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Academic Performance in Mathematics among Class-Vii Students of UNA District of Himachal Pradesh

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Abstract
The world is becoming more and more competitive. Quality of performance has become the key factor for personal progress. Parents desire that their children should climb the ladder of performance at high level of achievement puts a lot of pressure on students, teachers, parents, schools and in general the educational system itself. In fact, it appears as if whole educational system revolves around the academic performance of students. 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. Though, Himachal Pradesh has the distinction of providing sufficient number of teachers to schools, their quality raises some doubts. The selection of teacher trainees, training procedures for teachers and finally their recruitment in schools are the areas which need immediate attention.

Keywords: Academic Performance, Mathematics, Elementary Education, Achievement.

Introduction

Since independence, the central and state governments have been expanding the provision of primary formal and non-formal education to realize the goal of Universalization of Elementary Education (UEE). The challenge now is to sustain and deepen current reforms in education and encourage local planning and management of strategies for expanding and improving primary education.

Several central and state level initiatives have been in operation from the early 1980s.While the designs of these projects vary substantially, all of them address the objectives and strategies of the National Policy on Education 1986. They pay special attention to increasing girls' enrolment, improving educational outcomes, strengthening community involvement, improving teaching and learning materials and providing in-service teacher training.

The important such initiatives included National Bal Bhawan, New Delhi, National Council of Educational Research & Training (NCERT), Navodaya Vidyalaya Samiti (NVS), Strengthening of Teachers Training Institutions, Shiksha Karmi Project in Rajasthan, Operation Blackboard, National Literacy Mission Authority (NLMA), National Institute of Open Schooling (NIOS), Mahila Samakhya Programme, Lok Jumbish Project, Decentralization, District Primary Education Programme, National Council for Teacher Education, The National Programme of Nutritional Support to Primary Education (NP-NSPE), Janshala (GOI-UN) Programme, Sarva Shiksha Abhiyan (SSA), Kasturba Gandhi Balika Vidyalaya, Prarambhik Shiksha Kosh, Special Navodaya Vidyalayas, Non-Formal Education (NFE) and EGS & AIE etc.

When the target could not be achieved till 2001, Indian Government started its flagship programme named as `The Sarva Shiksha Abhiyan' in 2001.

Nichols (2009) [10] studied the effects of four-year-old preschool attendance on reading and math achievement of third and fourth grade students. This study addressed the effect that attendance in a four-year-old preschool program has on students' reading and math achievement and attitude towards school at the third and fourth grade level No differences were found in mathematics achievement. A significant difference was found in reading comprehension and attitude.

Harish (2011) [6] constructs a study and in his study his main objectives were to study the impact of integrated critical thinking skills on achievement in mathematics. The major findings of the study were there is a significant difference between the post-test achievement of Control and Experimental groups. There is no significant difference between the Mean scores of boys and girls in the post-test achievement. There is a significant interaction between group and gender on post-test achievement. There is a significant difference between the Mean scores of group and gender in their post-test achievement with respect to total integrated critical thinking skills. There is a significant interaction between group and gender on total integrated critical thinking skills on achievement after the intervention program.

Recently, Kumar (2008) [8] conducted a study to evaluate Sarva Shiksha Abhiyan (SSA) Programme launched in Himachal Pradesh with respect to quality improvement at elementary stage. He concluded that:

1. The level of academic achievement of Class I students of Una District is far below the expected one.
2. The level of academic achievement in Hindi of Class IV students of Una District is far below the expected one.
3. The level of academic achievement in Mathematics of Class IV students of Una District is far below the expected one.

4. The level of academic achievement in Science of Class IV students of Una District is far below the expected one.

The results of his study indicated that the academic performance of primary school students was not satisfactory. The results of this study were supported by the findings of earlier investigations, e.g. NCERT (2006), Sarva Shiksha Abhiyan (SSA), Third Joint Review Mission, Himachal Pradesh: State Report, January 13 to 20, 2006, ASER (2005), ASER (2006) and ASER (2007).

The results of Kumar's study (2008) [8] revealed that academic performance of students enrolled at elementary stage in Himachal Pradesh was not up to the mark and there had not been a marked shift in quality of education measured in terms of academic achievement of students even after eight years of implementation of SSA. The researcher stated that the rapid expansion of the school network and an exceptionally high teacher-pupil ratio notwithstanding, the quality of education, particularly at the primary level, continues to be a matter of concern in the hill state of Himachal Pradesh.

Similarly it appears that children learn numbers early but the progression towards solving mathematical sums - addition-subtraction and multiplication-division is relatively slow. In Std IV only 36 percent children are doing division sums. How they will negotiate Std V level mathematical sums is a grave concern. By Std IV all children should be doing division sums. Sarva Shiksha Abhiyan (SSA), Third Joint Review Mission, Himachal Pradesh: State Report, January 13 to 20, 2006 in respect of Development Objective 3 i.e. Quality observed:

Since Himachal Pradesh has achieved successfully near universal enrolment and retention, quality would be the main thrust in the future.At this juncture the State would need to focus on the multitude of issues impinging on quality education. A reasonable positive environment is seen in the school and there is a strong demand for learning outcomes among the community.

In the context of Student Achievement the Report stated:

In this respect, the results are a bit mixed. There is a modest increase in transition from Class V to Class VI and increase in the pass rate at board examinations between 2003 and 2005. However, there remains much room for improvement in student achievement.

In view of this a programme named Aaadhar was implemented in 2007 in Himachal Pradesh in order to usher in quality in early elementary classes in the state of Himachal Pradesh. It is interesting to note if there has been any improvement in academic performance of primary school students as envisaged by Aaadhar. Hence the present problem was undertaken for research.

Objective of the Study

To evaluate the level of academic performance in mathematics of Class VII students of District Una of Himachal Pradesh.

Hypothesis of the Study

The level of academic performance in mathematics of Class VII students of District Una of Himachal Pradesh is far below the expected one.

The Sample

The sample for the present study was drawn from Schools situated in District Una of Himachal Pradesh. The schools were selected on the basis of convenience, though it was observed that they are spread over a wider area in the district. It is worth mentioning that all these schools follow the curriculum prescribed by the Himachal Pradesh Board of School Education.

In each Middle/High and Senior Secondary School, data was collected from students studying in Class VIII (for class VII). The total sample comprise of 400 students from Una District of Himachal Pradesh.

Tool Used

In view of the objective of the study, achievement test constructed by Kumar (2008) [8] for classes VII (Mathematics) was used.

The Procedure

Keeping in view the purpose of the study, the test was administered to the students immediately after they took admission in the next class.

The achievement test was administered by the investigator to class VIII students (for class VII) under standard conditions after establishing proper rapport with the sampled students. 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 item-wise for further analysis.

Analysis and Interpretation of Data

The data for the study were available in the form of responses of students for different items grouped into four categories, namely, 'Correct', 'Partially Correct', 'Incorrect' and 'Unanswered'. The techniques of frequency distribution and percentages were used to analyze the data.

The present investigation aimed at studying the level of academic performance in mathematics among class VII students. The relevant data for the study were collected from a sample of 400 students of Class VII studying in Government High and Senior Secondary Schools situated in Una District of Himachal Pradesh. The tool used to collect data included one achievement test (Mathematics) constructed by Kumar (2008) [8].The data for the study were available in the form of responses of students for different items grouped into four categories, namely, `Correct', `Partially Correct', `Incorrect' and 'Unanswered'. The techniques of frequency distribution and percentages were used to analyze the data.

Analysis and Interpretation

The ensuing pages present the results of analyses of data followed by their interpretation.

The item-wise responses of 400 Class VII students to 40 items of the Achievement Test are presented in Table 3.1. The responses for each item were grouped into four categories, viz., 'Correct', 'Partially Correct', 'Incorrect' and 'unanswered'.

Table 1: The item-wise responses of 400 Students of Class VII to 40 items of the Achievement Test

Item No.	C	%age	IC	%age	PC	%age	UA	%age
1	66	16.50	88	22.00	169	42.25	77	19.25
2	56	14.00	152	38.00	136	34.00	56	14.00
3	196	49.00	163	40.75	0	0	41	10.25
4	324	81.00	61	15.25	0	0	15	3.75
5	279	69.75	68	17.00	0	0	53	13.25
6	191	47.75	146	36.50	0	0	63	15.75
7	42	10.50	317	79.25	0	0	41	10.25
8	224	56.00	134	33.50	0	0	42	10.50
9	280	70.00	65	16.25	0	0	55	13.75
10	301	75.25	70	17.50	0	0	29	7.25
11	372	93.00	9	2.25	0	0	19	4.75
12	260	65.00	123	30.75	0	0	17	4.25
13	341	85.25	42	10.50	0	0	17	4.25
14	245	61.25	109	27.25	0	0	46	11.50
15	379	94.75	9	2.25	0	0	12	3.00
16	375	93.75	13	3.25	0	0	12	3.00
17	236	59.00	138	34.50	0	0	26	6.50
18	287	71.75	98	24.50	0	0	15	3.75
19	306	76.50	79	19.75	0	0	15	3.75
20	98	24.50	289	72.25	0	0	13	3.25
21	96	24.00	267	66.75	0	0	37	9.25
22	51	12.75	265	66.25	0	0	84	21.00
23	115	28.75	214	53.50	0	0	71	17.75
24	378	94.50	14	3.50	0	0	8	2.00
25	178	44.50	205	51.25	0	0	17	4.25
26	304	76.00	91	22.75	0	0	5	1.25
27	276	69.00	77	19.25	0	0	47	11.75
28	382	95.50	11	2.75	0	0	7	1.75
29	140	35.00	249	62.25	0	0	11	2.75
30	388	97.00	7	1.75	0	0	5	1.25
31	297	74.25	88	22.00	0	0	15	3.75
32	286	71.50	104	26.00	0	0	10	2.50
33	78	19.50	300	75.00	0	0	22	5.50
34	126	31.50	232	58.00	0	0	42	10.50
35	176	44.00	208	52.00	0	0	16	4.00
36	191	47.75	25	6.25	159	39.75	25	6.25
37	75	18.75	72	18.00	185	46.25	68	17.00
38	248	62.00	40	10.00	41	10.25	71	17.75
39	30	7.50	62	15.50	263	65.75	45	11.25
40	100	25.00	41	10.25	218	54.50	41	10.25

Note: C=Correct; IC=Incorrect; PC=Partially Correct; UA=Unanswered.

Table 2: Total Number of Items = 40

Per Cent of Students	Number of Items Responded as			
	Correct	Incorrect	Partially*Correct	Unanswered
81 to 100	8	0	0	0
76 to 80	3	1	0	0
71 to 75	3	2	0	0
66 to 70	3	2	1	0
61 to 65	3	1	0	0
56 to 60	2	1	0	0
51 to 55	0	3	1	0
46 to 50	3	0	1	0
41 to 45	2	1	1	0
36 to 40	0	2	1	0
31 to 35	2	3	1	0
26 to 30	1	2	0	0
21 to 25	3	4	0	1
16 to 20	3	8	0	5
11 to 15	3	2	1	11
6 to 10	1	2	0	5
0 to 5	0	6	0	18
Total	40	40	7	40

Total Number of Students = 400

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

The analysis of Table 3.1 and 3.2 reveals the following specifics about the responses of students with regard to the level of performance of 400 students of class VII as measured by the achievement test:

1. None of the item was answered correctly 0 to 5 percent of the students.
2. Only one item (item no. 39) was answered correctly by 6 to 10 percent of the students.
3. Three items (item nos. 2, 7 and 22) were answered correctly by 11 to 15 percent of the students.
4. Three items (item nos. 1, 33 and 37) were answered correctly by 16 to 20 percent of the students.
5. Three items (item nos. 20, 21 and 40) were answered correctly by 21 to 25 percent of the students.
6. Only one item (item no. 23) was answered correctly by 26 to 30 percent of the students.
7. Two items (item nos. 29 and 34) were answered correctly 31 to 35 percent of the students.
8. Only two items (item nos. 25 and 35) were answered correctly by 41 to 45 percent of the students.
9. Three items (item nos. 3, 6 and 36) were answered correctly by 46 to 50 percent of the students.
10. Only two items (item nos. 8 and 17) were correctly answered by 56 to 60 percent of the students.
11. Three items (item nos. 12, 14 and 38) were answered correctly by 61 to 65 percent of the students.
12. Three items (item nos. 5, 9 and 27) were answered correctly 66 to 70 percent of the students.
13. Three items (item nos.18, 31 and 32) were answered correctly 71 to 75 percent of the students.
14. Three items (item nos.10, 19 and 26) were answered correctly 76 to 80 percent of the students.
15. Eight items (item no 4, 11, 13, 15, 16, 24, 28 and 30) were answered correctly by more than 76 percent of the students.

It is quite clearly revealed from the above observations that the level of the performance of 400 class VII students of District Una as measured by the achievement test is far below the expected one. Hence the hypothesis that "the level of academic achievement of class VII students of District Una of Himachal Pradesh is far below the expected one" is accepted. The results of the present study are in complete agreement with a similar study conducted by Kumar (2008)m [8].

Conclusions

On the basis of analysis and interpretation of data, the following conclusion was drawn for the present study:

The level of academic performance of Class VII students of Una District of Himachal Pradesh is far below the expected one.

Educational Implications

The present study reveals that academic achievement of students of class VII of District Una of Himachal Pradesh came out far below the expected one. This indicates that the State of Himachal Pradesh has not been able to achieve the objective of Sarva Shiksha Abhiyan and Aadhaar of improving quality in academic performance of school students even after many years of its launch.

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.

Suggestions for Further Research

On the basis of experience gained during the conduct of present piece of research, the following suggestion is forwarded for further investigations in this area:

1. A study may be conducted to identify causes of non-achievement of objectives of Aaadhar in Himachal Pradesh.
2. The present study was delimited to Una district of H.P. So, studies may be taken to evaluate the level of academic performance in other districts, class, subject, area (rural, semirural, urban and semi urban).

Reference

1. Annual Status of Education Report (Rural) 2005 – Final Report Pratham Resource Center, Mumbai office: Ground Floor, YB Chavan Center, Gen. J Bhosale Marg, Nariman Point, Mumbai- 2006, 400- 021.
2. Annual Status of Education Report (Rural) 2006 – Final Report Pratham Resource Center, Mumbai office: Ground Floor, YB Chavan Center, Gen. J. Bhosale Marg, Nariman Point, Mumbai, 2007, 400-021.
3. Annual Status of Education Report (Rural) 2007 – Provisional Pratham Resource Center, Mumbai office: Ground Floor, YB Chavan Center, Gen. J Bhosale Marg, Nariman Point, Mumbai, 2008; 400-021.
4. Chaudhary Prit. The academic achievement of Tribe Students of Ashram Schools of Surat District" in Journal of Indian Education. August. 2010; 36(2):35-45.
5. Department of Educational Measurement & Evaluation Sarva Shiksha Abhiyan: A Programme for Universal Elementary Education Framework for Implementation.Chapter 1: Basic Features of Sarva Shiksha Abhiyan (1.3 Objectives of Sarva Shiksha Abhiyan), 2001.
6. Harish GC. Impact of integrated critical thinking skills on achievement in mathematics of secondary schools students in EDUTRACKS, April 2011; 10(8):28-30.
7. Koul Lokesh, Methodology of Educational Research" Noida: Vikas publishing House PVT. Ltd. 2010, 103-138.
8. Kumar Anil, Evaluation of Sarva Shiksha Abhiyan (SSA) Programme Launched in Himachal Pradesh with respect to Quality Improvement at Elementary Stage".Ph.D. Thesis, Himachal Pradesh University, Shimla, India, 2008.
9. National Council of Education Research & Training School Achievement Survey, 2006.
10. Nichols J, Robin. The Effects of Four-Year-Old Preschool Attendance on Reading and Math Achievement of Third and Fourth Grade Students." Ed. D, Trevecca Nazarene University, pp. 73. In Dissertation Abstracts International 2009; 70(7):2379-A. 2010,