

PROFICIENCY IN ENGLISH AND ITS RELATION WITH ACADEMIC SUCCESS AT THE SCHOOL LEVEL

S. CHATTERJI AND M. MUKERJEE
Indian Statistical Institute

Introduction: Much is being talked about in favour and against the teaching of English in schools and colleges now a days. The arguments usually presented against English education in schools, can be summarised as follows:

- (a) As most of the students have to spend a considerable amount of time in mastering this foreign language, they do not get much time to learn other subjects which are of value in their future life.
- (b) There are many students who are good otherwise, but fail to master this foreign language and thereby their future academic career is doomed because in order to continue their study they must pass in English.

The study aims at finding out the truthfulness of such arguments on the basis of empirical data. It was decided to study the relationship between the performance of students in English and that in other subjects taught in the school and also the ability of the score in English to predict academic success.

How to measure the proficiency in English: Now the first problem in this study was to identify students who were good and those who were poor in English. One way was to consider their

school examination marks in English. But these examinations vary from school to school and the standard of the question papers and that of the evaluation also vary. So it was decided to use a test of English knowledge and comprehension (5) along with the school examination marks in English. The scores on this test served as an independent and common measure of proficiency in English for all the students considered for this study.

The Sample of Students: This investigation was carried on about 1200 class VIII students reading in 12 different schools at Calcutta. These schools were selected at random from a list of Bengali medium Higher Secondary schools. Seven of these schools were for boys whereas the remaining five were for girls only. In the selected schools all the students reading in class VIII were considered. The class VIII annual examination marks in English were collected and the objective examination mentioned above was administered on them. The reason of selecting the students at this level was that the English knowledge of the students at lower classes was expected to be just elementary and hence would not be of much use for this purpose, and those who were reading at higher

classes would leave the school soon and hence the criterion score would not be available to test the predictive ability of the score.

The school examination marks in English and the objective test used: A brief description of the school examination in English and that of the English knowledge and comprehension test are presented below:

(a) *School examination marks in English:* By examining the nature of the annual examination in English of the selected

schools it was observed that the maximum possible marks for the examination were different for different schools. For seven out of 12 schools the full marks was 200 whereas for the remaining five schools it was 150. It was also noted that 72 per cent of the students studied in this investigation, passed in English at the annual examination.

The means and standard deviations of these marks in English are presented in Table I for different schools along with the maximum possible marks.

Table I Showing the means, standard deviations of the marks in English at the class VIII annual examination in the selected schools

school	full marks	number of students	mean	standard deviation
A	200	117	70.04	20.10
B	200	92	76.23	18.79
C	150	73	79.17	15.38
D	200	93	61.86	22.44
E	150	57	72.10	13.07
F	200	189	60.01	24.86
G	150	57	51.93	20.02
H	150	77	60.44	16.36
I	200	105	41.43*	18.00
J	200	110	92.66	14.27
K	200	144	80.57	23.50
L	150	121	59.65	16.80

(b) *Objective examination in English knowledge & comprehension:* This was an objective test standardised for class VIII students for measuring their knowledge and comprehension in English. There were three parts in this test.

Part I—Spelling: There were 80 items in this test. Each item consisted of a word. The candidate was to indicate whether the

spelling of the word was correct or not. The time allowed for this part was 8 minutes.

Part II—Spotting error: This part consisted of 32 items. In each item there was a sentence which was divided into four parts marked as A, B, C and D. The candidate was to spot out the part which contained some grammatical error. The time limit was 18 minutes.

Part III — Comprehension : There were two passages in this part. The candidates were asked to go through the passages and answer 10 questions and the time limit was 10 minutes.

The means and standard deviations of these parts were separately calculated for different selected schools and these values are presented in Table 2. *Analysis of the data:* As stated

Table 2 Showing the means and standard deviations of the three parts separately for each of the selected schools

school	number of students	spelling		spotting error		comprehension	
		mean	standard deviation	mean	standard deviation	mean	standard deviation
A	84	24.65	10.80	6.94	2.48	5.24	1.44
B	88	27.96	9.81	6.71	2.93	4.05	1.90
C	70	37.83	12.22	7.76	1.78	9.36	3.19
D	88	34.16	10.72	7.97	2.97	5.91	1.77
E	54	35.04	10.30	8.85	3.00	6.32	1.78
F	133	26.74	12.33	8.30	3.61	4.61	1.72
G	41	24.56	11.01	7.01	3.28	4.99	2.47
H	72	24.49	13.47	6.48	2.55	5.30	2.03
I	99	22.64	11.94	6.65	3.15	4.67	2.22
J	106	37.00	10.61	7.63	3.44	6.63	2.26
K	116	22.40	10.75	6.09	2.65	3.91	1.76
L	91	24.82	12.42	7.24	3.32	4.40	1.94

The odd-even reliabilities of Part I, Part II and Part III were 0.87, 0.73 and 0.70 respectively.

earlier, it was decided that in course of the study, the relation between proficiency in English and the performance in other school subjects would be studied in addition to studying the predictive ability of the scores in English with respect to general academic performance of the students. This would be done by considering (a) the school examination marks in English and (b) the scores obtained in the English knowledge and comprehension test.

(a) *The relation between the school examination marks in English and the academic performance:* First of all the product

moment correlations between the class VIII annual examination marks in English and each one of the other subjects taught in class VIII were obtained and the results are presented in Table 3.

All the correlation coefficients were significantly different from zero at the one per cent level.

From Table 3 it follows that the marks in English were highly related with those in other subjects i.e., those who were good in English were generally good in other subjects and vice versa.

Next these marks in English were again correlated with those obtained in the class IX annual examination. This time, the total

Table 3. Showing the correlation coefficient of the marks in English with the marks obtained in different subjects taught in class VIII for 12 different schools

school	Numbers of students	Bengali	Mathematics	History	Geography	General Science	Sanskrit
A	117	.55	.52	.49	.48	.45	.64
B	92	.44	.49	.57	.68	.44	.62
C	73	.68	.55	.40	.56	.51	.73
D	93	.68	.57	.47	.45	.60	.68
E	57	.69	.58	.70	.59	.42	.64
F	189	.57	.61	.39	.53	.45	.64
G	57	.62	.70	.68	.62	.71	.70
H	77	.65	.49	.60	.43	.54	.65
I	105	.71	.59	.61	.72	.66	.63
J	110	.58	.53	.47	.49	.46	.59
K	144	.42	.37	.51	.38	.35	.41
L	121	.58	.45	.66	.55	.56	.70

marks were considered and the correlations were calculated separately for different schools. It should be mentioned here that the class IX annual examination total included the corresponding

marks in English. As the students were divided into three streams of study, the number of cases available for calculating correlation was small for some of the schools.

Table 4. Showing the correlations (r) of the marks in English in class VIII annual examination with the total marks obtained at the class IX annual examination

school	Number of students	Humanities r	Number of students	Science r	Number of students	Commerce r
A	59	.60**	—	—	—	—
B	47	.53**	—	—	—	—
C	34	.48**	31	.74**	—	—
D	43	.70**	14	.82**	—	—
E	20	.64**	17	.77**	—	—
F	15	.31	54	.71**	19	.51**
G	—	—	16	.66**	—	—
H	13	.40	22	.80**	20	.69**
I	—	—	15	.78**	15	.79**
J	—	—	38	.55**	31	.43**
K	54	.60**	42	.29	—	—
L	13	.40	33	.80**	30	.36*

*indicates significant at the 5 per cent level

**indicates significant at the 1 per cent level

As observed with the class VIII examination marks in other subjects, here also it can be seen that the marks in English was very good predictor of future academic success. The correlations between the two total examination marks (ranging from 0.52 to 0.92) were not much better than these correlations. This proves that the predictive ability of the marks in English was almost equal to that of the total marks in school examination. Hence it can be mentioned here that the marks in English were able to predict

general ability fairly well.

Now the Higher Secondary examination marks of these students were collected. These marks were obtained by following the students for more than three years and hence the number of students decreased as some of the students failed. So instead of calculating the correlations separately for different schools these were obtained streamwise after adjusting the total marks in English so that in each school the full marks was 200. The obtained correlations are presented in Table 5.

Table 5. Showing the correlations between the class VIII English examination marks and the total marks in the Higher Secondary Examination

Stream (Number of students)	Product moment correlation
Humanities (N=124)	.55**
Commerce (N=61)	.50**
Science (N=144)	.43**

**indicates significant at the 1 per cent level

From Table 5, it can be seen that the degree of correlations between marks in English at the annual examination with their academic performance three years later, was fairly high and all were significantly different from zero at the 1 per cent level. This proves that success in English is a good predictor of academic achievement.

The objective test score and its relation to future academic performance: Here instead of obtaining the correlation coefficient as an index of the degree of relationship, expectancy tables were prepared to investigate the predictive ability of different parts in this test. In order to prepare the expectancy tables,

the students were divided into three groups High, Average and Low on the basis of the scores on the three parts of the test separately. High and Low groups contained the top 23 per cent and bottom 23 per cent of the total cases respectively, and the Average group contained the remaining 54 per cent. These percentages were based on stanine grades i.e. the students having stanine grades 1,2,3, were put in Low group; the students having grades 4,5,6 were included in Average group whereas the students belonging to grades 7, 8,9 were put in High group.

There were three criteria as before viz.,

- (A) The marks obtained in different subjects taught in class VIII
- (B) The total marks obtained in class IX annual examination
- (C) The total marks obtained in the Higher Secondary Examination.

In order to get a result from the expectancy tables that has sufficient stability, it is necessary that the number of cases should be high. So while developing the expectancy table the entire data collected from different schools were pooled together. The percentage of students passing the school examinations in different subjects, in each of the three groups High, Average and Low were obtained and these percentages are included in Table 6.

Table 6. Showing the percentages of pass in different subjects taught in class VIII in three groups of students High, Average and Low, classified on the basis of scores on the objective examination (spelling, grammar and comprehension) $N=1048$

Grouped on the basis of scores on spelling	Bengali	Math.	History	Geography	Sanskrit	Science
	High	99	79	94	94	92
Average	94	72	86	85	78	88
Low	84	57	81	77	69	79

Grouped on the basis of scores on spotting error	Bengali	Math.	History	Geography	Sanskrit	Science
	High	96	82	92	91	88
Average	92	69	88	84	76	86
Low	91	61	78	84	79	83

Grouped on the basis of scores on comprehension	Bengali	Math	History	Geography	Sanskrit	Science
	High	97	78	93	95	90
Average	93	71	86	85	77	88
Low	90	60	83	77	74	78

From Table 6 it can be seen that the scores in the three tests viz., Spelling, Spotting error, and Comprehension were related with the success in other subjects but the relation was not identical for all the subjects. Moreover all the three tests did not have equal

degree of predictive ability.

Next class IX annual examination total was considered and the expectancy table was prepared as

before. The percentages of pass thus calculated are presented in Table 7.

From the figures presented in

Table 7. Showing the percentages of pass in class IX annual examination, in three groups of students High, Low and Average, classified on the basis of the objective tests (Spelling, Spotting error and comprehension)

Stream	Grouped on the basis of the scores on spelling			Grouped on the basis of scores on spotting error			Grouped on the basis of scores on comprehension		
	High	Average	Low	High	Average	Low	High	Average	Low
Science (N=261)	87	70	32	79	71	51	94	61	49
Humanities (N=235)	69	50	18	73	43	42	72	46	33
Commerce (N=103)	75	54	41	65	48	65	86	51	38

Table 7, it is observed that all the tests were sufficiently related to the performance in the school examinations in different streams after one year, but among the three tests, English comprehension had the highest validity. In the Science group those who were good in English (i.e. belonging to the High group according to the scores on three tests) had high probability of passing (79 and above) the class IX annual examination, whereas those who

were in the Low group had quite low probability of passing the same examination. For other two groups, Humanities and Commerce the same trend was observed.

Next, instead of analysing the school examination further, the Higher Secondary examination marks were considered and similar expectancy table was prepared with these scores as criterion. The obtained percentages are presented in Table 8.

Table 8. Showing the percentages of pass in the Higher Secondary Examination in three groups of students High, Average and Low, classified on the basis of the objective tests (Spelling, Spotting error, Comprehension)

Stream	Grouped on the basis of scores on spelling			Grouped on the basis of scores on spotting error			Grouped on the basis of scores on comprehension		
	High	Average	Low	High	Average	Low	High	Average	Low
Science (N=137)	92	86	62	96	89	50	97	88	45
Humanities (N=118)	93	88	54	95	86	79	88	86	83
Commerce (N=53)	88	77	60	83	76	75	94	67	75

From the figures presented in Table 8 it is clear that the comprehension part had high predictive ability for science stream because where only 45 per cent in the low group passed the Higher Secondary examination 97 per cent of those in the High group passed the same examination. This speaks in favour of the test's ability to discriminate between good and poor students. For the Humanities group however, spelling had high predictive ability but the comprehension part failed to do so. Spelling and comprehension both were able to predict success in commerce stream, but spotting error test failed in this respect. However this test had sufficient ability to differentiate high scoring students from low scoring ones.

Conclusion: The results obtained so far can be summarised as follows:

- (a) Proficiency in English was highly related with the success in other school subjects taught in class VIII. This is proved by measuring the proficiency in English with the help of school examination marks in English and also with the help of objective tests.
- (b) Proficiency in English was closely related to general academic success in future.
- (c) The argument that only

some specific ability is required to master this language was not supported by the findings of this study. Though it may be generally true that specific ability is required to master any language, yet in India, English being a completely foreign language general ability plays an important role in mastering this language. So it is usually found that those who are good in English generally do well in other subjects and their future academic performance are quite good.

- (d) It can be further observed that though majority of those who are in the High groups on the basis of test scores do well the school examination, yet the converse is not always true, as may be seen in the case of English Comprehension. The reason in this particular case may be that students depend more on cramming than on understanding and that reduces the influence of comprehension on academic success for the low ability group.

Further investigation with larger number of students is necessary before any definite conclusion in this direction can be drawn.

REFERENCES

- 1 Anastasi, A. *Psychological Testing*, Macmillan Co. N. Y.-1955.
- 2 Chatterji, S. and Mukherjee, M. "The school examination marks and their predictive ability for allocation purposes", *J. of vocational and educational guidance*, Vol. 12, No. 1, pp. 1-10, 1966.

3. Chatterji, S. and Mukerjee, M "Predictive ability of an aptitude test battery used for Differential prediction, *J. of vocational and educational guidance*, Vol. 13, No. 1, 1967 .
4. Guilford, J.P. *Fundamental statistics in psychology and education*, Mc Graw Hill Book, Co. N. Y. 1956.
5. Mukherjee, M. *Construction and Standardization of a Differential Aptitude Test Battery*, Calcutta University, 1965. (D. Phil. Thesis).