficient was used to analyze and find out the value of relationship (association) between prior achievement and academic achievement. However, the Stepwise Regression Analysis was used to analyze and find out the differential impact of PSEn on academic achievement.

## **Results and Discussions**

The study summarized and analyzed the data first at the school level and then for the whole sample. The following table shows the summary statistics of the data.

**Table 1: Summary Statistics**

Name of the Variable		Total Sample			Urban Areas			Rural Areas		
		Max	Min	Mean	Max	Min	Mean	Max	Min	Mean
PSEn (%)		92.8	27	66.43	93	45	73	92	60	27
Prior Achievement	Science Students	687	347	556	681	465	580	687	347	523
	Arts Students	660	320	488	660	357	503	630	320	469
Academic Achievement	Science Students	643	347	506	639	411	530	643	347	473
	Arts Students	611	291	422	611	300	436	567	291	406

Table 1 shows that PSEn is comparatively better in the urban schools than that of the rural schools. Furthermore, prior achievement and academic achievement is also comparatively better in the urban schools than that of the rural schools. It is also evident that there is much gap between the maximum and the minimum PSEn, PA and academic achievement of the urban as well as rural schools. Therefore, there is much variation in the data of prior school environment (PSEn), prior achievement (PA) and academic achievement at the secondary stage among the rural and the urban schools.

**Table 2: Relationship of the Prior School Environment**

		Correlation	
		Arts Students	Science Students
No. of Schools: (Arts Students)-----N = 258 (Science Students)—N = 252		Academic Achievement	
Prior School Environment	Correlation	.160	.322
	Sig.	.141	.003**

Table 2 shows the magnitude of correlation between PSEn and academic achievement as measured by the Pearson correlation coefficient. The value of relationship is insignificant for arts but significant for science students. However, the relationship is positive for both types of students.

**Table 3: The Differential Impact of the Prior School Environment**

		Coefficients <sup>a</sup>	
		t	Sig.
No. of Schools: Arts Students--N = 258 Science Students--N = 252			
Prior School Environment	Art Students	5.096	.000**
	Science Students	1.415	.158

a. Dependent Variable: Academic Achievement

Table 3 shows the magnitude of the differential impact of PSEn on academic achievement as measured by Stepwise Regression analysis. The t-value is significant for arts students and insignificant for science students. However, it is positive for the both types of students.

The results show that there is a positive relationship between PSEn and academic achievement. However, the relationship is significant for science students and insignificant for arts students. The results show the significant differential impact of PSEn on academic achievement for arts students and insignificant for science students. Furthermore, the relationship and the differential impact are positive in direction for both the science and arts students. Overall, it is evident that

PSEn has a positive role in producing academic achievement. The study supports the conclusions of Coon, Carey, Fulker, & Defries (1993) that effects are small and insignificant for science students. The study also supports the conclusion of Wilson, Abbott, Joireman & Stroh (2002) and Adesoji & Olatunbosun, (2008) that school environment directly influences academic achievement and the impact is significant for arts students. Likewise, the study supports Tableman (ed.) (2004) in its general conclusion that school environment plays its role in producing academic achievement.

## Conclusion

Prior school environment (PSEn) plays an important role in the education process. PSEn boost up the students. In the schools of better PSEn, students make a mind to attain the level of the school standards that is already developed. However, in the schools of weak PSEn, students relax, do not work hard and become lazy in their study. In other words, students are affected by the school setting that is developed within the school boundaries. Students are also affected by the peers' effect that is an indicator of the school setting or the school environment. Students look and copy the fellow students and do themselves. It is concluded that PSEn is an important predictor of academic achievement for arts students; however, it has some insignificant positive impact on academic achievement of science students. This insignificant and weak causal-relationship for science may be improved if the indicators of PSEn are properly defined and improved up to the higher standards. PSEn is very helpful in producing the present school environment. In this way, both the present and the prior school environments are the important.

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