

ACADEMIC ACHIEVEMENT IN SCIENCE OF CLASS IX STUDENTS OF TRI-CITY

***Dr. Lucky Singh**
****Dr. Sheojee Singh**

Abstract

The future of every country today depends on scientific and technological development. Scientific advancement brings a drastic change in the lives of the people. This has resulted in the tremendous impact of modern science on personal as well as the social life of the people. Science is being recognized as an important subject at every step of the educational ladder and also in our day to day life, especially in the present era (Singh, 2019). The present study aims at finding the comparative achievement of Class IX students studying in schools situated in the tri-city of Chandigarh, Panchkula and Mohali in the subject of Science. Using descriptive survey method on a random sample of 2005 students of class IX almost equally distributed from the government schools of the three cities of Chandigarh, Mohali and Panchkula, the study found no significant difference in achievement of students of Chandigarh and Mohali as well as for Chandigarh and Panchkula but a significant difference was found in achievement of students of Mohali and Panchkula.

Keywords: Academic Achievement, Descriptive Survey, Difference, Science

Introduction

In every society whether simple or complex, education has become a basic human need. It enables one to acquire appropriate knowledge, attitudes, skills and values that would make one to contribute positively to the development of one self and the society at large. Also, education is a veritable tool used by numerous countries all over the world to enhance national development. a nation that is not taking the education of its citizens seriously is endangering her future (Panda, 2016). Also, the future of every country depends on scientific and technological development.

***Ex-Research Scholar, Department of Education, Panjab University, Chandigarh**

****Associate Professor, Government College of Education, Sector-20, Chandigarh**

Scientific advancement brings a drastic change in the lives of the people. This has resulted in the tremendous impact of modern science on personal as well as the social life of the people. Science is being recognized as an important subject at every step of the educational ladder and also in our day to day life, especially in the present era (Singh, 2019).

Significance of the Study

Although all the subjects have their own importance and relevance to students for leading and living a better and harmonious life, science is considered of immense importance in the modern age of information and communication technology for students at early school life. Science subject is considered as the foundation for the development of attitude, values, capabilities, knowledge and skills. Technological advances have influenced all spheres of advancement in India but at the same time society is facing different types of challenges. To overcome these challenges science can play a pivotal role (Singh, 2019).

The quality of science teaching in our schools has been found unsatisfactory. There seems to be a serious drawback in science education. Student shows less interest in a science subject and some of them even develop a negative stereotype of science and scientists by viewing them like mad scientists. It is seen that most of the student after passing their X exams opted for art and humanities subjects and only a few students go for science courses. Performance of India in the Programme for International Student Assessment (PISA) in 2009 supports the shown concern. India Participated in PISA for the first time. when tested on their reading, math and science abilities India secure second last place only among the 73 countries participated in the event. Besides that ASER reports from 2014 to 2018, and National Achievement Survey (NAS) results in year after year show science to be a serious and major source of concern. It also makes it clear that there exists a learning crisis in science in our country. Hence, this study becomes significant at the preliminary level.

Tri-city refers to three adjacent and usually economically interacting cities. Chandigarh has 2 satellite cities – Panchkula and Mohali. The three cities collectively

referred as Chandigarh tri-city. Chandigarh, Panchkula and Mohali have failed to show results in national achievement Survey (NCERT, 2017) conducted by the National Council for Educational Research and Training. It can be said that the NAS report is just a reflection of poor board exam results in Tri-city. Three different state cities with three different education boards made the researcher to take up the study on the difference in students' achievement in science in the Tri-city (Chandigarh, Panchkula and Mohali).

Statement of the study:

Comparison of academic achievement in science of class IX students of Tri-city (Chandigarh, Panchkula and Mohali)

Objective

To find out the difference in the achievement of students in science of Government schools of the Tri-city of Chandigarh, Mohali and Panchkula

Hypotheses

1. There is no significant difference between the academic achievement of the students in the science of the schools of Chandigarh and Panchkula.
2. There is no significant difference between the achievements of the students in the science of the schools of Chandigarh and Mohali.
3. There is no significant difference between the achievements of students in the science of the schools of Panchkula and Mohali.

Design of the study

For the present study descriptive survey method of research was used to study the difference in the achievement of students in science of Government schools of the Tri-city (Chandigarh, Mohali and Panchkula).

Sample and Sampling Technique

For the required purpose, the area of the Tri-city was selected, which comprises of Chandigarh (U.T.), Mohali (a district of Punjab state) and Panchkula (a district of Haryana State). The government schools were approached after using the random sampling techniques for the selection, and the final sample comprised of a total of 40 schools, The total ($N_s = 2005$) sample of the students comprises of 665 from Chandigarh (12 schools), 659 from Mohali (13 schools) and 681 from Panchkula (15 schools) from where the data were collected. The marks sheets of the students were used to get access to the marks obtained in science by them. For this purpose, the investigator asked the science teachers for the data related to the achievement score of the students in science.

Tool used

Final result (Marks) of the students of class IX in secondary/senior secondary schools.

Delimitations

The present study was delimited to achievement in science of 9th grade students of government schools of Tricity (Chandigarh, Panchkula and Mohali).

Analysis and results

Table1. Mean, median, S.D, skewness and kurtosis of Achievement of students in science from schools of Chandigarh, Panchkula and Mohali:

Variable	ACADEMIC ACHIEVEMENT			
Subject	SCIENCE			
Area	Total	CHANDIGARH	PANCHKULA	MOHALI
N	130	45	42	43
Mean	45.69	46.82	42.34	47.77
Mean S.E	.708	.912	1.454	1.151
Median	46.89	47.38	41.99	47.60
S.D	8.068	6.123	9.425	7.547
Skewness	-0.144	-0.433	.238	.229

Sk. S.E	.212	.354	.365	.361
Kurtosis	-0.142	-0.182	-0.864	.733
Ku. S.E	.422	.695	.717	.709

From the table 1 above, the values of skewness and kurtosis on the scores of academic achievement in science were found to be lying in the range of +/- 1.96 (Peat, & Barton, 2008) and mean and median were found to be almost same. Since all the values lie within range, it can be concluded that the academic achievement scores of students in the science of schools of Chandigarh, Panchkula and Mohali were reasonably normally distributed.

Hypothesis 1: There is no significant difference between the academic achievement of the students in the science of schools of Chandigarh and Panchkula.

Table 2 Significance of difference between means of academic achievement of students in the science of schools of Chandigarh and Panchkula:

Academic achievement in science	Area	N	Mean	S.D	t value	p-value
	Chandigarh	45	46.82	6.123	2.646	0.10
	Panchkula	42	42.34	9.425		

Significance of difference between means of academic achievement of students in the science of schools of Chandigarh and Panchkula was computed by t-ratio. t-value (2.646) and p-value (0.10) was found to be no significant at 0.05 and also at 0.01 level. The mean score of academic achievement of students in the science of schools of Chandigarh was 46.82 whereas the mean score of the academic achievement of students in the science of schools of Panchkula was 42.34.

Hence, hypothesis 1, ‘There is no significant difference between the academic achievements of the students in the science of schools of Chandigarh and Panchkula’ stands accepted.

Hypothesis 2: There is no significant difference between the academic achievement of the students in the science of schools of Chandigarh and Mohali.

Table 3 Significance of difference between means of academic achievement of students of schools of Chandigarh and Mohali:

Academic achievement in science	Area	N	Mean	S.D	t-value	p-value
	Chandigarh	45	46.82	6.123	-0.645	0.521
	Mohali	43	47.77	7.547		

Significance of difference between means of academic achievement of students in the science of schools of Chandigarh and Mohali was computed by t-ratio. t-value (-0.645) and p-value (0.521) was found to be insignificant at 0.05 and also at 0.01 level. The mean score of academic achievement of students in the science of schools of Chandigarh was 46.82 whereas the mean score of the academic achievement of students in the science of schools of Mohali was 47.77.

Hence, hypothesis 2, ‘There is no significant difference between the academic achievements of the students in the science of schools of Chandigarh and Mohali’ is accepted.

Hypothesis 3: There is no significant difference between the academic achievement of the students in science of schools of Panchkula and Mohali.

Table 4 Significance of difference between means of the academic achievement of students in the science of schools of Panchkula and Mohali:

Academic achievement in science	Area	N	Mean	S.D	t-value	p-value
	Panchkula	42	42.34	9.425	-2.931	.004
	Mohali	43	47.77	7.547		

Significance of difference between means of the academic achievement of students in the science of schools of Panchkula and Mohali was computed by t-ratio. t-value (-2.931) and p-value (0.004) is found to be significant at 0.05 and also at 0.01 level. The mean score of academic achievement of students in the science of schools of Panchkula was 42.34 whereas the mean score of the academic achievement of students in the science of schools of Mohali was 47.77.

Hence, hypothesis 3, ‘There is no significant difference between the academic achievements of the students in the science of schools of Panchkula and Mohali’ stands rejected

Conclusion

Students of Chandigarh schools have higher academic achievement in the teaching subject science than academic achievement of the Students of Panchkula and Mohali schools in the teaching subject of science. These results attributed to the initiatives taken by Chandigarh education department like starting No bag day or joyful learning day in every school on every Saturday. Project “Phoenix” was also launched to track the learning outcome of all the students and performance of teachers of elementary level. A mobile application based on learning outcomes and progress sheet was also developed by UT, Chandigarh, to track the performance subject-wise, class-wise, school and cluster-wise etc. and also to track the progress of students and performance of teachers on monthly basis. The application tracks. Teachers have to analyze students’ achievements and give remedial classes before and after school to those who need it. By adopting such measure as mentioned above, Chandigarh students perform reasonably well in comparison to students of neighboring cities of Panchkula and Mohali.

There was no significant difference observed in the academic achievement of students in science of Chandigarh and Mohali schools. Along with Chandigarh, Punjab government has also taken steps in reforming education system and improving students’ achievement. Providing free textbooks to all students, free Internet service in primary schools provided as a part of educational reforms. In a unique initiative, the government also started a programme-- 'Padho Punjab. Padhao Punjab'—where by young NRI graduates and people from across India and the

world were invited to dedicate upto one year by way of volunteer work to assist in teaching in the schools (The Tribune,2017, June 20).

Students of Mohali schools have higher academic achievement in the teaching subject science than academic achievement of Students of Panchkula schools in the teaching subject of science. Absence of regular principals and teachers for science subjects in many school of Barwala, Morni, Raipur Rani blocks of Panchkula may also be responsible for poor achievement of students. Beside that, Haryana is also taking numerous steps to improve the achievement of students in all subjects (Thakur, 2016). The ‘Saksham Haryana’ program was launched with the objective of making 80 per cent of government school students in Haryana grade-level competent. The Haryana government developed a teacher training online course called ‘DigiLEP’ sharing course in WhatsApp groups among teachers of various schools. Course contains videos providing regular training and mentoring on remedial learning. In April 2018, the school education department introduced an assessment dashboard called ‘Saksham Adhyapak’ which kept tabs on student learning level. These entire steps taken by Haryana govt. will definitely improve the level of achievement of students in near future.

References

ASER (2014). Annual status of education report (rural) 2014: (X). Retrieved from ASER Centre website: <http://www.asercentre.org/Keywords/p/234.html>

ASER (2018). Annual status of education report (rural) 2018: (X). Retrieved from ASER Centre website: <http://www.asercentre.org/Keywords/p/234.html>

National Council For Teacher Education. (1998). *Competency-based and Commitment Oriented Teacher Education for Quality School Education* (Pre-service Education/In-service Education), New Delhi.

NCERT (2017). National Achievement Survey- 2017 District Report Cards retrieved from <https://ncert.nic.in/DRC.php>

- NCERT (2018). National Achievement Survey, Class X (Cycle 2) - 2018 State Report Cards. Retrieved from <https://ncert.nic.in/DRCX.php>
- Panda, D. D. (2016). *Impact of privatisation on quality in secondary education* [Unpublished doctoral dissertation]. Sambalpur University.
- Singh, L. (2019). *Achievement of students in science and mathematics in relation to professional commitment of their teachers, school climate and administrative effectiveness of the head of the institution* [Unpublished doctoral dissertation]. Panjab University, Chandigarh.
- Thakur, B. S. (2016, May 25). Haryana board: Panchkula teachers to face action for poor results. *Hindustan Times*. <https://www.hindustantimes.com/punjab/haryana-board-panchkula-teachers-to-face-action-for-poor-results/story-S4n4u1QjvxU8veXYRuUpeI.html>
- The Tribune. (2017, June 20). After poor results, Punjab govt takes steps to reform education. *The Tribune*. <https://www.tribuneindia.com/news/archive/punjab/news-detail-425015>