Attendance is One of the Major Factors for Academic Performance of the Students of Elementary Classes

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Introduction

The main objectives of education, as quoted by GEN J.J. SINGH[1], Governor of Arunachal Pradesh, 11 September 2009 are to bring "changes not only in the amount of knowledge but also for achieving abilities to do something, to think and to acquire habits, skills and attitudes, which characterise an individual, who is socially accepted and adjusted". Keeping these in view Sarva Shiksha Abhiyan was launched in 2001 by MHRD, Government of India with the objective of implementing scheme of ensuring education to children upto eleven years of age by 2007 and upto fourteen years of age by 2010.

Since interest in schooling as E.A. Hanushek and G.T. Burtless[2] held comes from a policy perspective, which depends on several sources, schooling is perceived as an important determinant of individual productivity and learning. Thus, schooling is considered as an instrument for affecting both the national economy and the individual income and earnings. And hence schooling maybe considered as an important tool for economic growth of the nation along with functioning of democratic norms, which justify for an important component of public investment.

However, student attendance in this context also is a major concern to the educators. J. Brauer[3] (1994), held the view that absence on the part of the student "creates a dead, tiresome, unpleasant classroom environment that makes students who do attend class feel uncomfortable".

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Therefore, good attendance and prompt arrival to school and or in class is expected to achieve the aims and objectives as mentioned above. Poor attendance not only hinders academic achievement but also promotes a poorly educated society and thus leads to many negative social issues. Some educational experts argue that students who have not acquired an association between academics and life experiences do not feel that good school attendance is relevant to their future (Collins, 1982).

Students with high self-efficacy seem to be more successful in maintaining consistent attendance (Bouffard-Bouchard, 1990).

A domino effect result which starts with poor attendance, proceeds to low achievement, increases the dropout rate, and amplifies a host of social problems.

In a recent paper, S.T. Hijazi and S.M.M. Raza Naqvi[4] held the view that student's performance is "associated with students' profile like his attitude towards class attendance, time allocation of studies, parent's level of income, mother's age and mother's education". Similarly, a good number of scholars conducted a number of studies on student's performance in the context of his profile like race, gender, sex (Hansen, Jeo B 2000), economic circumstances and the risk of becoming a dropout that proved to be positive (Goldman, N., Hancy, W., and Koffler, S., 1998; Pallas, A., Natriello, G., Mcdill, E, 1989; Levin, H., 1986) B.A. Chansarkar and A. Mishaeloudis (2001) conducted the study on the effects of age, qualification, distance from learning place, etc. on student's performance. Y.B. Walters, Kola Soyibo[5] (1998) held the view that "high school students' level of performance is with statistically significant differences, linked to their gender grade level, school location, school type and socio-economic background (SEB)."

The Objective of the Study

The basic objective of the study is to identify the factors, which are responsible for students' academic performance in elementary school level.

Hypothesis

The hypothesis of the study is as follow:

(a) Student's attendance in the class has a positive impact on his academic result.
(b) Family income of the student is positively related to the student's academic result.

(c) Mother's education has a positive influence on student's academic performance.
(d) Father's education has a positive impact on student's academic performance.
(e) Distance of the school from the student's house has a negative impact on his academic result.
(f) Sex of the student has an impact on student's academic performance. Girls are showing better academic result than the boys.
(g) Percentage of trained teacher in the school has a positive impact on better result of the student.

Methodology

This study is based on primary data and the information was collected from schools and households of the surveyed students. For the analysis of the data simple statistical techniques like average, percentage, correlation, etc. were used. In case of graphical representation, diagrams like pie chart, bar diagram, line diagram were also used in this study.

Sample selection criteria

This study was conducted in the schools of Agartala Municipal Council area. As per the information of Sarva Shiksha Abhiyan, Rajya Mission, Office of the State Project Director, Agartala, at present there are 115 schools in Agartala Municipal Council area. Among these 80 are managed by Education Department, Government of Tripura, 23 schools are private aided and rest 11 are private unaided.

Recently Agartala Municipal Council (AMC) area has been extended. The new extended AMC area is less developed compared to the old AMC area. So in this study schools were selected on the basis of Stratified Random Sampling Method. For the selection of the schools, the whole AMC area was classified into two strata.

Stratun I: It consists of 50 schools situated in newly extended Agartala Municipal Council area.

Stratun II; It consists of 65 schools situated in old Agartala Municipal Council area.

For this study 12 schools from each stratum (i.e. in total 24 schools) were selected on the basis of Simple Random Sampling Method. A sample of 332 students of Classes I to VIII was taken from these 24 selected schools also by applying Simple Random Sampling Method.

Data collection procedure

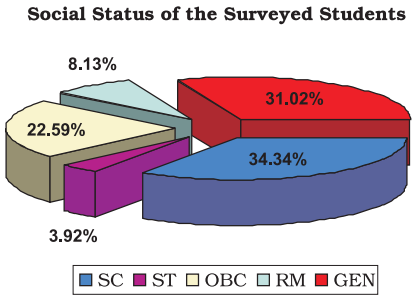
To collect various information regarding students strength, faculty position, students attendance and school infrastructure, a questionnaire was canvassed. Besides this, Focus Group Discussion (FGD) was followed to capture the different qualitative magnitude of students' attendance.

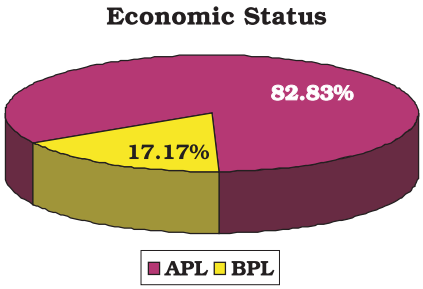
For household level survey, the most knowledgeable adult household member (who maybe the head of the household) and student of the house were interviewed.

Data Analysis

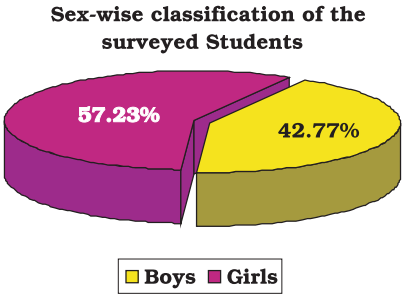
Demographic profile of the surveyed student

It also reveals from the study that among these surveyed students 34.34 per cent belongs to SC community, whereas 31.02 per cent belongs to general class. The ST, OBC and RM students are 3.92 per cent, 22.59 per cent and 8.13 per cent respectively.





Out of 332 surveyed students, 82.83 per cent belongs to APL family, whereas 17.17 per cent belongs to BPL family.



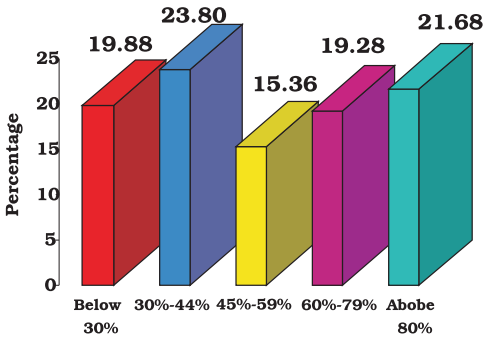
Among the surveyed students of selected schools 42.77 per cent were boys and the rest were girls.

Academic performance of the surveyed student

In this study annual result of the surveyed students of Classes I to VIII was considered as performance of the student. All the surveyed schools follow the same curriculum, same book, and same syllabus under one authority SCERT (State

Council of Education Research and Training). As a result almost similar kind of question paper was set by the school authority of the surveyed schools. To analyse the performance of the student, percentage of Total Aggregate marks was taken. Among these surveyed students 19.88 per cent have got below 30 per cent marks in their last annual examination. 23.80 per cent students have scored 30 to 44 per cent marks, whereas, 15.36 per cent scored 45 to 59 per cent. Around 19 per cent students have got 60 to 79 per cent marks, whereas, 21.68 per cent students have scored above 80 per cent marks in their last annual examination.

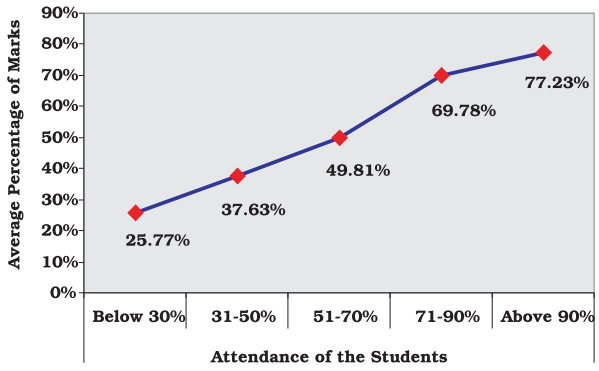
Academic Performance of the Surveyed Students



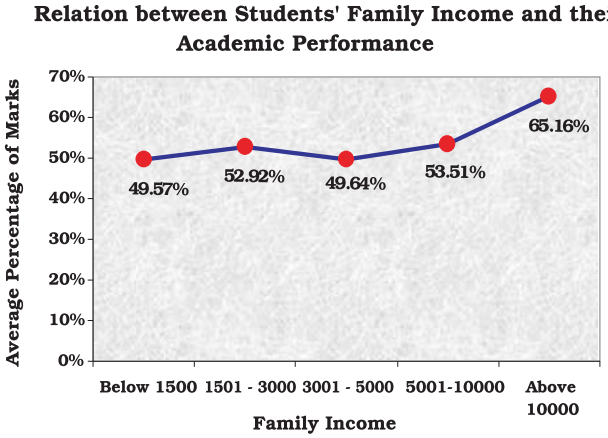
Relation between student's attendance in the school and their academic performance

To examine the relation between students' attendance and their academic performance, attendance of the students was classified into five groups i.e. below 30 per cent, 31–50 per cent, 51–70 per cent, 71–90 per cent and above 90 per cent. It is found from the study that students belonging to below 30 per cent attendance group scored 25.77 per cent in their annual examination. The students belonging to 31–50 per cent, 51.70 per cent, 71–90 per cent and above 90 per cent attendance group, got 37.63 per cent, 49.81 per cent, 69.78 per cent and 77.23 per cent marks respectively in their last annual examination. It shows that performance of the students increases with the increase of their attendance in the school. It satisfies the hypothesis (a) i.e. students' attendance in schools has a positive impact on their academic performance.

Relation between Students' Attendance in School and their Academic Result



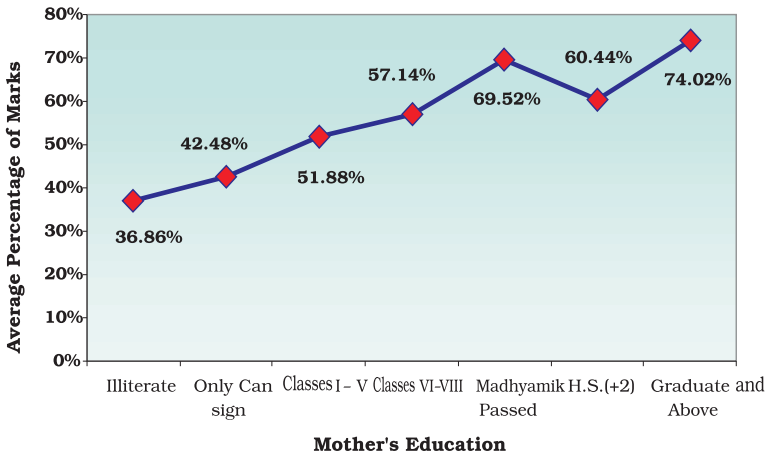
Relation between student's family income and their academic performance



In this study, total income of the household was considered as the students' family income. It is accepted that money can buy all comforts that students need. To examine the relationship between students' family income and their annual result, total family income was divided into 5 income ranges i.e. below ₹1500, ₹ 1501-₹ 3000, ₹ 3001- ₹ 5000, ₹ 5001-₹ 10000 and above ₹10000. Study shows that students belonging to income group of below ₹1500 have scored 49.57 per cent mark in their last annual examination. Student have scored 52.92 per cent marks in the income group of ₹ 1501- ₹ 3000. But the students belonging to the income group of ₹ 3001- ₹ 5000 have sored 49.64 per cent marks in their last annual examination, whereas, in the income range of ₹ 5001- ₹ 10000 and above ₹ 10000 students have scored 53.51 per cent and 65.16 per cent marks respectively. So, no clear indication is found from the above discussion. Besides, the correlation coefficient value is 0.12 only. This shows that there is a weak relation between students' family income and their academic performance. Hence, the hypothesis (b) does not hold good.

Relation between students' mother's education and their academic performance

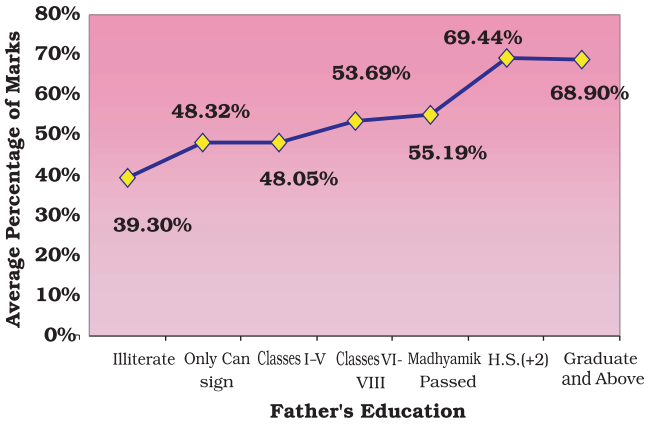
To examine the impact of mother's and father's education on their child's academic performance, level of education was classified into 7 groups, i.e. Illiterates, only can sign, Class I–V, Class VI–VIII, Madhyamik Passed, H.S(+2) passed and Graduate and above. Study shows children of illiterate mothers have scored poor marks in the examination. Almost in all cases, percentage of marks increased with the increase of mother's education. Besides, correlation coefficient value is 0.38. It shows that there is a positive relation between



students' academic relation and their mother's education. So, it satisfies our hypothesis (c).

Relation between students' father's education and their academic performance

In this study, father's education of the surveyed students has been also classified in to 7 groups. These groups are Illiterate, Only can sign, Classes I–V, Classes VI–VIII, Madhyamik Passed, H.S(+2) passed and Graduate and above. No clear indication is found from the this study. Besides, correlation coefficient value is 0.29. So, our hypothesis (d), i.e. father's education has a positive impact on students' academic performance does not hold true.



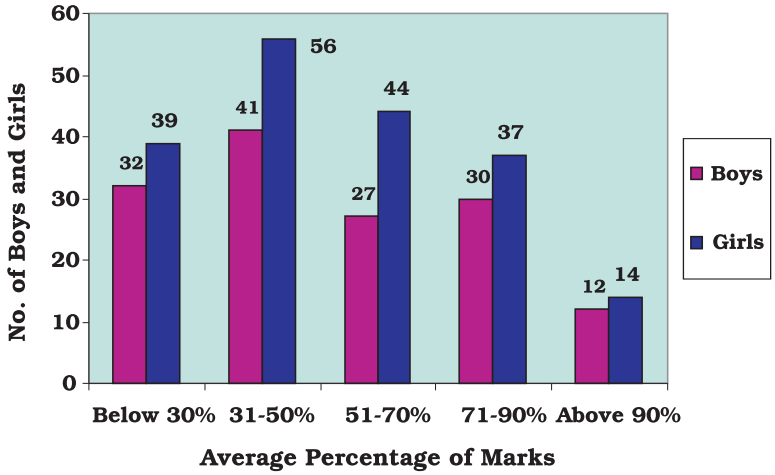
Relation between distance of school from students' house and their academic performance

It was assumed that distance of the schools from the students' house

has a negative impact on students' academic performance. The study shows that correlation coefficient value of these two variables is 0.013. This shows that the relation is negative. Therefore, hypothesis (e) does not hold true.

Relation between sex of the student and their academic performance

It was assumed that sex of the students has an impact on their academic performance. In this study, marks obtained by the students are divided into five categories. These are below 30 per cent, 31-50 per cent, 51-70 per cent, 71-90 per cent and above 90 per cent. The study reveals that in all five categories number of girls is higher than the number of boys, i.e. girl students are showing better academic performance than the boys. Thus, the results satisfy our hypothesis (f).



Relation between students' academic performance and percentage of trained teachers in the school

In this study, teachers having BT/BD training are considered as trained teachers. A trained teacher can teach the students better than an untrained teacher. The value of correlation coefficient of trained teacher and students' academic performance in the school is 0.053. This shows that the relation between students' academic performance and percentage of trained teachers in school is weak. Thus, hypothesis (g) does not hold true.

Regression Analysis

The above discussion reveals that academic performance of the

students with respect to eight independent variables has been expressed in percentile form. But percentile form of analysis does not always focus on the exact result. For this reason a number of scholars have used Linear Regression Approach. In this study, 24 schools were surveyed and all of them follow the same curriculum, same book, and same syllabus under one authority SCERT (State Council of Education Research and Training). As a result almost similar kind of question paper was set by the school authority of the surveyed school and examination was taken in almost the same time. Under this condition Regression Model could be applied for testing the relation of the variables with respect to students' academic performance.

Regression model

For the similar kind of study, linear regression model was used by a number of scholars. Eskew and Faley[6] (1988), Miller and Westmoreland[7] (1998) used linear regression model for establishing relation between students' performance and number of explanatory factors. Kruck & Lending[8] (2003) developed a multivariable regression model for finding out relation with the use of five independent variables to predict performance and hence to analyse grade in an introductory information science course. Garcia and Jenkins[9] (2003) used similar multiple regression model to establish relation between performance of a degree programme with 20 independent variables.

Following the models proposed by Eskew and Faley (1988) and others analysed above, an attempt has been taken here to find out the relation between the performance of the student with seven independent variables. The proposed regression model was as

$Y= b_1 + b_2 AS + b_3 FI + b_4 ME + b_5 FE + b_6 TR + b_7 TT + b_8 SS + b_9 DS + U$

where, Y is the dependent variable and it represents academic performance of the students and b_1, b_2, b_3, b_4, b_5, b_6, b_7, b_8 and b_9 are the coefficients. U represents the disturbance term of the model.

The Exogenous variables of the model are:

AS = Attendance of the Student. It represents how many classes student attended in last academic year and it shows the seriousness and attitude towards studies.

FI = Family Income of the Student. The family can provide better facilities to the student if the family income is high.

ME = Mother's Education. If mothers are educated, they can contribute to improve the performance of the students.

FE = Father's Education. An educated father can understand the nature of education beneficial for his child's future.

TT = Trained Teacher in the school. If the teacher is trained, he can teach the student better than an untrained teacher.
SS = Sex of the Student, Dummy as Girl=1, Boy=0. Usually, sex difference is found in academic performance of the students.
DS = Distance of School from the student's house. If the school is near the residence of the student, he/she can easily attend the school regularly.

Data Analysis

Results of regression analysis

Table 1
Regression Statistics

Adjusted R Square	0.525
Standard Error	17.97
F Stat	49.563

	Unstandardised	x	Standardised	t	Sig.
	B	Std. Error	Beta		
(Constant)	-6.760	4.771		-1.417	0.158
Attendance(AS)	.685	0.044	0.655	15.630	0.000
Income (FI)	-3.531E-05	0.000	-0.005	-0.116	0.908
Mother's Education (ME)	1.861	0.619	0.167	3.009	0.003
Father's Education (FE)	0.317	0.613	0.028	0.516	0.606
Percentage of Trained Teachers (TT)	9.073E-02	0.041	0.089	2.229	0.027
Sex of the Student (SS)	-0.190	2.090	-0.004	-0.091	0.928
Distance (DS)	2.271	2.300	0.040	0.988	0.324

a Dependent Variable: MARKS

Table 2
Correlation Matrix

	Marks	Attendance	Income	Mother's Education	Father's Education	Percentage of trained teachers	Sex of the student	Distance
Marks	**1.000**	0.700	0.115	0.390	0.291	0.058	0.002	-0.013
Attendance	0.700	**1.000**	0.091	0.298	0.220	-0.064	0.014	-0.115
Income	0.115	0.091	**1.000**	0.305	0.313	-0.071	0.007	0.167
Mother's Education	0.390	0.298	0.305	**1.000**	0.676	0.062	0.025	0.117

Father's Education	0.291	0.220	0.313	0.676	**1.000**	0.007	-0.048	0.155
Percentage of trained teachers	0.058	-0.064	-0.071	0.062	0.007	**1.000**	-0.097	-0.014
Sex	0.002	0.014	0.007	0.025	-0.048	-0.097	**1.000**	0.060
Distance	-0.013	-0.115	0.167	0.117	0.155	-0.014	0.060	**1.000**

Table 3
Case Summaries

	N	Mean	Std. Deviation	Coefficient of Variation	Variance
Marks	332	52.06	25.86	49.67	668.70
Attendance	332	59.58	25.03	42.01	626.31
Income	332	4312.95	3548.94	82.29	12594986.14
Mother's Education	332	4.63	2.38	51.40	5.68
Father's Education	332	4.92	2.57	52.24	6.61
Percentage of Trained Teachers	332	62.23	25.48	40.94	649.27
Distance	332	0.77	0.46	59.74	0.21

Discussion

It reveals from the study that the value of R^2 is 0.53. It means that 7 of the variables together can explain 53 per cent of the model and rest 47 per cent maybe explained by the other factors not mentioned in this regression model. Mean, Standard Deviation, Coefficient of Variation, and correlation coefficients are also shown in the above tables.

It is found from Table 1 that standardised coefficient of percentage of attendance is 0.66 and the t value is 15.63, which is significant at 99 per cent confidence interval. It implies that impact of student's attendance on his/her performance is positive. The result shows that a student who attends the classes regularly can do better in examination.

It was assumed that the relationship between student's academic performance and students family income is positive because money can buy all comforts that student need. But the result could not prove these relation, because coefficient value is -0.005 and insignificant t value –0.116 as reveals from Table 1. Since all kinds

of educational expenditure are being maintained by the state government for the students of elementary classes, it can be said that family income is not an affecting factor for the academic performance of the students of the said categories.

It was assumed that mother's education is positively related to the academic performance of the student. An educated mother can take better care of her child and the result of the study also proves the relation. It is found from the Table 1 that the coefficient value is 0.167 and significant t value 3.009. It shows there is a positive relation between student's academic performance and student's mother's education; the student is doing better whose mother is educated.

It was expected that student's academic performance is positively related to student's father's education. An educated father can guide his child to choose the better field of studies. The result of the study as reveals from Table 1 shows that the coefficient value is 0.028 and there is insignificant t value 0.516. Here it can be said that fathers are not habituated to taking care of the education of their kids at the elementary level. Beside, they remain busy and remain out of houses for most of the daytime for maintaining their livelihood.

It was assumed that the relation between dependent variable and the percentage of trained teachers in the school is positive. A trained teacher can teach the student better than an untrained teacher. It is found from Table 1 that the coefficient value is 0.089 and significant t value 2.229 though due to small value of correlation coefficient (0.053) as shown in Table 2, the relation between academic performance and percentage of trained teacher is found weak.

It was believed that sex of the students has an influence on their academic performance and it is also assumed that girls are showing better performance than the boys but the coefficient value –0.004 and t value –0.091, as found in table 1 are insignificant in support of the hypothesis (f). Hence the hypothesis (f) does not hold good.

It was expected that students' academic performance and distance of school from students' house are positively related. If the school is near the residence of the student, he/she can easily attend the school regularly. The study shows that the relation does not hold well because coefficient value is 0.040 and t value 0.988 is insignificant as revealed from Table 1. The study shows that the correlation coefficient of distance and academic performance is only –013. Since there is a direct relationship between academic performance and attendance and negative relationship between attendance and distance, it shows a negative relation between academic performance and distance of the school.

Conclusion

The academic performance of the student depends on a number of socio-economic factors, only 7 (seven) of which have been identified by us. This can explain at least 53 per cent of our proposed model. Out of these seven variables, attendance of the students has a major impact on their academic performance in comparison with the other variables.

As a part of overall suggestion of the study, students must be urged to be regular in their attendance and appointing authority or the department may reconsider its policy of appointing trained teacher for qualitative performance of the student. Besides this, educational programme like 'Vidhyalay Chalo Abhiyan' should be implemented more carefully to cover all dropout boys and girls. Because today's boys and girls are future fathers and mothers of our society.

There maybe other factors which may have direct effect on the performance of the students. Thus, this requires an elaborate study of the performance of the student with multiple socio-economic factors by the application of multiple regression analysis as suggested by Bickel[10] (2007).

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