

What Matters Education Outcome of Children in Government Primary School: A Survey on Four Primary Schools in Dhaka City

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Abstract: Academic achievement of primary school children is influenced by various socio-economic factors. The author has surveyed to find out what matters the education outcome of four primary school children in Dhaka city. From the result of Ordinary Least Square Method, it has been revealed that self or guided study, school presence and home learning environment have significantly improved academic outcome where father or mother income has insignificantly affect the academic outcome. This study has also found out the insignificant correlation between mothers & fathers education and students' academic outcome, which has not been found out in many previous studies in different countries especially in the early year of schooling.

Keywords: Academic outcome, Socio-Economic factors (SES), Home learning environment (HLE), and education policy.

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I. INTRODUCTION

One of the focused areas of the governments especially in developing and underdeveloped countries is to ensure education for all. Education for all is associated with providing equality of opportunity to the citizen in the way of having education. It has been enshrined in article 17 of the Constitution of Bangladesh that states should provide free, compulsory and uniform education for all to remove illiteracy. Other national (article 28/4 of the constitution of Bangladesh) and international acts related to education (EFA, 1990, Salamanca Declaration 1994, Un-convention on Persons with Disabilities- 2006, MDG, 2015, etc.) where Bangladesh is a signatory compelled the government to ensure the equality of opportunity for its all citizens. The two components of equality in opportunity are providing equal access to education and academic achievement [1]. Without any financial or social or policy level barriers everyone should have access to education. Improving students learning outcome is probably the main priority area occupied in education policy. Over the years, the government has taken various steps to improve students' academic achievement by taking different policies and programs. These included a fair recruitment process so that real talented persons can enter teaching, improving teacher's quality by providing training. In addition to that, it contains improving school infrastructure, curriculum development, preparing age/grade/context - appropriate textbook and effective student assessment procedures. To support student's education for poor income group, financial help and mid-day mill to stay at school has been provided in some areas of the country. These are all macro factors that affect student overall learning but there are other micro and socio-economic factors, which affect students learning, and academic achievement too.

The academic success of a student is linked with individual features of that student, socioeconomic status (SES) of the student's family and school resources. Now a day in the academic research linked with the impact of SES on student academic achievement has included the social context of a student where he/she grew up and has regarded school as the predictors of student academic success. The social context of students and schools has included the locality where the student lives, social capital (the link between school and parents) and the area or locality of the school (urban, suburban, rural) respectively. Tansel (1995) [2] in his study showed that student's settlement affect academic success and it was more acute for the male students than female. The micro and socio-economic factors proved as significant contributors to students' academic performances.

The conceptual meaning and empirical measurement of SES vary in works of literature [3]. 'SES describes an individual's or a family's ranking on a hierarchy according to access to or control over some combination of valued commodities such as wealth, power, and social status' [4]. The definition given by other researchers [5][6][7][4] included three indicators as SES like parental income, parental education, and parental

occupation. For example, parent's income [8], parents especially mother's education, parent's occupation, home learning environment (HLE) were helpful for better academic performance. Mothers who have been involved in intellectually stimulating jobs can be delivered more support to the children, which helps children verbal skills [9]. From the evidence, it has been seen that lower Socio-Economic Status (SES) is connected with low stimulating support and lower cognitive development [10][11].

Parenting varies with different SES [12]. Good parenting practices such as playing and reading with children, watching TV, use of the complex word, warmth interaction are helpful for the better developmental outcome of children [13].

Race, culture, social values, and expectations and interaction of students in the family and the schools link to the academic performance of the East Asian students [14].

The size of the family and gender have influenced the academic success of students. Generally, in large family students have fewer educational opportunities and achieved lower academic success [15]. Generally, females have been found to more motivated to study than males [16][17][18].

Academic success also varies with the grade level of the students. However, it has been found from the researches that low SES lowered academic success. But as the student gets older, the effect of SES on academic achievement weakened [19][20]. Because the students were staying longer in the schooling process, school authorities provide equal support to the students. In addition to that, students from disadvantaged families have dropped out of school gradually. Both these factors have lessened the impact of SES on the academic outcome.

The academic outcome is associated with learning. A human being is born dependent. After that through different learning sources and complex process, a human being became a worthy citizen. Among different macro and socio-economic factors that influenced learning and academic achievements, this study has investigated some of the SES factors that might contribute to the education outcome of primary school students in Bangladesh.

The government is implementing the Primary Education Development Project (PEDP). Under this project, the 3rd phase (2015-19) of students' scholarship program is ongoing. Total budget for scholarship is 6,92,305.54 lakh taka [21]. Per month, 100 taka is given to the students of class one to five. The objectives of the student scholarship program are to increase enrollment rate, increase the school presence of the students, reduce the dropout rate and increase the quality of education and increase the primary education completion rate, etc. School presence directly helps the quality of education by student learning and thus improve academic achievement. However, other socio-economic factors also deserve much attention to the policymakers often neglected.

The urban slums and city dwellers from low-income segments live in a very awful condition. In most cases, the entire family lives in a single room or at best, two rooms because of high rent. This situation seriously has hampered the learning environment at home. The school contact hour in Bangladesh for the primary students from class three to class five is only four and a half hours. The rest of the time, they have stayed at home with a poor learning environment. This study has explored the impact of the home learning environment on students' academic success with a few other socio-economic variables.

The remainder of this paper is organized as follows. Section 2 has outlined the reviews of previous empirical works and in section 3, the conceptual framework. Section 4 has included research questions and objectives, section 5 has discussed methodology in detail. Section 6 has presented and discussed the descriptive and econometric results. The paper has been concluded in Section 7 with a discussion of policy implications of the results.

1.2. Statement of the Problem:

The low exam score is a cause of concern for the academician and policymakers. The low exam score is the cause of low learning. In a knowledge-driven society, human resources is the prime mover of economic development. It has argued that without technological progress, only human resource is not enough to explain present economic and social progress. The cohesive existence of technology and human resource are the pivotal factors for faster progress of a country. Because it is human resource who innovate and use technology. Since better learning is associated with better human resources. Therefore, each country is inquisitive to students' academic performance and Bangladesh is not an exception. After the publication of public exam result (PSC, JSC, SSC, and HSC), government especially Ministry of education dissect the result and find out major deviation in students performances if any with the previous result. This type of analysis is done on the macro level. Researchers in Bangladesh have seldom conducted study on a micro level to find out why some of the students perform poorly than others and why not a single student of a school has succeeded. Does the cause of the poor performance of students associate with a particular geographic location, a particular subject or particular socio-economic status? The government usually takes punitive action against teachers and the result of such action has been sometimes abysmal. Therefore, besides the macro level, a micro level study is helpful to find out the link between academic achievement (exam score) and different socio-economic and micro factors.

Above all, understanding the factors influencing children's readiness for school and capacity for academic achievement has implications for theories of educational achievement, educational policy and practice. This study is an attempt to investigate the link between some micro/socio- economic indicators and academic outcomes.

1.3. Rationality:

'Schooling is widely seen as critical to the development process and poverty alleviation' [22]. The task of schools to prepare children to acquire the necessary knowledge and skill to function optimally as an adult and to make a responsible and competent individual/citizen [23]. In Dhaka, city children from the poorer section of the society read mainly in the government primary schools. The teachers of the government primary schools are highly trained than private kindergarten schools. In some cases, teachers are more qualified in terms of academic performance than those privately run schools especially those follow the government curriculum. The mushroom growth of kindergarten schools in the close neighborhood and mad traffic of Dhaka city have compelled parents to enroll children in the so-called kindergarten at the expense of quality. However, education of the Government primary schools is free of cost but those who have the ability have seldom enrolled their children in primary schools. Now, the reality is that only children from the day laborer, small vendor, housemaids, garments worker, driver and professions associated with low salaries are the students of government primary schools. They live in the city slum and rented house where the entire family lives in a single room or two rooms. The students have the minimum facility to study at home as from sleeping to recreation; every activity is accomplished in a single room. The students from the wealthier parents have a separate reading room for the children or perhaps a separate table to accomplish study. Beyond this scanty support at home, some students of primary schools do well than others. Therefore, it needs to investigate what matters the education outcome of those students and the factors that affect education outcomes.

Learning is a complex process. There are many contributors to learning. These are the mother or father of the children, the social context where the children's family enmeshed, the primary schools, the larger society [23]. the availability and quality of health care and schooling' [24] etc. All the contributors affect the education outcome of children [23]. From empirical researches, it has been found that exam score is positively correlated with the economic condition of the family. Study on the effect of quality of school on students' academic success has been found that in general wealthier parents can afford a better quality of schools and better quality schools affect student success more than low-quality schools but in the same schools, success is not associated with parents income [22]. Another study on the same issue found that the quality of school affects the students' duration of school not learning [25]. Researchers studied socio-economic status (SES) to cognitive development and academic performance [26][27] etc. but the dimension and strength of socio-economic status and students' academic achievements vary among cultures [28]. White (1982)[29] in meta-analysis exhibited that only 5% variation in academic achievement due to SES, therefore, other factors have been important in explaining children academic performance. Since the result of previous research on socioeconomic factors in explaining academic achievements is inconclusive and seldom studied in Bangladesh at a micro level, this study is an attempt to fill up the knowledge gap. This study expects that from the findings, policy planners would initiate the proper plan and the parents, teachers, as well as students themselves can take a proactive plan to improve academic performance and build a solid base of human capital without whom sustainable economic growth is impossible to achieve.

II. RESEARCH QUESTIONS AND OBJECTIVES

The study has been guided by the question; what are the factors that contribute to academic achievements measured in terms of exam score?

The main objective of this study is to examine the effect of student's individual, family and school factors that help to achieve higher exam scores. The specific objectives are:

- 2.1. To identify the individual factors that help achieve higher exam score;
- 2.2. To investigate the link between family factors (parents income, education & occupation) and exam score;
- 2.3. To find out the effect of school presence on exam score;
- 2.4. To find out the gender effect on exam scores.

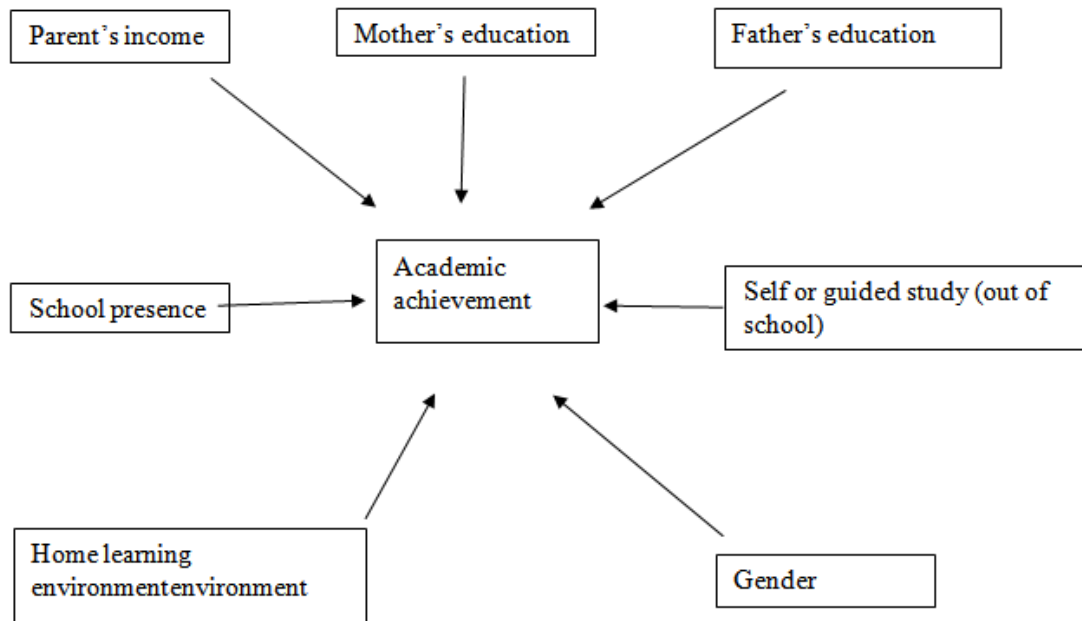
III. LITERATURE REVIEW

Academic scores of children are affected by many factors some of which are external to the children and family, some are endogenous. Health and nutrition affect the probability of children enrolled in school and the ability to learn and succeed in academic achievement [28]. Per capita expenditure has a robustly positive effect on test scores in poor counties of China, a 10% increase in expenditures increases test scores by 0.05 standard [25]. Home learning environment (HLE) and home numeracy environment (HNE) have an impact on exam score. Study has shown that various issues related to HLE and HNE correlate with reading and

mathematics ability in Chinese children but the relationships are slightly negative [30] like other previous studies [31][32][33]. On the other hand, Comer (1984)[23]has found out that the relationship among home, school and school achievement is positive. He has argued that psychological climate and environmental factors in and out of school have an impact on children learning. He has reviewed four major learning environments. First, the learning environment associated with the primary caregiver (mother or father), secondly, the social network of the family where the family is enmeshed has impacted the child learning process. School constitutes the third and most important learning environment and the fourth is the larger society. All have an impact on children learning processes. However, these studies of health, nutrition, home learning environment and other socio-economic factors on children academic success are conducted mainly in the developed country and few are in the developing countries. The study of the home learning environment on children academic success in Bangladesh is rare; this study will fill up the knowledge gap in this respect. In addition to that, the home learning environment measured in terms of home space is new. Slum dwellers reside in a small tiny room. The majority of the children have no separate table or space for reading. This poses a serious threat to the creation of a friendly learning atmosphere at home. This 'space'variable never draws attention to the researchers as separate variable in any study; present study sheds light on this issue.

IV. CONCEPTUAL FRAMEWORK

The researcher has reviewed previous works about the impact of socio-economic factors on students' academic outcome/success/ performance and made a list of variables that induced the variation of academic success. The impact of these variables on academic outcome has differed on the economic development and social characters and social capital of the countries, the norms and values, student's individual character, socio-economic status of the student's family, the social context where students have grown up, home learning environment, etc. Some of the variables are not predominated in our country e.g. racial or minority/ethnicity variables. The impact of some of the variables on academic outcomes is negated by the design of the present study. For example, sample schools are selected from the homogenous social context, same class (no grade level effect), homogeneous social capital (uniform system of parents student relationship in government primary school). After controlling these variables, the present study has explored the impact of the following variables on the academic outcome of children.



Source: Prepared by the researcher.

V. METHODOLOGY

This study is quantitative as well as qualitative in the sense that qualitative variables are quantified in terms of appropriate measurement techniques. Data have been collected from 179 primary school children. They are studied in four primary schools located at Mirpur and old Dhaka. The selection of the schools is done purposively to assimilate the socio-economic background of the parents. Students are selected randomly from three primary schools and all students of one primary are taken as a sample because number student is only ten

(present at the time of data collection). Class five students are taken as a sample since at the end of the year they have sat for the PSC exam. This is the first public exam of a student in Bangladesh and all the stakeholders are very serious about the exam. Parents have taken extra care in terms of providing a tutor, helping children study at home and so are the schools. At the same time, students are also serious about their studies. Simple Linear Regression has been conducted where the dependent variable is the average of first and second term exam scores of all subjects. The list of independent variables is weekly study hours at home, parent's monthly income, home learning environment (separate space available for study) and parents education (years of schooling) and sex of the students (male-1. Female-2). This study has assumed the quality of teachers is homogeneous in the sense that the Ministry of Primary and Mass Education has recruited them by following almost the same procedures. The toughness and easiness of questions faced by the students in the exam be the same as questions are prepared on the area basis, not by the individual schools.

VI. RESULT AND DISCUSSION

6.1 Descriptive result and Discussion:

Data have been collected from 179 students of class five from four primary schools. The number of male students is 76 and the number of female students is 103. The number of female students is greater than male -like national statistics of male and female students in Bangladesh up to secondary level. The average marks obtained by a student is 317.44 out of 600, weekly study hour per student is 21.43. Schools presence is 168.61 days per year out of 241 working days. This number is below the required days of presence. Because 80% of school presence is required to have the scholarship. The teachers sometimes are compelled to conceal the absenteeism. Parents create undue pressure on the teachers if their child did not get the scholarship. The average family member of the students is 4.89. 19% of students have not had any space for study; they study in bed with other members doing other things. 81% of students have space as on the top of large suitcases, table is not dedicated only for study but used for other purposes and as a small tool, etc. 30.72% of fathers are doing service in small shops as salesman, in offices as MLSS or office worker and, 36.31% are small businessman like selling vegetables, fish or fruits in the market or by the roadside shop or with a van. 8.38% are day laborer, 21.22% are drivers, and 2.79% are engaged in other occupations. On the other hand, 81% of mothers are housewives, 13.40% are working in garments, 2.79% are day laborer, only one mother doing business and 2% are doing other kinds of jobs. Mean schooling year of father and mother are 7.15 years and 6.27.

It is surprising that the correlation between students' academic outcomes and mother or fathers' years of schooling is insignificant which is not the case in many countries. The reason lies behind the age of students and the context where the students live. In the early year of students learning, the caregiver is a mother or father are the primary sources of learning. Gradually with the age of students, additional sources of learning help students' cognitive development. The curriculum and the textbook for class five of primary school are tough to handle for the mother and fathers who have six or seven years of schooling. This may be a reason for the insignificant correlation between the above variables.

6.2. Econometric Result and Discussion:

The focus of this present study is to determine what factors affect students' academic outcomes. Average result (the average result of the first term and second term exam) of students are regressed against independent variables e.g. presence in the school, parents monthly income, weekly study hours, parents education (years of schooling), and gender. Father and mothers' education and gender of students reveal insignificant in explaining the variation of the result. The parent's income is also insignificant in explaining the variation of the result. Former three variables have been dropped later because of multicollinearity. Finally, academic scores haveregressed with the rest of the variables, OLS has provided R square value .719 that is the model could explain 71.9% variation of students' academic outcomes for change of the dependent variables. This R squared value is sufficiently large which has exhibited that this has been a good econometric model to explain the factors affecting children education outcome at primary level. All the variables are a significant predictor of academic outcomes except parents' income. The strongest significant predictor is the school presence and the weakest predictor (by beta value in regression) is the home learning environment for study. This finding supports government intervention of providing scholarship to the students, which helps increase students presence in the school and thus achieve better academic outcomes through better learning. Though the home learning environment has measured in terms of the availability of space for study appeared as the weakest significant predictor, this variable is not possible to measure in true sense. Because of the researcher's presence in the natural environment of student's home to perceive the home learning environment variable and thus the measurement of the variable is required which is not possible in the present study. However, during a telephone conversation with the teachers of the respective schools, teachers give much importance to the home learning environment of students for better education outcomes. The government cannot be able to create a better

learning environment at home of all students, but school contact hour can be extended or school can be open for the students with teacher/s (experimentally with one/two teacher/s in each day) to serve as the place for learning.

VII. CONCLUSION AND RECOMMENDATION:

Education is seen as an increasingly important pathway to success. Students from a slum or lower-income segment can breakdown the trap of being poor coming from the poorer family background is possible by the state’s adoption and implementation of proper policy and targeted intervention. Providing scholarship to the students of primary schools proved effective in increasing students’ presence in the school. The finding of this study shows that school presence has the strongest impact on the better academic outcome of students. However, the focus of the study is to investigate the impact of the home learning environment on academic success appears significant but weaker than other variables, the future in-depth study will reveal the true impact if the variable is perceived and measured in the natural setting of the student’s home learning environment. The government can rethink the school contact hour or closing time of schools to provide students an alternative place for reading. The results of this study can act as a beginning of research to addresses this important issue in Bangladesh.

Appendix:

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.848 ^a	.719	.712	47.65580	.719	101.796	4	159	.000
a. Predictors: (Constant), school presence, Income of father and Mother, Having separate space for study, Total study hour in a week									
b. Dependent Variable: Average result of 1st & 2nd term									

Table -1:Result of Ordinary Least Square Method (OLS)

Table: 2Result of Ordinary Least Square Method (OLS)

Coefficients ^a								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	-152.482	34.858		-4.374	.000		
	Income of father and Mother	.000	.000	-.040	-.913	.363	.912	1.096
	Total study hour in a week	5.302	.803	.348	6.599	.000	.636	1.573
	Having separate space for study	59.000	10.977	.267	5.375	.000	.715	1.399
	school presence	1.859	.249	.425	7.470	.000	.545	1.835
a. Dependent Variable: Average result of 1st & 2nd term								

Table 3: Correlation between Average academic score of students and mothers years of schooling

Correlations			
		M_EDU	AV
M_EDU	Pearson Correlation	1	.098
	Sig. (2-tailed)		.210
	N	179	165
Average academic score of students	Pearson Correlation	.098	1
	Sig. (2-tailed)	.210	
	N	165	165

Table-4:Correlation between Average academic score of students and fathers years of schooling

Correlations			
		AV	F_EDU
Average academic score of students	Pearson Correlation	1	.133
	Sig. (2-tailed)		.089
	N	165	165
F_EDU	Pearson Correlation	.133	1
	Sig. (2-tailed)	.089	
	N	165	179

Table-5:Mean year of schooling of student’s father and mother

Statistics			
		M_EDU	F_EDU
N	Valid	179	179
	Missing	0	0
Mean		6.27	7.15

Chart-1:Distribution of data

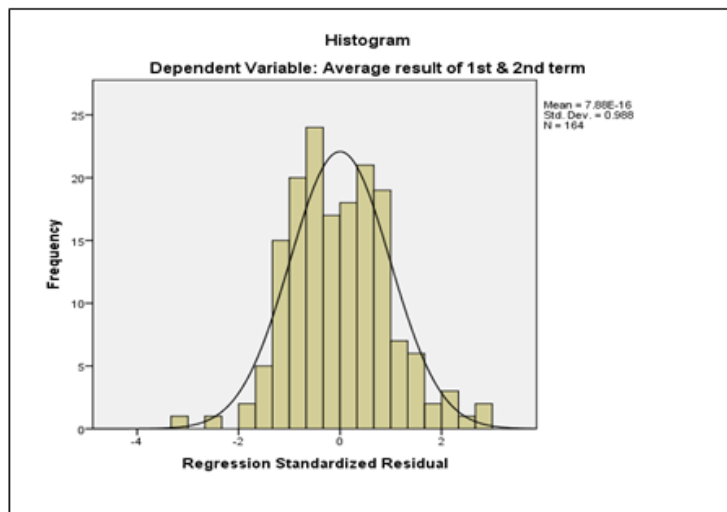
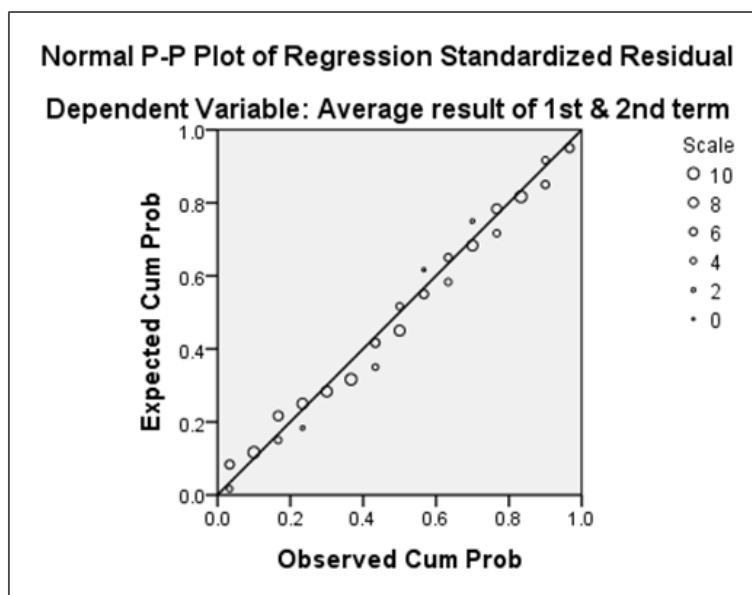


Chart-2:Normal P P plot



Both histogram and normal Q Q plot present homogeneity of the distribution of data.

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