Educational Quest: An Int. J. of Education and Applied Social Science: Vol. 8, No. 1, pp. 55-60, April 2017
DOI: 10.5958/2230-7311.2017.00010.1

Sarva Shiksha Abhiyan Interventions: Study of Scholastic Achievement of Students of High and Low Literacy Rate Districts of Punjab

Sandeep Kumar and Jatinder Grover

Department of Education, Panjab University, Chandigarh, India

Corresponding author: jatinder1633@gmail.com

ABSTRACT

The present study was carried out on standard -III students of 10 districts of Punjab to assess their scholastic achievement in relation to *Sarva Shiksha Abhiyan* interventions. Significant difference was observed in the scholastic achievement of students as Base line, Mid –term and Final –term assessment in Punjabi, English and Mathematics. For the subject of Punjabi, students from high literacy districts performed better than students from low literacy districts but in English, students from low literacy districts outperformed students from high literacy districts. For Mathematics, students from low literacy districts performed better in BAS and MAS but students from high literacy districts outperformed them in FAS.

Keywords: SSA (*Sarva Shiksha Abhiyan*), BAS (Base line assessment survey), MAS (Mid - term assessment survey), FAS (Final-term assessment survey)

Progressive development and prosperous future of any nation lies in the hands of the students and the type of education and training they receive. At the time of adoption of Constitution of India in 1949; a provision in the chapter of Directive Principles of State policy declared that universal free primary education should be made available to all children up to the age of fourteen years within a period of ten years, but till 2013, this target has not been achieved. In the year 2002, with the Article 45 of the Directive Principles of State Policy, Constitution was amended to make free primary education a Fundamental Right and the Government of India called this approach as Universalizing Primary Education for children from 6 to 14 years of age under the aegis of *Sarva Shiksha Abhiyan* (SSA).

Sarva Shiksha Abhiyan mission strives to secure the right to quality basic education for all children in the 6-14 years age group; retention of all children till the upper primary stage by 2010, bridging of gender and social category gaps in enrollment, retention and learning, ensuring that there is a significant enhancement in the learning achievement levels of children at the primary and upper primary stage are the major objectives of SSA. RTE Act,2009 enacted on 4th august, 2009 which came into force on 1st April, 2010 describes the modalities of the importance of free and compulsory education for children between 6 and 14 in India under article 21-A of the constitution (http://ssa.nic.in/national-mission/sarva-shikshaabhiyan).

Tenth Five Year Plan (2002- 07) addressed all aspects of elementary education with *Sarva Shiksha Abhiyan* covering over millions of elementary schools, out of schools children under Education Guarantee Scheme (EGS) and Alternative and Innovative Education (AIE) centers but the results of learning achievement surveys conducted by NCERT and by NGO *Pratham* (Annual Status of Education Report, 2005) highlighted the poor quality of learning. In Eleventh five year plan (2007-12) emphasis was laid on mainstreaming of drop-out students at primary

level and to reduce drop-out rate at the elementary level from over 50% to 20% by 2011- 12. It also gave emphasis on significant improvement of learning conditions. In Twelfth five year plan (2012- 17) emphasis is laid on learning enhancement and student retention by quality education; ensuring that all children acquire basic reading and numeracy skills by standard 2nd and skills of critical thinking, expression and problem solving by standard 5th. More residential schools in educationally backward blocks for girls and boys to be opened. It also stressed to improve teacher training with emphasis on effective pedagogy given the multi-age, multi-grade and multi-level contexts.

With the aim to achieve UEE, Punjab started SSA from 2001- 02 in all the 20 districts of the state. Punjab steadily progressed towards Universal Elementary Education and had made efforts to improve literacy among its people. Bharti (2008) reported that the *Sarva Shiksha Abhiyan* Authority (SSAA), Punjab had taken steps to bring about qualitative improvement in actual classroom teaching by launching *Parho Punjab Project*, a comprehensive programme for improving classroom teaching at primary level. Under the programme, weak as well as strong points of each student- from classes II to IV was kept and the teachers posted in the government schools were trained for the purpose. Depending on the strengths and weaknesses of each student, they were grouped and taught accordingly, this scheme improved the quality of teaching in the government schools of the state (http://www.ssapunjab.org/).

Malviya and Rajput (2007) observed in Bhopal that achievement of standard IV and V students in English and Mathematics subjects was low. Students of standard were not able to write the numbers correctly, even in English students writing and speaking skills were inadequate. Pandey and Tripathi (2008) found that in mid-term assessment mean achievement score of III standard students in Language was 70% in Mathematics it was 72%, which was an improvement in achievement over the achievement of Baseline Assessment survey, 62% in language and 65% in mathematics in all the districts of Jharkhand and observed that. Performance of urban area students was better than the performance of rural area students. Research by Srivastava, Bala, Saxena and Arora (2009); and Programme Evaluation Organisation (2010) revealed that despite massive interventions in primary education, students are still below the expected achievement level in our various states. Nanda (2015) reported that enrollment level of students in India was near universal with 96.7% of children registered in schools during 2014. The proportion of all children in Standard V who can read a Standard II text has improved from 47.0% in 2013 to 48.1% in 2014. This means every second Standard V student in rural India can't read the text of a standard three levels or below.

As per ASER (2016), in Punjab 99% of the children of age group 6-14 years are enrolled in the Govt. and private schools. On reading levels of Standard-III, it is reported that only 30.6 % students of Govt. schools and 39.2% students of private schools can read standard 2nd level text. On learning levels for arithmetic, only 36.3% Govt. school students and 59.6% Private school students can at least do subtraction.

Various government and private organization have conducted studies to assess the academic achievement of students, but independent research in this is still very few, results of the study will provide a real picture on the scholastic achievement of students.

Objectives

- To study scholastic achievement in written expression of standard-III primary school students of Punjab in relation to SSA interventions in the subjects of Punjabi, English and Mathematics on BAS, MAS and FAS.
- To compare scholastic achievement in written expression of standard-III primary school students of Punjab in relation to SSA interventions in the districts with high and low literacy rate on BAS, MAS and FAS.

Hypotheses

- **$H_1$0:** There exists no significant effect of SSA interventions on the scholastic achievement in written expression of standard-III primary school students of Punjab due to SSA interventions in the subjects of Punjabi, English and Mathematics on BAS, MAS and FAS.
- **$H_2$0:** There exists no significant difference in the scholastic achievement in written expression of standard-III primary school students of Punjab

due to SSA interventions Punjab in the districts with high and low literacy rate on BAS, MAS and FAS.

Methodology

Sample: Firstly, 10 districts were selected, 5 districts having high literacy rate and 5 districts having low literacy rate as per Census report, 2011 of Punjab. Further from each district 2 educational blocks were selected randomly and from these blocks four primary schools were randomly selected. **S**tudy was conducted on a randomly selected sample of 80 primary schools of Punjab. Sample consisted of 1263 students of III standard with 465 students from districts with high literacy rate and 798 students from districts with low literacy rate.

Tools: In accordance with the *Sarva Shiksha Abhiyan* interventions, Base line, Mid-term and Final-term achievement tests on Punjabi, English and Mathematics were developed and standardized by the investigator.

Method and Procedure: Descriptive survey method was adopted for collection of data. After the selection of the schools, students of III standard were tested for written expression in Punjabi, English and Mathematics on Base line, Mid-term and Final-term assessment. A gap of two months was given in between Base line, Mid-term and Final-term assessment.

Analysis and Interpretation of results

The data were analyzed to determine the nature of the distribution of scores by employing mean and standard deviation. Percentages were calculated to know the progress if any in the academic achievement at Mid-term and Final-term assessment.

Percentage analysis of Scholastic Achievement scores of students belonging to High and Low Literacy Districts: The scholastic achievement of students of high and low literacy districts for the subjects of Punjabi, English and Mathematics in the phases of BAS, MAS and FAS is presented in table 1.

From table 1, a clear cut difference was observed in the base line, mid-term and final-term assessment of students belonging to high and low literacy districts for the subjects of Punjabi, English and Mathematics. In the subject of Punjabi, students from high literacy districts performed better than low literacy districts students on BAS, MAS and FAS.

Table 1: Scholastic Achievement of Standard-III Students of Punjab

Districts	Phases	Punjabi	English	Mathematics
High literacy	BAS	38.70%	19.78%	13.76%
	MAS	52.25%	33.76%	29.46%
	FAS	65.59%	53.11%	58.70%
Low literacy	BAS	36.21%	32.20%	15.41%
	MAS	50.87%	43.98%	30.57%
	FAS	59.89%	54.01%	56.14%

For English, students from low literacy districts performed better than high literacy districts on BAS, MAS and FAS. For Mathematics, students from low literacy districts performed better than students of high literacy districts at BAS and MAS, while in FAS students from high literacy districts performed better than students from low literacy districts.

Comparative Analysis on Scholastic Achievement scores of students in Punjabi, English and Mathematics on BAS, MAS and FAS: For the present sample, Friedman test was used to find the significance of difference between the three surveys as it was observed from Skewness and Kurtosis, Shipiro-Wilk test p-value, Normal Q- Q plots that present sample was not normally distributed and results for the three surveys are presented in mean ranks in the table 2.

Table 2: Friedman test for Ranks for Analysis on Scholastic Achievement scores of Students in Punjabi, English and Mathematics on BAS, MAS and FAS

Phases	Mean Ranks		
	Punjabi	English	Mathematics
BAS	1.80	1.81	1.71
MAS	2.02	2.00	1.94
FAS	2.18	2.20	2.35

From table 2, it is clear that on mean ranks, there is a progressive increase in the scholastic achievement of students in Punjabi, English and Mathematics on BAS, MAS and FAS. The significance of difference is checked from Test Statistics as presented in table 6.

Table 3: Test statistics to compare Scholastic Achievement scores of Students in Punjabi, English and Mathematics on BAS, MAS and FAS

	Punjabi	English	Mathematics
N	1263	1263	1263
Chi- Square	340.85	480.53	758.69
Df	2	2	2
Asymp. Sig.	.000	.000	.000

From table 3, the Chi square value at degrees of freedom-2 for a sample of 1263 is 340.851 for BAS; 480.53 for MAS; and 758.69 for FAS. As p< 0.05, it shows that significance differences exist in the scholastic achievement of students in Punjabi, English and Mathematics on BAS, MAS and FAS. Hence null hypothesis $H_1 0$, stating that there exists no significant effect of SSA interventions on the scholastic achievement in written expression of -III standard primary school students of Punjab due to SSA interventions in the subjects of Punjabi, English and Mathematics on BAS, MAS and FAS got rejected.

Comparison of Scholastic Achievement of students of High and Low Literacy rate Districts: For comparing the scholastic achievement of students of High and Low Literacy rate Districts on Punjabi, English and Mathematics in BAS, MAS and FAS; the Non- parametric test i.e. Wilcoxon Mann-Whitney - U is used and results are presented in table 4 and 5.

Table 4: Wilcoxon Mann-Whitney Test to Compare Scholastic Achievement of students of High and Low Literacy rate Districts

Assessment Survey	District	N	Mean Ranks		
			Punjabi	English	Mathematics
BAS	High literacy	465	641.95	582.44	624.42
	Low literacy	798	626.20	660.88	636.42
MAS	High literacy	465	637.51	591.22	627.55
	Low literacy	798	628.79	655.77	634.59
FAS	High literacy	465	654.71	628.44	642.25
	Low literacy	798	618.77	634.07	626.03

From table 4, it is clear that on mean ranks, students from high literacy rate districts outperformed low literacy rate districts students in Punjabi on BAS, MAS and FAS; for the subject of English, students from low literacy rate districts performed better on BAS, MAS and FAS; for Mathematics students from low literacy rate districts performed better on BAS and MAS; while on FAS students from high literacy rate districts outperformed students of low literacy rate districts.

Table 5: Test Statistics to compare Scholastic Achievement scores of Students of High and Low Literacy rate districts in Punjabi, English and Mathematics on BAS, MAS and FAS

Punjabi	**BAS**	**MAS**	**FAS**
Mann-Whitney U	1.809	1.830	1.750
Wilcoxon W	4.997	5.018	4.938
Z	-.884	-.473	-2.009
Asymp. Sig. (2-tailed)	.376	.636	.045
English	**BAS**	**MAS**	**FAS**
Mann-Whitney U	1.625	1.666	1.839
Wilcoxon W	2.708	2.749	2.922
Z	-4.759	-3.572	-.306
Asymp. Sig. (2-tailed)	.000	.000	.759
Mathematics	**BAS**	**MAS**	**FAS**
Mann-Whitney U	1.820	1.835	1.808
Wilcoxon W	2.904	2.918	4.996
Z	-.913	-.416	-.889
Asymp. Sig. (2-tailed)	.361	.677	.374

From table 5, for the subject of Punjabi, Wilcoxon Mann- Whitney U test statistic and associated significance is 1.809 (p> 0.05) on BAS; on MAS 1.830 (p> 0.05); and on FAS 1.750 (p< 0.05). For English, Wilcoxon Mann- Whitney U test statistic and associated significance is 1.625 (p< 0.05) on BAS; on MAS 1.666 (p< 0.05); and on FAS 1.839 (p> 0.05). For Mathematics, Wilcoxon Mann- Whitney U test statistic and associated significance is 1.820 (p> 0.05) on BAS; on MAS 1.835 (p> 0.05); and on FAS 1.808 (p> 0.05). Hence the null hypothesis $H_3 0$ stating that there exists no significant difference in the scholastic achievement in written expression of standard-III primary school students of Punjab due to SSA interventions in the districts with high and low literacy rate on BAS, MAS and FAS rejected for FAS of Punjabi; BAS and MAS of English. But hypothesis $H_3 0$ is accepted for BAS and MAS of

Punjabi; FAS of English and similarly for BAS, MAS and FAS in Mathematics.

RESULTS AND DISCUSSION

Under the flagship of *Sarva Shiksha Abhiyan*, efforts have been made to take a holistic and comprehensive approach to improve the quality of education. Literacy and numeracy are the basic building blocks of learning.

A significant increase in the scholastic achievement of III standard students in Punjabi, English and Mathematics in Punjab was recorded on BAS, MAS and FAS. Students of high literacy rate districts performed better in Punjabi than low literacy rate districts; whereas in English students from low literacy districts performed better than the students from high literacy rate districts; while in Mathematics students from low literacy districts performed better on BAS and MAS; but on FAS students from high literacy districts outperformed students from low literacy districts. In majority, students from low literacy districts performed better than the students from high literacy districts.

Present study showed that *Sarva Shiksha Abhiyan* interventions had a positive impact on the scholastic achievement of III standard students of Punjab in the subjects of Punjabi, English and Mathematics and there is an increase in the percentage of scholastic achievement of students in contrary to Annual Status of Education Report (ASER) (2016) in rural report observed learning levels; for standard-III , 17.2% children were able to subtract in 2014 and it has increased to 20.2% in 2016 in Govt. schools at national level. Nationally, the proportion of children in standard-III who are able to read at least Std I level text has gone up slightly, from 40.2% in 2014 to 42.5% in 2016. 32% children in Std III could read simple words in English as compared to 28.5% in 2009. Hence *Sarva Shiksha Abhiyan* interventions have a positive impact on the academic achievement of III standard students in Punjabi, English and Mathematics and percentage of students on scholastic achievement has also improved as compared to the ASER (2016) reports.

There was a positive increase in the mean rank scores of Punjabi, English and Mathematics from BAS to MAS and finally to FAS. It showed on MAS and FAS students' scholastic achievement has increased because of SSA interventions in Punjab. Test statistics in case of districts showed that for the subject of Punjabi there was no significant difference in the scholastic achievement of students from high literacy rate district and low literacy rate districts on BAS and MAS; in English significant difference was only in BAS and MAS; while in Mathematics there was no significant difference in the scholastic achievement of high literacy rate districts and low literacy rate districts on BAS, MAS and FAS. In English, students from low literacy rate districts outperformed the students from high literacy rate districts. This is a clear indication that students from low literacy rate districts were benefitted more than the students from high literacy rate districts. It signifies that Govt. is taking keen interest to implement the recommendations for quality education in all districts and people from low literacy rate districts are more concerned about the education now a days.

REFERENCES

Annual Status of Education Report (ASER) 2005. *Executive Summary*. http://www.esocialsciences.org/Download/repec Download.aspx?f name = Document 1201200610.6708338.pdf&fcategory=Articles&AId=350&fref=repec

Annual Status of Education Report (ASER) 2016. http://img.asercentre.org/docs/Publications/ASER%20Reports/ASER%202016/aser_2016.pdf

Bharti, P. 2008. *Move to improve classroom teaching*. The Tribune, August 5, p.14.

Eleventh five year plan 2007- 2012. http://planning commission.nic.in/plans/planrel/fiveyr/11th/11_v2/11th_vol2.pdf

Malviya, S. and Rajput, M. 2007. *Diagnostic study to find out the reasons of average and below average marks in Mathematics and English in class IV and VI. Abhivayakti Janshiksha Evam Sanskriti Samiti*- Bhopal.

Nanda, K.P. 2015. India disappoints in educational outcome test. Livemint, retrieved from http://www.livemint.com/Politics/ZNRkJBrnB4NG9bJzLx5IaO/India-disappoints-in-educational-outcome-test.html

Pandey, S. and Tripathi, R.N. 2008. *Mid-term assessment of pupil achievement*. Midstream Marketing & Research Pvt. Ltd. New Delhi.

Pratham 2011. *Pratham Punjab* Retrieved from http://www.pratham.org/M-50-5-Punjab.aspx

Programme Evaluation Organisation 2010. *Evaluation Report of Sarva Shiksha Abhiyan*, Planning Commission, Government of India, New Delhi, retrieved from http://planningcommission.nic.in/reports/peoreport/peoevalu/peo_ssa.pdf

Srivastava, A.B.L., Bala, N., Saxena, R.R. and Arora, O.P. 2009. *Scholastic achievement and literacy level of children at Primary stage (Karnataka, Orissa and Uttar Pradesh)*,

Research, Evaluation and Studies Unit, Technical Support Group, Ed. CIL (India) Limited, (A Government of India Enterprise).

SSA – Govt. of India website: http://ssa.nic.in/national-mission/sarva-shikshaabhiyan- mission-statement

SSA- Punjab 2014. Department of School Education, Punjab, retrieved from http://www.ssapunjab.org/

Tenth Five Year Plan 2002- 07. http://planningcommission.nic.in/plans/planrel/fiveyr/10th/volume2/10th_vol2.pdf

Twelfth Five Year Plan 2012-17. http://planningcommission.gov.in/plans/planrel/12thplan/pdf/12fyp_vol2.pdf