A Study of Relationship between Reading Comprehension Ability and Academic Achievement of Secondary School Students

Abstract

Reading comprehension is perhaps one of the most critical skills a student can master. It means understanding something that you read and not just read through. A child must be able to recollect, assimilate and reproduce whatever he has read. Proficiency in reading comprehension is found to be closely related to success in academic achievement of the students but there is a wide individual difference among them. Some children learn with good speed while some remain lingering too long hindering their reading ability which affects their language learning and relatively effect their academic achievement i.e. their achievement or understanding of other school subjects.

Keywords: Reading Comprehension, Academic Achievement, Secondary.

Introduction

According to Little one's Reading Resource (2003-2010) Reading begins the journey through one's language development stages and language development begins with reading to our children. You cannot really have one without the other, and reading to a child will help him begin the process of mastering words and language In research conducted by Anderson, Wilson & Fielding (1988) evidence show that extensive reading promotes growth of vocabulary, verbal fluency and general information. Since language permeates school life, boys and girls in their attempt to master the school curriculum and in the process of growing up have to call upon their reading resources. According to Rosen (1971) as language permeates the school life, reading permeates school curriculum. Thorndike (1973) considered reading to be central part of school curriculum. With the rapid increase of human knowledge and expanding curricula, books have become the nucleus for much of the activity conducted in schools and success in many academic subjects is dependent upon pupil's reading ability. Comprehension is viewed as the "essence" of reading and necessary for academic and lifelong learning Durkin(1993). Krashen (1989) concluded that extensive reading and achievement in English are closely related. Students become better readers; score higher on achievement tests in all subjects areas than those who are not good readers. Lee (1933) demonstrated clearly the importance of reading for general scholarship in the primary grades and Bond (1938) also found significant correlation between general reading comprehension and average scholarship in the school. Thus on the basis of above discussion, viewpoints of various authors and researches it can be concluded that reading comprehension is a technique for improving students success in extracting useful knowledge from the text. It is the central part of learning a language having unique position in school curriculum, as it is a tool for mastery on language which is a medium of instruction in school and a tool for mastery of other subjects and enhance students' academic achievement.

Need & Significance of the Study

Reading comprehension ability is found to be closely related to success in language learning capacity of students. Some children learn with good speed while some remain lingering too long hindering their reading ability which affects their language learning and relatively effect their academic achievement i.e. their achievement or understanding of other school subjects. When a child starts understanding things easily, he develops a sense of literary comprehension which sticks to him forever.

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According to researches reviewed no study has been found till date on this topic so the researcher proposed this study with a purpose to know the relationship between reading comprehension ability and academic achievement of secondary students and to provide suggestive measures for the problem which would help the students to have better reading ability and language learning capacity resulting in the growth of their academic achievement.

Comprehension is viewed as the essence of reading and necessary for academic and lifelong learning (Dunkin, 1993). Reading comprehension provides an opportunity to develop language and language structure which is the foundation of academic achievement of students being medium of instruction. Now days, it has been observed that students pay no attention towards comprehension or understanding of the read material or text. They emphasize on rote memorization in order to achieve success in academics. This hampers their language development which in turn also affects their academic achievement as they are unable to understand subjects and express themselves freely. In the present study, an attempt has been made to study the effect of Reading Comprehension Ability on the Academic Achievement of Secondary School Students.

Objective of The Study

To study the effect of Reading Comprehension Ability on the academic achievement of secondary school students studying in the schools affiliated to different boards of secondary education.

Hypotheses

H-1

There is no significant relationship between Reading Comprehension Ability and Achievement of School subject English Lit

H-2

There is no significant relationship between Reading Comprehension Ability and Achievement of School subject Mathematics.

H-3

There is no significant relationship between Reading Comprehension Ability and Achievement of School subject Science.

Review of Related Literature

From the review of related literature and studies the researcher came to many interesting facts and drew some important conclusions chief among them are:

1. Reading ability was considered to be an important factor related to the differential achievement pattern of school going pupils (Srivastava 1969, Swenson 1942).
2. SES, attitude of parents, teachers and peers, educational aspiration and study habits were found to be positively correlated with reading attainment, academic adjustment and scholastic performance of students (Reddy, 1978; Parmesh, 1975; Shivappa, 1980; Agarwal, 1990)
3. Reading comprehension ability, interest and scientific attitude contribute towards academic success (Olson, 1966; Srivastava, 1969;

Thorndike, 1973; Singh and Pandey, 1970; Williams, 1976).
4. Language study helps students in their academic achievement (Rafferty, 1986; Rebecca. M. Callahan, 2005).

Research Design and Variables

The present study is a normative survey. The aim of the present study is to know about the effect of reading comprehension ability on the academic achievement of secondary school students. All these variables have already occurred and researcher observed the dependent variable and then tried to draw conclusions about independent variable. It can be said that in this research Ex-post facto research design was planned. In the present study an effort was made to compare the academic achievement of students studying in various secondary schools affiliated to Madhyamik Shiksha Parishad, Allahabad (known as MSPU.P.Board), Central Board of Secondary Education (CBSE) and Indian Council of Secondary Education (ICSE) on the basis of their reading comprehension ability.

Variables of The Study

Independent Variables

In the present research work the Independent variables are as follows:
1. Reading Comprehension Ability.
2. Different Board of Education (MSPUP; CBSE; ICSE)
3. Gender

Dependent Variables

The dependent variables are–

Academic Achievement of students - The effect of IVS was compared in academic achievement of 3 subjects that are –
1. English.
2. Maths.
3. Science.

Controlled Variables

In the present research work the controlled variables are as follows:
1. Educational and Mental ability level (class XI).
2. Medium of Instruction (English).
3. Age.
4. Subjects (Eng. Lit; Maths; Science)

Sample

The researcher decided to take 100 students for each sub-group. Thus 200 students studying in the schools affiliated to one type of board of secondary schools were selected. The ratio between boys and girls was 1:1. In this way total 300 boys and 300 girls were selected in the sample. The total number of 600 respondents seems to be sufficient for the present research plan.

Tools of the Study

1. Reading Comprehension Test in English by P. Ahuja and G.C. Ahuja.
2. 10th Standard Result of the Students was considered for calculating academic achievement.

Statistical Techniques Used/Data Analysis

The data was analysed on the basis of measures of central tendency and variability. Statistical techniques such as mean, SD, t and

ANOVA were used to test the research hypotheses formulated.

Tabulation and Analysis

Test of Difference between Mean Scores of High and Low Groups (On the Basis of RCA) of Secondary School Students on the Achievement of Different Subjects

As it was planned in research design, the comparison was made in the achievement of students scored high on reading comprehension ability (RCA) test and the achievement of students scored low on RCA. Three groups were made on the basis of their scores on RCA. Mean + one S.D. and Mean – one S.D. was decided the limits of group B (Average Ability above this limit group A (High Ability) and below this limit, group C (Low Ability). Students of Group A and Group C were compared on other observations of achievement to find out the relationship of RCA with achievement of other subjects if there is any.

Table 4.1

Comparison of Scores on Reading Comprehension Abilities (RCA) achieved by Secondary Students

	MSPU.P.	I.C.S.E.	C.B.S.E.
Mean	17.28	34.47	31.05
S.D.	9.32	6.40	10.46

It is evident that mean scores of all the three groups variate too much, hence division of upper and lower groups were made on the basis of mean and S.D. of the different groups.

MSP U.P.

Mean + S.D. = 17.28+9.32 = 26.60
Mean – S.D. = 17.28 – 9.32 = 7.96

Division of Groups

Group A = score 26.6 and above
Group B = score 7.96 to 26.6
Group C = score 7.96 and below

ICSE

Mean + S.D. = 34.47 + 6.40 = 40.87
Mean – S.D. = 34.47 – 6.40 = 28.07

Range of Groups

Group A – Score 40.87 and above
Group B = score 28.07 to 40.87
Group C = score 28.07 and below

CBSE

Mean + S.D. = 31.05 + 10.46 = 41.51
Mean – S.D. = 31.05 – 10.46 = 20.59

Range of Groups

Group A = 41.51 and above
Group B = 20.59 and 41.51
Group C = 20.59 and below

The boys and girls were identified for Group A, B, and C according to the above mentioned criteria. But only Group A and Group C of each Board of secondary education were compared. Hence 12 groups were compared to identify the relation of RCA with the variables:

1. English
2. Maths
3. Science

Test of relationship between Reading Comprehension Ability and Achievement of School subject English Lit.

H-1 There is no significant relationship between Reading Comprehension Ability and Achievement of School subject English Lit.

Table – 4.2 M.S.P.U.P. – BOYS

Ho – 1 Mean of Group A = Mean of Group C Required level of P =.05=.01 df = 35		
	Group A	Group C
Mean	67.0000	62.3750
S.D.	10.3118	7.3945
N	13	24
t =	$M_1 - M_2/SE_D$	= 4.6250/2.9300
t =1.5785,	P = .0617	
Result =Ho is Retained		

Difference between the school subject achievements of English Literature is not significant as t is 1.5785 and P is06. Boys of Group A and group C performed equally in the English Literature examinations. Though this result seems contradictory, it would be discussed further.

Table – 4.3 M.S.P.U.P. – GIRLS

Ho – 2 Mean of Group A = Mean of Group C Required level of P = .05= .01 df =29		
	Group A	Group C
Mean	63.1667	58.0000
S.D.	8.1383	6.1101
N	24	7
t=	$M_1 - M_2/SE_D$	= 5.1667/3.3344
t=	1.5495, P = .0661	
Result = Ho is Retained		

Girls belonging to Group A performed better than girls belonging to Group C in English Lit. examinations difference between these two means is 5.16 but this is not found significant as P is.06 and Null hypothesis cannot be rejected, but mean of Group A is found greater.

Table – 4.4 ICSE – BOYS

Ho – 3 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df =21		
	Group A	Group C
Mean	81.0833	74.7273
S.D.	7.7981	5.5334
N	12	11
t= $M_1 - M_2/SE_D$=6.3561/2.8444		
t=	2.2346, P = .0182	
Result =Ho is Rejected.		

Difference between mean of Group A and Group C is 6.3561, which is also found significant as t is 2.2346 and P .0182 hence hypothesis of zero difference is rejected. It may be concluded that Boys having good reading comprehension ability scored better in English Literature.

Table – 4.5 ICSE – GIRLS

Ho – 4 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df =31		
	Group A	**Group C**
Mean	82.6471	73.7500
S.D.	6.9995	7.5144
N	17	16
t=	$M_1 - M_2/SE_D$ =	8.8971/2.5264
t=	3.5216, P = .0006	
Result =	Ho is rejected.	

It is evident that both the groups differ significantly on the English Lit. achievement as observed value of t is 3.5216 and P.0006, which is highly significant. In other words it may be said that reading comprehension ability is positively correlated with English Lit. achievement.

Table – 4.6 C.B.S.E. – BOYS

Ho – 5 Mean of Group A = Mean of Group C Required level of P =.05 = .01 df =13		
	Group A	**Group C**
Mean	79.1000	66.6000
S.D.	9.0363	13.2590
N	10	5
t=	$M_1 - M_2/SE_D$ =	12.5000/5.7608
t=	2.1698, P = .0246	
Result =	Ho is rejected.	

The boys placed in Group A on the basis of RCA achieved 12.50 points greater than boys placed in Group C. This difference is also found significant as t is 2.1698 and P is .0246 hence null hypothesis is rejected. It may be concluded that Group A is better than Group C in achievement of English Lit.

Table – 4.7 C.B.S.E. – GIRLS

Ho – 6 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=21		
	Group A	**Group C**
Mean	77.4000	68.5000
S.D.	4.2778	8.8268
N	5	18
t =	$M_1 - M_2/SE_D$=	8.9000/4.1242
t =	2.1580, P = .0213	
Result =	Ho is rejected.	

The sampled girls students of the schools affiliated to CBSE board were found different in the achievement of English Lit. on the basis of RCA. It may be concluded that Reading comprehension ability has positive effect on school subject Eng. Lit.

Test of Relationship between Reading Comprehension Ability and Achievement of School Subject Mathematics

H-2 There is no significant relationship between Reading Comprehension Ability and Achievement of School Mathematics:

Table – 4.8 M.S.P.U.P. – BOYS

Ho – 1 Mean of Group A =Mean of Group C Required level of P =.05=.01 df=35		
	Group A	**Group C**
Mean	65.0769	64.0417
S.D.	15.8979	12.2172
N	13	24
t =	$M_1 - M_2/SE_D$ =	1.0353/4.6806
t =	.2212, P = .4131	
Result =	Ho is retained.	

Inspection of the table 4.23 reveals that mean of group A is greater than mean of group C. Difference between means is not found significant and hypothesis of zero difference is retained. It may be said that achievements of boys belonging to group A and Group C were not found significantly different in school subject Maths.

Table – 4.9 M.S.P.U.P. – GIRLS

Ho – 2 Mean of Group A =Mean of Group C Required level of P=.05=.01 df=29		
	Group A	**Group C**
Mean	61.0833	53.2857
S.D.	9.3758	7.0643
N	24	7
t =	$M_1 - M_2/SE_D$ =	7.7976/3.8432
t =	2.0290 P = .0259	
Result =	Ho is rejected.	

Girls having good reading comprehension ability also scored high in achievement of mathematics. Difference between means of group A and Group C is 7.7976 and was found significant as P is .0259 hence hypothesis of zero difference is rejected. It may be concluded that reading comprehension ability has positive effect on achievement of school subject mathematics.

Table – 4.10 ICSE – BOYS

Ho – 3 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=21		
	Group A	**Group C**
Mean	91.5833	79.7273
S.D.	4.4407	7.4578
N	12	11
t =	$M_1 - M_2/SE_D$ =	11.8561/2.5327
t =	4.6812, P = .000063	
Result =	Ho is rejected.	

Boys placed in Group A achieved 11.85 points greater than boys placed in group C on the basis of RCA. The observed value of t is 4.68 and is highly significant hence chance hypothesis is rejected. It is evident that secondary students having good reading comprehension ability showed good achievement in school subject mathematics.

Table – 4.11 ICSE – GIRLS

Ho – 4 Mean of Group A =Mean of Group C Required level of P =.05=.01 df=31		
	Group A	**Group C**
Mean	89.2941	78.7500
S.D.	3.9491	9.9700
N	17	16
t =	$M_1 - M_2/SE_D$ =	10.5441/2.6100
t =	4.0400, P = .00016	
Result =	Ho is rejected.	

Girls belonging to Group A and Group C achieved differently on the examination of school subject Mathematics. Table 4.26 shows the Mean of Group C is 78.75. t for this difference is found significant as P is .0001 and highly significant hence hypothesis of no difference is rejected. It may be said that level of reading comprehension ability do effect the achievement of school subject mathematics.

Table – 4.12 C.B.S.E. – BOYS

Ho – 5 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=13		
	Group A	**Group C**
Mean	88.4000	83.6000
S.D.	9.5126	6.0663
N	10	5
t = $M_1 - M_2/SE_D$ = 4.8000/4.7107		
t = 1.0190, P = .1634		
Result = Ho is retained.		

Sampled secondary students of this group showed similar achievement in examination of school subject mathematics.Table 4.27 shows that observed value of t is 1.0190 and P is .1634 hence chance hypothesis is retained.

Table – 4.13 C.B.S.E. – GIRLS

Ho – 6 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=21		
	Group A	**Group C**
Mean	86.8000	75.7778
S.D.	4.3243	10.8712
N	5	18
t=$M_1 - M_2/SE_D$ = 11.0222/5.0358		
t = 2.1888, P = .0200		
Result = Ho is rejected.		

According to Table 4.28, difference between mean of Group A and Group C is 11.02, which is significant as t is 2.1888 and P is .02. It may be concluded that girls of Group A achieved higher scores in examinations of school subject mathematics.In other words Reading comprehensions Ability of sampled secondary students do effect the achievement of school subject Mathematics.

Test of relationship between Reading Comprehension Ability and Achievement of School subject Science

H-3 There is no significant relationship between Reading Comprehension Ability and Achievement of School subject Science:

Table – 4.14 MSPUP – BOYS

Ho – 1 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df= 35		
	Group A	**Group C**
Mean	64.0769	64.0000
S.D.	9.3315	9.3017
N	13	24
t=$M_1 - M_2/SE_D$ = .0769/3.2067		
t = .0240, P = .4905		
Result = Ho is retained.		

It seems, Reading comprehension Ability of secondary students of this group has no effect on their achievement of school subject science. The facts will be discussed further.

Table – 4.15 MSPUP – GIRLS

Ho – 2 Mean of Group A =Mean of Group C Required level P =.05 =.01 df= 29		
	Group A	**Group C**
Mean	62.1250	49.7143
S.D.	11.9576	10.3717
N	24	7
t=$M_1 - M_2/SE_D$ =12.4107/5.0032		
t = 2.4806, P = .0095		
Result = Ho is rejected.		

It may be said RCA is an important variable to effect the achievement of school subject science.

Table – 4.16 ICSE – BOYS

Ho – 6 Mean of Group A =Mean of Group C Required level P =.05= .01 df=21		
	Group A	**Group C**
Mean	88.3333	74.1818
S.D.	7.9582	7.0967
N	12	11
t=$M_1 - M_2/SE_D$=14.1515/3.1558		
t = 4.4843, P = .0001		
Result = Ho is rejected.		

Sampled secondary Boys (ICSE) of Group A performed much letter in their examinations and achieved higher score as their mean is 88.33 in comparison of boys of group C (74.18). This difference between means is found significant at .01 level, hence Ho is rejected.

Table – 4.17 ICSE – GIRLS

Ho – 4 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=31		
	Group A	**Group C**
Mean	85.8235	76.6875
S.D.	3.6952	9.1631
N	17	16
t = $M_1 - M_2/SE_D$ = 9.1360/2.4050		
t = 3.7988, P = .0003		
Result = Ho is rejected.		

On the basis of Table 4.32 it may be said that girls having good RCA also achieved good score in examination of school subject Science. The difference between mean of group A and group C is 9.1360. The observed t value is 3.7988 and P .0003, the hypothesis of no difference is rejected.

Table – 4.18 C.B.S.E. – BOYS

Ho – 5 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=13		
	Group A	**Group C**
Mean	87.4000	77.6000
S.D.	6.8020	4.4497
N	10	5
t = $M_1 - M_2/SE_D$ = 9.8000/3.3819		
t = 2.8978, P = .0062		
Result = Ho is rejected.		

It may be concluded that level of RCA has great impact on the boys achievement in the school subject science. Boys of group A achieved 9.8 points greater from boys of group C in examinations of school subject science. This difference between means was found significant as P is.006, which is highly significant, hence Ho is rejected.

Remarking An Analisation

Table – 4.19 C.B.S.E. – GIRLS

Ho – 6 Mean of Group A =Mean of Group C Required level of P =.05 =.01 df=21		
	Group A	**Group C**
Mean	84.60	77.8889
S.D.	5.9414	7.7679
N	5	18
$t=M_1 - M_2/SE_D$ =		6.7111/3.7685
t =	1.7809, P = .0447	
Result =	Ho is rejected.	

Girls placed in Group A performed better than the girls of group C in their examination of school subject Science. The observed value of t is 1.7809 and P. 0447 is sufficient enough to reject the hypothesis of zero difference.

It is concluded that Reading comprehension ability has positive and significant impact on the achievement of sampled secondary students in their examination in school subject Science.

Major Findings of the Study

Conclusion of the test of significance of difference between mean of high RCA (Group A) and mean of Low RCA (Group C) shows that group A among all sub groups proved to be better. In all the comparisons (English, Science, Maths) almost t were found significant. It is evident that high level of Reading comprehension Ability has positive impact on achievement of English Lit., Science and Maths achievement.

The prominent findings of this study may be summarized as follows:

1. It was found that the secondary students having good RCA scored better in Eng. Literature (Table 4.2 - 4.7). Thus RCA has positive effect on School subject Eng. Literature.
2. It was found that secondary students having good RCA had good achievement in school subject mathematics. Thus RCA affect the achievement of students in Mathematics (Table 4.8 - 4.13).
3. It was concluded that RCA has positive and significant impact on the achievement of secondary students in their school subjects Science (Table 4.14-4.19)

Implications and Usefulness of The Study

In the present study, effort was made to understand the relationship between Reading Comprehension Ability and its relative effect on the academic achievement. The findings of the study revealed that reading comprehension affect language learning capacity of children which relativity affects their academic achievement. Hence it has become the need of the hour to focus our attention on laying emphasis on reading and improving comprehension among students. The teachers, who are agents of transformations of the young generation, have to concentrate on accelerating the comprehension capabilities of young minds.   The parents and classmates should build developing strategies for better study habits of underachievers. Reading comprehension being incredibly complex and multifaceted, children do not develop ability to comprehend texts quickly, easily or independently. Thus reading comprehension strategies must be

taught over an extended period of time by parents and teachers who have knowledge and experience using them. Reading comprehension strategies must be refined, practiced and reinforced continually throughout life. Even in the middle grades and high school, parents and teachers need to continue to help their children developing reading comprehension strategies. As their reading material become more diverse and challenging, children need to learn new tools for comprehending these texts. Children should be encouraged to read books, newspapers, magazines and journal articles that pose different reading comprehension challenges for young people and thus require different comprehension strategies. Reading sharpens insight and widens experiences. So, love of reading should be inculcated among students right from beginning of education. There is a need for properly planned, deliberate and conscious effort on the part of teachers, parents and all the members of the society to provide children conducive atmosphere for the development of their reading ability and improving their academic achievement.

References
1. Ahuja, G.C. and Ahuja, P. Reading Comprehension Test: Based on the Cloze Procedure For Classes VIII, IX & X, National Psychological Corporation, Agra.
2. Ahuja, G.C. & Ahuja P. Reading Comprehension Tests, CILL Reading Series -7. Mysore: Central Institute of Indian Languages; 1988.
3. Ahuja, G.C. & Ahuja P. How to Increase Reading Speed. Sterling Publishers, New –Delhi; 1987.
4. Anderson, R.C.; Wilson, P.T. & Fielding, I.G. Growth in Reading and How Children Spend Their Time Outside Of School. Reading Research Quarterly 23, 1, 285 - 304, April; 1988.
5. Bond, E. Reading and Ninth Grade Achievement; Contribution to Education, No.756.New York: Bureau of Publication, Teachers' college, Columbia University; 1938.
6. Durkin, D. Teaching Them to Read (6[th]ed).Boston, Ma: Allyn and Bacon; 1993.
7. Lee, D.M. The Importance Of Reading For Achieving In Grades 4, 5 And 6. Contribution to Education, No 566. New York: Bureau of Publication, Teaches' College, Columbia University; 1933.
8. Little Ones Reading Resource. Reading and its Effect on Children LanguageDevelopment.
9. http://www.littleonesreadingresource.com/langua ge - development stages. html. Copyright 2003-10.
10. Krashen, S. D. We Acquire Vocabulary and Spelling By Reading: Additional Evidence for Input Hypothesis. Modern Language Journal; 73, 3,440-464, June; 1989.
11. Olson, A.V. School Achievement, Reading Ability and Specific Visual Perception Skills in the Third Grade. The Reading Teacher, 19:7; 1966, Pp.490-92.
12. Parmesh, R. A. Study of Creativity and Educational Achievement. Survey of Educational Research; 1975.

13. Rafferty, E. A. Second Language Study and Basic Skills in Louisiana. U.S, Louisiana; 1986, From ERIC Database.

14. Rebecca. M. Callahan. English Language Proficiency and Variable Effects on Academic Achievement. University of Texas, Austin Cascadilla Press, Somervilla; 2000.

15. Reddy. A Study of Relationship between Academic Adjustment and Scholastic Performance. Survey of Educational Research; 1978.

16. Rosen, H. A. Language Policy across the Curriculum. In D. Barnes et.al. Language, the Learner and the School: Penguin Education; 1971.

17. Shivappa. A Study of Factors Contributing to Academic Achievement. Survey of Educational Research; 1980.

18. Shivapuri, V. A Study of Pupils Comprehension of English. Survey of Educational Research; 1982.

19. Singh N.P and Pandey, V.D. A Correlational Study of Reading Speed, Academic Achievement and Intelligence of University Students. Journal of Education and Psychology; 1970.

20. Srivastava, A.K. Reading Ability and Under-Achievement. Indian Educational Review, 4:1; 1969, pp116-22.

21. Srivastava, R.P. Reading Ability and School Achievement. New Delhi, Commonwealth Publisher; 2005.

22. Swenson, E.J. A Study of Relationship among Various Type of Reading Scores on General and Science Material. Journal of Educational Research, 36; 1942, pp81-90.

23. Thorndike, R.L. Reading Comprehension Education in Fifteen Countries. International Association for the Evaluation of Educational Achievement. New York: Halsted Press; 1973.

24. Williams, C.C. The Relationship between selected Reading skills and other Personal Variable of Seventh Grade Students and Achievement in Science and Social Studies. Dissertation Abstract International, 36:7; 1976, pp4132A