

**CHAPTER - IV**

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# ANALYSIS AND INTERPRETATION OF DATA

### 4.0 INTRODUCTION

The purpose of this investigation was to study the English language proficiency and the academic achievement of class V students. Further, the investigator wanted to examine the relationship of English language proficiency and academic achievement and also the effect of English language proficiency of students on their academic achievement. Therefore, data was collected as per the objectives and then analysed. The hypothesis was tested statistically and conclusions were drawn.

### 4.1 ANALYSIS OF THE ENGLISH LANGUAGE PROFICIENCY OF CLASS V STUDENTS

Keeping in view, the minimum and maximum possible scores of English language proficiency, a classification was made. It was based on equal range i.e. "high", "moderate" and "low".

The mean scores of English language proficiency and also of word power (section I), grammar (section II) and expression (section III) were obtained, then they were identified as "high", "moderate" and "low" based on the above classification, as presented in table - 2.



**Table - 4 Table of English Language Proficiency of Class V Students of Anand Vihar School, Bhopal.**

[N = 110]

	<b>Min.</b>	<b>Max.</b>	<b>Mean</b>	<b>Standard Deviation</b>
Word power	6.5	46.5	31	8.71
Grammar	1	28.0	15	4.36
Expression	0	19.5	8	4.67
Total	8.5	84.5	54	15.69

In word power, the highest score in the class is 46.5 whereas the lowest score is just 6.5, out of 47.5. The mean score is 31. Thus, the students have a moderate word power.

In grammar, the highest score in the class is 28 and the lowest score is just 1, out of 29.5. The mean score is 15 which shows that the students are moderate in the use of grammar.

In expression, the highest score in the class is 19.5 and the lowest score is zero, out of 23. This makes the mean as 8 which again indicates that students are moderate in expression also.

The highest score in the language proficiency test is 84.5 whereas the lowest score is just 8.5, out of 100. The mean of the total score of English language proficiency is 54, which clearly shows that the class V students of Anand Vihar School, Bhopal have a moderate English language proficiency. Further, the students have performed better word power in English than in the use of grammar followed by expression.

In the above results it can be identified that students have performed moderately in all the three components of language proficiency test in a

descending manner i.e. word power (65%), grammar (51%) and expression (35%). This performance of students can be attributed to the reason that English is not their mother tongue and positively to the medium of instruction being English.

#### 4.2 ANALYSIS OF ACHIEVEMENT OF CLASS V STUDENTS IN DIFFERENT SUBJECTS

Table - 5 Table of Achievement in Different Subjects

[ N = 110 ]

Subject	Min.	Max.	Mean	Standard Deviation
Hindi	28	172	107.4	35.24
English	43.5	117.5	114.6	35.33
Maths	40	181	111	34.40
EVS	39	178.5	103.6	35.88
Total	170.5	698	438	130.56

The students study four subjects namely Hindi, English, Mathematics and Environmental Science (EVS). The maximum possible marks for each subject is 190 whereas the minimum possible marks is zero. Therefore, the total academic achievement is out of 760 (190 x 4).

In Hindi, the highest score in the class is 172 whereas the lowest score is just 28, out of 190. Thus, the mean score or achievement in Hindi is 107.4.

In English, the highest score in the class is 177.5 whereas the lowest score is 43.5, out of 190. Thus, the mean score or achievement in English is 114.6.

In Mathematics, the highest score in the class is 181 whereas the lowest score is 40, out of 190. Thus, the mean score or achievement in Mathematics is 111.

In Environmental Science (EVS), the highest score in the class is 178.5 whereas the lowest score is 39, out of 190. Thus, the mean score or achievement in EVS is 103.6.

Thus, the highest individual score is in Mathematics, whereas the lowest individual score is in Hindi. The highest mean score is in English whereas the lowest mean score is in EVS. It is noted that though the mean score of students in different subjects varied slightly but the magnitude of standard deviation of the mean of the scores of students in different subjects is more or less same. Thus, the dispersion of scores in different subjects is also more or less same. On examination of the range of scores, it is observed that Hindi recorded highest range (28-172).

#### 4.3 ANALYSIS OF RELATIONSHIP BETWEEN ENGLISH LANGUAGE PROFICIENCY AND ACADEMIC ACHIEVEMENT.

Table – 6 Significance of 'r' between Language Proficiency in English and Academic Achievement

Variables	N	df	r	Significance level
English Language Proficiency	110	108	0.73	0.00
Academic Achievement				

This table shows the significance of coefficient of correlation r, between English language proficiency and academic achievement of students of

class V. The value of 'r' is found to be significant at 0.01 level of significance. Thus, there is high correlation between the two variables. It is a positive correlation. Hence, the hypothesis is accepted which explicates that there is a significant relationship of English language proficiency with academic achievement of students. So, students having high English language proficiency will achieve better in academics than the students having low proficiency in English. Reason being the students studying in English medium schools have to listen to the instructions in English, read and comprehend textbooks written in English and write the exams also in English only.

**Table- 7 Correlation Matrix of Components of Language Proficiency.**

	<b>Word Power (LPT – I)</b>	<b>Grammar (LPT – II)</b>	<b>Expression (LPT – III)</b>
LPT – I	1.0	0.62	0.64
LPT – II	--	1.0	0.63
LPT – III	--	--	1.0

This table shows the correlation among the components of language proficiency. There were three components of language proficiency as divided into three sections of language proficiency test namely – word power, grammar in use and expression.

Seeing, the values of coefficient of correlation 'r' between the components of language proficiency, it can be safely concluded that there is a substantial or marked relationship between the components of language proficiency. This indicates that there is an internal consistency of language proficiency test as the components of language proficiency are positively correlated.

Table – 8 Correlation Matrix for Achievement in Different Subjects

	Hindi	English	Maths	EVS
Hindi	1.0	0.75	0.73	0.83
English	--	1.0	0.81	0.86
Maths	--	--	1.0	0.80
EVS	--	--	--	1.0

This table shows the achievement of students in different subjects. Seeing the values of coefficient of correlation 'r' between the achievement of students in different subjects, it can safely be concluded that there is a high or very high relationship among the achievement of students in different subjects.

Table – 9- Correlation Matrix for Components of Language Proficiency and Achievement in Different Subjects

	Hindi	English	Maths	EVS
Word power (LPT – I)	0.47	0.64	0.54	0.54
Grammar (LPT – II)	0.63	0.61	0.60	0.65
Expression (LPT – III)	0.60	0.68	0.66	0.68

This table shows the correlation between components of language proficiency (in English) and achievement in different subjects. All the three

components of language proficiency in English have substantial or marked relationship with achievement in different subjects.

On examination it is observed that word power in English is more related to achievement in English, than achievement in other subjects like Maths, EVS and Hindi. Grammar in English helped in achievement in EVS followed by Hindi, English and Maths. Expression in English helped in achievement in English and EVS equally, followed by achievement in Mathematics and Hindi.

Achievement in Hindi is related more to grammar in English. Ability of expression in English also helps in Hindi achievement. Word power in English has meagre role to play in achievement in Hindi.

Achievement in English is substantially related to expression, word power and grammar respectively.

Achievement in Mathematics is related more to student's expression ability. Use of grammar also helps in this, but word power has a meagre role to play here.

Achievement in EVS is substantially related to expression, grammar and word power respectively.



#### 4.4 ANAYSIS OF EFFECT OF ENGLISH LANGUAGE PROFICIENCY ON ACADEMIC ACHIEVEMENT

Table – 10 Significance of F Between Language Proficiency Categories With Respect to Academic Achievement.

	Sum of Squares	df	Mean Square	F	Significance level
Between Groups	688689	2	344344.6		
Within Groups	1169251.9	107	10927.6	31.5	0.00
Total	1857941	109			

The value of F is found to be significant and hence the null hypothesis is rejected.

There is a significant difference between “high”, “moderate” and “low” categories of English language proficiency of students of class V. This indicates that language proficiency do effect the academic achievement of students.

In order to know the significance of difference between these three categories of language proficiency, values of t are computed and shown in the following table.

Table – 11 Values of 't' Between Language Proficiency Categories With Respect to Academic Achievement

Category	N	Mean	Standard Deviation	t	df	Significance
High	18	588.9	80	5.5	91	0.00
Moderate	75	430.5	115			
High	18	588.9	80	10.9	33	0.00
Low	17	310.9	70.5			
Moderate	75	430.5	115	4.1	90	0.00
Low	17	310.9	70.5			

t is significant between all categories of language proficiency and hence there is a significant difference between high, moderate and low language proficiency groups with respect to academic achievement.

On examining the means, it is found that the achievement of high language proficiency group is more as compared to moderate and low groups. From this it is evident that higher the language proficiency more will be the academic achievement of students.