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## Level of academic achievement among class iv students in science in four districts of Himachal Pradesh

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### Abstract

The present paper attempts to evaluate the level of academic achievement among Class IV Science students in four Districts of Himachal Pradesh. Academic achievement referred to the number of items of achievement test answered correctly by a student and expected performance meant hundred per cent score on the achievement test i.e. all the 40 items answered correctly by the student. The present study revealed that academic achievement of students of classes IV selected from four Districts of Himachal Pradesh, viz., Una, Hamirpur, Kangra and Bilaspur came out to be far below the expected one for each individual district as well as for the total sample. This indicates that the State of Himachal Pradesh has not been able to achieve the objective of providing elementary education of satisfactory quality even after ten years of launch of SSA as well as introducing other interventions.

**Keywords:** Academic achievement, Expected Attainment.

### 1. Introduction

Universalization of Elementary Education (UEE) has been accepted as a national goal in India since Independence. The founding fathers of Indian Constitution recognized UEE as a crucial input for nation building. In this context, about 60 years ago, Article 45 of the Indian Constitution (1950) stated that:

The State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years.

When the target could not be achieved till 2001 in spite of various interventions at National and state levels, Indian Government started its flagship programme named as 'The Sarva Shiksha Abhiyan' in 2001 with the following objectives:

- All children complete five years of primary schooling by 2007
- All children complete eight years of elementary schooling by 2010
- Focus on elementary education of satisfactory quality with emphasis on education for life
- Bridge all gender and social category gaps at primary stage by 2007 and at elementary education level by 2010
- Universal retention by 2010

Also, the document 'Towards Faster and More Inclusive Growth: An Approach to the 11<sup>th</sup> Five Year Plan' (2006) envisaged the following plan for Elementary Education for 11<sup>th</sup> Five year Plan 2007-2012:

Education, in its broadest sense of development of youth, including sports, is the most critical input for empowering people with skills and knowledge and for giving them access to productive employment in the future. The 11th Plan should ensure that we move towards raising public spending in education to 6% of GDP, which is an NCMP commitment. It must fulfill the Constitutional obligation of providing free and compulsory elementary education of good quality to all children up to the age of 14. This means we must ensure both access and good quality and standards in respect of curriculum, pedagogy, and infrastructure irrespective of the parents' ability to pay.

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In view of the above, the provision of a number of incentives was made at State level also to all girls and children belonging to disadvantaged groups. However, the review of literature reveals that academic performance of students enrolled at elementary stage in India is not up to the mark and there has not been a marked shift in quality of education measured in terms of academic achievement of students even after ten years of implementation of SSA as well as providing various incentives (NCERT, 2006; ASER, 2005; ASER, 2006; ASER, 2007, ASER, 2008, ASER, 2009, ASER, 2010, Walker, 2011).

The State of Himachal Pradesh is not an exception. The rapid expansion of the school network and an exceptionally high teacher-pupil ratio notwithstanding, the quality of education, particularly at the elementary level, continues to be a matter of concern in the hill state of Himachal Pradesh.

With about 10,000 primary, 1,000 upper primary, 1000 high and 1000 senior secondary institutions in Himachal Pradesh, elementary education is accessible to all, and children do not have to walk more than 1.5 km to attend school. As per the recent data, the teacher-pupil ratio has improved to 1:17 from 1:22 in 2004-05 as against the norm of 1:40. The average of slightly more than three classrooms per primary school is also quite reasonable. In fact, infrastructure-wise the state is ranked seventh in the country. However, the upgrading of physical infrastructure and deployment of more than adequate teachers has not brought about the expected improvement in the standard of education.

When the present study was envisaged, no worthwhile survey had been carried out by any independent agency in Himachal Pradesh in order to evaluate the SSA and other intervention programmes in terms of achievement of the objective of 'providing elementary education of satisfactory quality'. Whatsoever information was available with respect to the improvement in quality was based on Government sponsored surveys. Further, the method employed in ASER studies has been of different nature. It was, therefore, thought worthwhile to undertake the present piece of research with an objective to evaluate the 'National Program of Universal Elementary Education' known as *Sarva Shiksha Abhiyan* (SSA) launched in 2001 and other interventions in Himachal Pradesh with respect to quality improvement at elementary Stage. The index of quality was limited to 'academic achievement' only. The study was focused on Class I, IV and VII, however, in the present paper the results are reported for Class IV only.

## 2. Objectives of the Study

The following objectives were laid down for the present study:

1. To evaluate the level of academic achievement of Class IV students in Science of following four Districts of Himachal Pradesh vis-à-vis the expected one:
  - a. Una
  - b. Hamirpur
  - c. Kangra
  - d. Bilaspur
2. To evaluate the level of academic achievement of total sample of Class IV students in Science drawn from above mentioned four Districts of Himachal Pradesh vis-à-vis the expected one:

## 3. Hypotheses of the Study

The following hypotheses, based upon the results of earlier surveys, were formulated which were tested in the present study:

1. The level of academic achievement of Class IV students in Science of following four Districts of Himachal Pradesh is far below the expected one:
  - a. Una
  - b. Hamirpur
  - c. Kangra
  - d. Bilaspur
2. The level of academic achievement of total sample of Class IV students in Science drawn from above mentioned four Districts of Himachal Pradesh is far below the expected one.

## Academic Achievement

The number of items answered correctly by a student.

## Expected Performance

All the 40 items to be answered correctly.

## 4. The Sample

Survey method of research was used in the present study. The sample for the present study was drawn from 81 Government Primary Schools situated in four districts of Himachal Pradesh viz., Una (20), Hamirpur (21), Kangra (20) and Bilaspur (20). The four districts and the schools in each district were selected on the basis of convenience, though it was observed that the schools were spread over a wider area and adequately represented each district in terms of locale (rural-urban) and sex (boys-girls). It is worth mentioning that all these schools followed the curriculum prescribed by the Himachal Pradesh Board of School Education. The total sample consisted of 1258 students (Una = 310), Hamirpur = 315, Kangra = 323, Bilaspur = 310).

## 5. Tool Used

An achievement test was constructed for classes IV students to assess their academic performance. Since the aim of the present study was to observe whether the students of selected class have been able to achieve minimum level of learning in Class IV, hence, the usual procedure of constructing norm-referenced or criterion-referenced tests was not followed in the present case.

At the preparatory stage, primary school teachers from five schools were contacted and asked what did they expect from Class-IV students to achieve in terms of minimum level of learning with reference to the prescribed curriculum. Taking this clue, the achievement test was constructed for Class-IV students. More information in this regard was gathered from students' notebooks, prescribed textbook, home assignments and class-test questions. The preliminary draft was shown to teachers to indicate items which were poor, difficult or beyond the criterion of minimum level of learning at Class-IV level. The final draft consisted of forty items. The test was subjected to content and language edit and reliability.

## 6. Analysis and Interpretation of Data

The achievement test was administered to Class-IV students either before their final examination or immediately after they took admission in the next class. The test was scored in the form of correct, partially correct, incorrect and unanswered responses of the students for different items and the results thus obtained were tabulated district and item-wise for further analysis. The techniques of frequency distribution and percentages were used to analyze the data.

As noted earlier, the test was constructed to assess students' performance vis-à-vis the expected performance. The criterion for level of expected performance in terms of

minimum level of learning at Class-IV level was determined on the basis of perception of teachers actually teaching Class-IV students. Hence, the number of items answered correctly by each student was considered his/her 'academic performance' and all the 40 items supposed to be answered correctly by a student was treated as 'expected performance'. The item-wise responses of Class IV students to 40 items of the Achievement Test are presented for each of the selected four Districts separately as well as for the total sample.

**6.1 District Una: Class IV: SCIENCE**

The analysis of Table I reveals the following facts in respect of District Una:

**Total Number of Items = 40**  
**Total Number of Students = 310**

Per Cent of Students	Number of Items Responded as			
	Correct	Partially* Correct	Incorrect	Unanswered
76 or more	0	0	0	0
51 to 75	1	5	0	1
46 to 50	1	0	3	7
41 to 45	1	0	7	9
36 to 40	4	0	9	11
31 to 35	5	0	4	4
26 to 30	5	0	5	3
21 to 25	6	1	1	3
16 to 20	6	1	3	2
11 to 15	5	0	1	0
06 to 10	2	0	3	0
05 or less	4	0	4	0
	<b>40</b>	<b>7</b>	<b>40</b>	<b>40</b>

\* Out of 7 items which could have 'Partial Correct' response

The following significant features emerged from the above table with regard to the level of performance in Science of 310 Class IV students of Una District as measured by the Achievement Test (Science):

- As many as 4 items (Item Nos. 1, 3, 37 and 38) were answered correctly by less than 5 per cent of the students.
- Only two items (Item Nos. 2 and 39) were answered correctly by 6 to 10 per cent of the students.
- As many as 5 items (Item Nos. 9, 20, 27, 30 and 36) were answered correctly by 11 to 15 per cent of the students.
- Six items (Item Nos. 6, 21, 25, 28, 34 and 35) were answered correctly by 16 to 20 per cent of the students.
- Six items (Item Nos. 4, 12, 19, 24, 29 and 32) were answered correctly by 21 to 25 per cent of the students.
- Only five items (Item Nos. 7, 13, 14, 26 and 40) were answered correctly by 26 to 30 per cent of the students.
- Five items (Item Nos. 11, 15, 16, 23 and 31) were answered correctly by 31 to 35 per cent of the students.
- Four items (Item Nos. 8, 10, 17 and 33) were answered correctly by 36 to 40 per cent of the students.
- One item (Item No. 22) was answered correctly by 41 to 45 per cent of the students.
- Only one item (Item No. 18) was answered correctly by 46 to 50 per cent of the students.
- Only one item (Item No. 5) was answered correctly by 51 to 75 per cent of the students.

- None of the items was answered correctly by more than 75 per cent of the students.
- None of the 7 items having more than one response was answered completely correctly by any of the 310 students.
- None of the remaining 33 items of the test which have single response was answered correctly by any of the 310 students.
- All the 40 items were left unanswered by different number of students.

It is quite clearly revealed from the above observations that the level of performance in Science of 310 Class IV students of Una District as measured by Achievement Test (Science) is far below the expected one. Hence, the hypothesis that "The level of academic achievement in Science of Class IV students of Una District of Himachal Pradesh is far below the expected one" is accepted.

**6.2 District Hamirpur: Class IV: SCIENCE**

The analysis of Table I reveals the following facts in respect of District Hamirpur:

**Total Number of Items = 40**  
**Total Number of Students = 315**

Per Cent of Students	Number of Items Responded as			
	Correct	Partially* Correct	Incorrect	Unanswered
76 or more	0	0	0	0
51 to 75	0	5	0	11
46 to 50	1	0	3	8
41 to 45	1	0	2	5
36 to 40	4	0	9	11
31 to 35	4	0	5	3
26 to 30	2	0	7	0
21 to 25	5	1	4	2
16 to 20	6	1	2	0
11 to 15	8	0	1	0
06 to 10	4	0	0	0
05 or less	5	0	7	0
	<b>40</b>	<b>7</b>	<b>40</b>	<b>40</b>

\* Out of 7 items which could have 'Partial Correct' response

- The following significant features emerged from the above table with regard to the level of performance in Science of 315 Class IV students of Hamirpur District as measured by the Achievement Test (Science):
- As many as 5 items (Item Nos. 1, 2, 3, 37 and 38) were answered correctly by less than 5 per cent of the students.
  - Only four items (Item Nos. 13, 27, 36 and 39) were answered correctly by 6 to 10 per cent of the students.
  - As many as 8 items (Item Nos. 6, 9, 20, 21, 25, 28, 30 and 35) were answered correctly by 11 to 15 per cent of the students.
  - Six items (Item Nos. 4, 19, 24, 32, 34 and 40) were answered correctly by 16 to 20 per cent of the students.
  - Six items (Item Nos. 7, 12, 14, 15, and 26) were answered correctly by 21 to 25 per cent of the students.
  - Only two items (Item Nos. 16 and 31) were answered correctly by 26 to 30 per cent of the students.
  - Four items (Item Nos. 8, 10, 11 and 23) were answered correctly by 31 to 35 per cent of the students.

9. Four items (Item Nos. 17, 22, 29 and 33) were answered correctly by 36 to 40 per cent of the students.
10. One item (Item No. 18) was answered correctly by 41 to 45 per cent of the students.
11. Only one item (Item No. 5) was answered correctly by 46 to 50 per cent of the students.
12. None of the items was answered correctly by more than 50 per cent of the students.
13. None of the 7 items having more than one response was answered completely correctly by any of the 315 students.
14. None of the remaining 33 items of the test which have single response was answered correctly by any of the 315 students.
15. All the 40 items were left unanswered by different number of students. Amazingly, 35 items were left unanswered by more than 35 per cent of students.

It is quite clearly revealed from the above observations that the level of performance in Science of 315 Class IV students of Hamirpur District as measured by Achievement Test (Science) is far below the expected one. Hence, the hypothesis that “*The level of academic achievement in Science of Class IV students of Hamirpur District of Himachal Pradesh is far below the expected one*” is accepted.

### 6.3 District Kangra: Class IV: SCIENCE

The analysis of Table I reveals the following facts in respect of District Kangra:

**Total Number of Items = 40**  
**Total Number of Students = 323**

Per Cent of Students	Number of Items Responded as			
	Correct	Partially* Correct	Incorrect	Unanswered
76 or more	0	0	0	29
51 to 75	0	1	0	10
46 to 50	0	0	0	0
41 to 45	0	1	0	1
36 to 40	0	1	0	0
31 to 35	0	0	0	0
26 to 30	0	0	0	0
21 to 25	1	2	1	0
16 to 20	4	0	3	0
11 to 15	4	0	10	0
06 to 10	12	2	16	0
05 or less	19	0	10	0
	<b>40</b>	<b>7</b>	<b>40</b>	<b>40</b>

\* Out of 7 items which could have ‘Partial Correct’ response

The following significant features emerged from the above table with regard to the level of performance in Science of 323 Class IV students of Kangra District as measured by the Achievement Test (Science):

1. As many as 19 items (Item Nos. 1, 2, 3, 4, 13, 19, 20, 21, 24, 26, 27, 28, 34, 35, 36, 37, 38, 39 and 40) were answered correctly by less than 5 per cent of the students.
2. Twelve items (Item Nos. 6, 7, 8, 9, 10, 12, 22, 25, 30, 31, 32 and 33) were answered correctly by 6 to 10 per cent of the students.
3. Only four items (Item Nos. 14, 15, 16 and 23) were answered correctly by 11 to 15 per cent of the students.

4. Four items (Item Nos. 11, 17, 18 and 29) were answered correctly by 16 to 20 per cent of the students.
5. None of the items was answered correctly by more than 25 per cent of the students.
6. None of the 7 items having more than one response was answered completely correctly by any of the 323 students.
7. None of the remaining 33 items of the test which have single response was answered correctly by any of the 323 students.
8. All the 40 items were left unanswered by different number of students. Amazingly, 39 items were left unanswered by more than 50 per cent of students.

It is quite clearly revealed from the above observations that the level of performance in Science of 323 Class IV students of Kangra District as measured by Achievement Test (Science) is far below the expected one. Hence, the hypothesis that “*The level of academic achievement in Science of Class IV students of Kangra District of Himachal Pradesh is far below the expected one*” is accepted.

### 6.4 District Bilaspur: Class IV: SCIENCE

The analysis of Table I reveals the following facts in respect of District Bilaspur:

**Total Number of Items = 40**  
**Total Number of Students = 310**

Per Cent of Students	Number of Items Responded as			
	Correct	Partially* Correct	Incorrect	Unanswered
76 or more	0	0	0	1
51 to 75	0	3	0	31
46 to 50	0	0	0	4
41 to 45	1	0	0	1
36 to 40	1	0	1	0
31 to 35	3	2	4	2
26 to 30	2	0	7	1
21 to 25	5	1	11	0
16 to 20	5	0	5	0
11 to 15	10	0	4	0
06 to 10	6	1	1	0
05 or less	7	0	7	0
	<b>40</b>	<b>7</b>	<b>40</b>	<b>40</b>

\* Out of 7 items which could have ‘Partial Correct’ response

The following significant features emerged from the above table with regard to the level of performance in Science of 310 Class IV students of Bilaspur District as measured by the Achievement Test (Science):

1. As many as 7 items (Item Nos. 1, 2, 3, 36, 37, 38 and 39) were answered correctly by less than 5 per cent of the students.
2. Six items (Item Nos. 13, 25, 27, 28, 30 and 34) were answered correctly by 6 to 10 per cent of the students.
3. As many as 10 items (Item Nos. 4, 6, 7, 19, 20, 21, 24, 31, 35 and 40) were answered correctly by 11 to 15 per cent of the students.
4. Only five items (Item Nos. 8, 9, 16, 32 and 33) were answered correctly by 16 to 20 per cent of the students.
5. Five items (Item Nos. 10, 12, 14, 15 and 23) were answered correctly by 21 to 25 per cent of the students.
6. Two items (Item Nos. 22 and 26) were answered correctly by 26 to 30 per cent of the students.

7. Three items (Item Nos. 11, 17 and 29) were answered correctly by 31 to 35 per cent of the students.
8. One item (Item No. 18) was answered correctly by 36 to 40 per cent of the students.
9. Only one item (Item No. 5) was answered correctly by 41 to 45 per cent of the students.
10. None of the items was answered correctly by more than 45 per cent of the students.
11. None of the 7 items having more than one response was answered completely correctly by any of the 310 students.
12. None of the remaining 33 items of the test which have single response was answered correctly by any of the 310 students.
13. All the 40 items were left unanswered by different number of students. Amazingly, 32 items were left unanswered by more than 50 per cent of students.

It is quite clearly revealed from the above observations that the level of performance in Science of 310 Class IV students of Bilaspur District as measured by Achievement Test (Science) is far below the expected one. Hence, the hypothesis that “*The level of academic achievement in Science of Class IV students of Bilaspur District of Himachal Pradesh is far below the expected one*” is accepted.

#### 6.5 Total Sample: Class IV: SCIENCE

The analysis of Table I reveals the following facts in respect of total sample from four Districts:

**Total Number of Items = 40**  
**Total Number of Students = 1258**

Per Cent of Students	Number of Items Responded as			
	Correct	Partially* Correct	Incorrect	Unanswered
76 or more	0	0	0	1
51 to 75	0	3	0	28
46 to 50	0	0	0	4
41 to 45	1	2	0	4
36 to 40	1	0	2	1
31 to 35	1	0	6	1
26 to 30	4	0	8	1
21 to 25	6	0	10	0
16 to 20	6	1	4	0
11 to 15	11	1	3	0
06 to 10	5	0	0	0
05 or less	5	0	7	0
	<b>40</b>	<b>7</b>	<b>40</b>	<b>40</b>

\* Out of 7 items which could have 'Partial Correct' response

The following significant features emerged from the above table with regard to the level of performance in Science of 1258 Class IV students comprising the total sample from four Districts as measured by the Achievement Test (Science):

1. As many as 5 items (Item Nos. 1, 3, 37, 38 and 39) were answered correctly by less than 5 per cent of the students.
2. Only five items (Item Nos. 2, 20, 27, 28 and 36) were answered correctly by 6 to 10 per cent of the students.
3. As many as 11 items (Item Nos. 4, 6, 9, 13, 19, 21, 24, 25, 30, 34 and 35) were answered correctly by 11 to 15 per cent of the students.
4. Six items (Item Nos. 7, 12, 26, 31, 32 and 40) were answered correctly by 16 to 20 per cent of the students.
5. Six items (Item Nos. 8, 10, 14, 15, 16 and 23) were answered correctly by 21 to 25 per cent of the students.
6. Only four items (Item Nos. 11, 22, 29 and 33) were answered correctly by 26 to 30 per cent of the students.
7. Only one item (Item No. 17) was answered correctly by 31 to 35 per cent of the students.
8. One item (Item No. 18) was answered correctly by 36 to 40 per cent of the students.
9. One item (Item No. 5) was answered correctly by 41 to 45 per cent of the students.
10. None of the items was answered correctly by more than 45 per cent of the students.
11. None of the 7 items having more than one response was answered completely correctly by any of the 1258 students.
12. None of the remaining 33 items of the test which have single response was answered correctly by any of the 1258 students.
13. All the 40 items were left unanswered by different number of students. Amazingly, 29 items were left unanswered by more than 50 per cent of students.

It is quite clearly revealed from the above observations that the level of performance in Science of 1258 Class IV students comprising the total sample from four Districts is far below the expected one. Hence, the hypothesis that “*The level of academic achievement in Science of total Class IV students sampled from four Districts of Himachal Pradesh is far below the expected one*” is accepted.

#### 7. Discussion

The present study reveals that academic achievement of students of classes IV selected from four Districts of Himachal Pradesh, viz., Una, Hamirpur, Kangra and Bilaspur came out to be far below the expected one for each individual district as well as for the total sample. This indicates that the State of Himachal Pradesh has not been able to achieve the objective of providing elementary education of satisfactory quality even after ten years of launch of SSA as well as introducing other interventions.

Item-wise results for 40 items given in the Table I present the overall picture of the performance in Science of Class IV students. The consolidated results given below for total sample of 1258 students drawn from this Table further elaborate the state of poor academic attainment among students after completing Class IV curriculum.

**Table 7.1:** Description of question items in the questionnaire

Item No.	Description	Attempted Correctly By (Per Cent)
1	Fill in the Blanks (5)	01.27
2	Fill in the Blanks (5)	06.12
3	Fill in the Blanks (5)	02.38
4	From where we get wood for furniture. {Multiple Choice Type}	15.02
5	What is absorbed by roots from earth? {Multiple Choice Type}	42.13

6	Why we protect Animals & Plants? {Multiple Choice Type}	13.12
7	Important source of drinking water. {Multiple Choice Type}	18.36
8	Why bleaching powder is added to water? {Multiple Choice Type}	24.17
9	What happened to food if it cooked for a longer time? {Multiple Choice Type}	13.67
10	Right way of dealing with litter. {Multiple Choice Type}	25.04
11	Wax of candle is dissolves in {Multiple Choice Type}	30.45
12	Bubbles in 'soda water' are of which Gas? {Multiple Choice Type}	18.60
13	Process of Water cycle involves {Multiple Choice Type}	11.29
14	Which state of matter is Ice Ball? {Multiple Choice Type}	20.99
15	Which sand absorbs maximum water? {Multiple Choice Type}	24.17
16	Food gives us {Multiple Choice Type}	22.58
17	How many planets in solar system? {Multiple Choice Type}	30.76
18	How many hours are taken by the Earth to revolve around its axis? {Multiple Choice Type}	36.01
19	How green plants prepare their food? {Multiple Choice Type}	13.43
20	What explain the right digestive process? {Multiple Choice Type}	09.06
21	How nutrients of Food can be increased? {Multiple Choice Type}	11.84
22	In what condition the Beats of the Heart of a child increased? {Multiple Choice Type}	29.09
23	After how many days the drinking water from the pot be replaced? {Multiple Choice Type}	24.64
24	Which process is used to kill germs present in water? {Multiple Choice Type}	13.43
25	What happened when there is heavy shortage of water and salt in body? {Multiple Choice Type}	11.84
26	Name the Process of extraction of Salt from sea water. {Multiple Choice Type}	19.71
27	When water vapours freezes in the form of ice crystals in the air, how these crystals fall on the earth? {Multiple Choice Type}	07.23
28	Clay is best soil for making toys. Why? {Multiple Choice Type}	10.10
29	What is capacity to do work? {Multiple Choice Type}	28.46
30	Planets revolve around which astrological object? {Multiple Choice Type}	10.97
31	Why water and manure is timely necessary? {Multiple Choice Type}	19.79
32	What is present in green leafy vegetables? {Multiple Choice Type}	17.97
33	Pot in which drinking water is stored is..... {Multiple Choice Type}	26.95
34	Which disease is caused by drinking dirty water? {Multiple Choice Type}	12.00
35	Which Oil spray is done on the water to stop the growth of mosquitoes? {Multiple Choice Type}	12.56
36	Best way of utilizing waste water...	07.39
37	Mark correct or incorrect statements. (5)	02.54
38	Mark correct or incorrect statements. (5)	01.35
39	Name three things which are prepared from leather?	04.13
40	Match the columns (4)	15.66

**Table 7.2:** Frequency Table

S. No.	Percentage	Frequency
1	0.01-05.00	05
2	5.01-10.00	05
3	10.01-15.00	11
4	15.01-20.00	06
5	20.01-25.00	06
6	25.01-30.00	04
7	30.01-35.00	01
8	35.01-40.00	01
9	40.01-45.00	01
10	45.01-50.00	00
	<b>TOTAL</b>	<b>40</b>

It is revealed that only item number 5 namely "What is absorbed by roots from earth? {Multiple Choice Type}" has been attempted correctly by maximum number of students which is merely 42.13 per cent. The items requiring the students to read and choose the correct out of the four options has been attempted correctly by only 0.01 to 30 per cent of students. Overall 37 items were answered correctly by less than 30 per cent of students.

One of the reasons for not answering even the very simple

items correctly could be that the students were unable to read and/or comprehend the test items. This had been realized by us during the pilot study stage. To overcome this problem, each item was explained to students during the test administration stage. Though the results reveal that the students either still failed to understand the item or did not know the answer.

The State of Himachal Pradesh has been successful to a great extent in making elementary education accessible to nearly all through rapid expansion of the school network, achieving an exceptionally high teacher-pupil ratio, increasing enrolment at elementary stage and decreasing drop-out rate considerably. However, the quality of education, particularly at the elementary stage, continues to be a matter of concern as is evident from the results of present study. It seems that the upgrading of physical infrastructure and deployment of more than adequate number of teachers has not brought about the expected improvement in the standards of education.

The results of the study may prove to be beneficial to policy planners in reviewing the existing policies in the context of improving quality of education at elementary stage. The results of the study may also generate awareness that it is not

sufficient to provide infrastructure alone but is also equally necessary to identify factors that are essential in order to achieve the aforesaid goal of providing quality education.

In the educational ladder, Mastery over the basics of Science is very crucial and is the foundation for other subjects in the following classes. If the foundation remains weak, one cannot expect a strong, steady and quality building. It has been our experience that students have not achieved the expected level of learning in Science.

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