

Academic Achievements in Social Science subject of 9th class student of rural area's Schools through Inquiry-based Teaching Model

Priti Kumari¹, Dr S.K. Arora²

¹Research Scholar, Suresh Gyan Vihar University, Jaipur, India

²Professor, Sanskriti College of Education, Haryana, India

Abstract- The academic achievement is the major concern for the teacher and parents of the students during the academics session. Each individual teacher applies its own teaching methodology. Every teaching methodology is being oriented on the student understanding capability. The main motto of these methodologies is to explore the knowledge hidden in the topic taught. It is not possible in the traditional teaching style in which the teachers comes and teach the student without making any interactions with the students.

In case of the inquiry-based teaching model, the limitations of the traditional teaching model are being reduced with help of the inquiries between the students and the teacher. This teaching model generate the interactive session between the students and teacher in the class. It helps the students to resolve their doubts and problems faced in the class duration. In this paper, we will emphasize the impact of the inquiry-based teaching model in the students' academic achievement in the social science subject taught in the schools of the rural area.

Keywords— Academic Achievement, Traditional Teaching methodology, Social Science, Achievement test, Inquiry-based

I. INTRODUCTION

The academic achievement is the educational ambition that is achieved by a student, teacher or institution achieves over a convinced era. This is calculated either by examinations or unremitting assessments and the goal may diverge from an individual or institution to another. Academic achievement is commonly considered by examinations or continuous assessment but there is no general agreement on how it is best tested or which aspects are most important- procedural knowledge such as skills or declarative knowledge such as facts.

Academic achievements are accomplishment obtained in school by finishing classes, preserving high-quality grades and getting elevated scores on tests. Academic achievements do not comprise music or sports and are usually a demonstration of a students' extraordinarily good work in an academic term. Examples of academic achievements would be a student captivating a spelling bee, graduating first in their class, having the highest score on a test or quiz, and having the best grades in a class.

A student may exhibit knowledge on one apparatus and not on another. Using good strategies to evaluate academic achievement from numerous sources will ensure good in rank and the best possible educational planning. Today's school-reform enterprises often core on using procedures of student learning to estimate school and teacher efficiency. This focus on liability in some ways taken away from the supplementary indispensable rationale of consideration: to outline out what students know and necessitate to learn.

Many schools deal with this gap by instituting benchmark or interim tests, which often mimic the final standardized tests, or tracking specific skills through progress monitoring.

Teachers also design their own formative assessments, including anything from informal class questioning to written tests to performance-based tasks.

II. BEST WAYS TO MEASURE

There may exist following type of way of measuring the academic achievement as given below:

1. **Govern a standardized achievement test.** The standardized test has to be given by somebody who meets the credentials required in the testing manual. Usually that is a person who has assignments in administering that type of assessment. Standardized achievement tests evaluate the students being tested with the regular student of the equivalent age in a sample of students across the country. The advantage of these types of standardized tests is that they are well researched and usually have pretty good validity and reliability.
2. **Analyze state testing results.** State testing results in a state test -- can be a high-quality guideline for seeing what that student has essentially learned given what they have been educated. However, a student could have guessed well on the examination or they could have had a terrible day on the date of the test. This is one high-quality way of telling what a student has learned but it should be considered along with other sources of information also.
3. **Employ informal surveys to quantify academic achievement.** Teacher surveys based on what has actually been educated in the classroom can be a high-quality pointer of academic achievement. These are sometimes included in textbooks or they can easily be made up. They are a first-rate tool to employ to see

what has been learned, what has been retained over time, and what has not been mastered and needs to be re-taught.

4. **Glance at grade reports.** Grades are solitary tool to use to evaluate academic achievement. They are a great indicator of academic accomplishment and short-term learning. However, grades do not automatically measure long-term learning or mastery. For example, some students may do well on tests because they can commit to memory information and relate it at test time. However, it may be dubious if it was actual learning if they forget it right after the test and cannot demonstrate that knowledge at a later time. Grades are partially based on that short-term knowledge that comes from weekly tests and homework, and only part of the grade is more long-term knowledge.

These methods are being used to measure the academic achievement of the students in the class.

II. LITERATURE REVIEW

Fan et. al (1999) examined achievement differences among rural, suburban, and urban school students. Using data from the National Education Longitudinal Study of 1988 (NELS:88). Performance comparisons were made for nationally representative samples of 8th, 10th, and 12th graders in reading, math, science, and social studies. We found that rural students performed as well as, if not better than, their peers in metropolitan schools. These results provided evidence that, all else equal, rural students did not suffer disadvantage simply as the result of their residence in rural areas or their attendance at rural schools.

Owoeye et. al (2011) showed that there were no significant differences in the performance of students between rural and urban secondary schools in term of availability of library facilities ($t = 1.79, p < 0.05$), availability of textbooks ($t = 1.20; p < 0.05$) and availability of laboratory facilities ($t = 1.83, p < 0.05$). It had been established that facilities were potent to high academic achievement of students; therefore, Ekiti State Government should provided adequate material resources to rural/urban locations to enhance teaching and learning processes. The Parent Teacher Association (PTA), philanthropist and other charitable organizations were also implored to compliment the effort of the government to boost the performance of students in SSCE.

Paul et. al (2012) attempted to analyze the nature and impact of mid-day meal programme on academic achievement of students in some selected upper primary level schools of Burdwan district in West Bengal. The study covered three hundred students ($N = 300$) both in urban and rural areas encompassing „Below Poverty Line“ (BPL) and „Above Poverty Line“ (APL). The results of Chi-square-test revealed that mid-day meal program had had a significant positive impact in academic achievement of students. A multiple regression model had been used to determine the extent of relationship between mid-day meal programme (via the factors- attendance, enrolment, retention and drop out) and academic achievement of students. Again, students' t test had been used to examine the assumed hypothesis whether

any variation of effect of mid-day meal among economic status of students (i.e., among BPL and APL) or area (i.e., among village and town) and enrolment, attendance, retention or dropout among rural and urban students existed or not.

Adeyemo et. al (2012) examined the influence of social and economic disadvantage on students' academic achievement in senior secondary school physics. One hundred and ten students were selected randomly across two randomly selected senior secondary schools in Lagos State. From each of the randomly selected schools the researcher selected fifty five physics students using the simple random sampling technique. A number of related materials both of empirical and theoretical importance were reviewed. This study adopted a simple survey research design and made use of questionnaire in facilitating data collection. The statistical description (such as mean simple percentages and standard deviation) Pearson moment correlation coefficient and Chi-square method were employed for the analysis. Based on result obtained there was no significant relationship between socio-economic disadvantaged students' and their academic achievement. Also there was no significant relationship between parental influence and students' academic achievement in physics. Moreover, recommendations were made for the physics students, teachers, parents government and curriculum developer on ways to improve academic achievement and inculcating positive attitudes in students towards learning physics.

Kaur et. al (2013) pointed out that the students who receive high parental encouragement were better at academic performance than the students who received less parental encouragement. Hence it was recommended that parents should take interests in the educational activities of their children. By implicating this, the educational achievement of the students could be enhanced.

Saikia et. al (2013) stated that schools played a pivotal role in shaping the life of an individual as well as in bringing about socio-economic and cultural changes and progress of society. The modern time and changing situation had made the role of school even more significant. The success of any educational institution largely depended upon the quality education that was provided by the institution to the students. Inequalities between Rural and Urban areas were not new. They had always existed. In the present times it had become a vital problem of the society. Though the world has become a small village in this Era of Globalization this type of disparities still existed in our society. Present study tried to trace out the rural urban disparity of the academic achievement of the students in secondary schools of Kamrup district.

Chandra et. al (2013) presented study which examined the influence of Intelligence and gender on Academic achievement of secondary school students of Lucknow city. The sample of the study consisted of 614 students (358 males and 256 females) from ninth and tenth class of fourteen schools of Lucknow city of Uttar Pradesh (India). Intelligence was measured by Dr.G.C.Ahuja's Group Test of Intelligence. The board Results of Class X was used for collecting data for academic achievement. The findings of the study reveal that there is a significant influence of

Intelligence on academic achievement whereas gender has not significantly influenced the academic achievement .T-Test; ANOVA and F- value were used for analyzing the data.

Hameed et. al (2014) performed study aimed at investigating the performance of regular and contract English teachers at government elementary schools located in southern Punjab province of Pakistan. As students' achievement was taken as measure of teachers' performance, their test scores were also compared in terms of gender and locality. For this purpose, a test in English subject was administered personally by researchers to 7th grade students of four purposefully selected schools in District Rahim Yar Khan. The students' obtained test scores were analyzed by working out mean values, standard deviation and applying t-test of independent samples. It was concluded that there was significant difference in achievement of students taught by regular and contract teachers, and contract teachers performed relatively better than regular teachers. Comparison of performance of regular and contract teachers revealed that in both cases urban school students scored higher than students belonging to rural area. It is recommended that government of Punjab should not rely perpetually on contract policy for achieving the goal of enhancing financial efficiency and academic productivity, and appropriate measures may be taken for enhancing quality of school management and supervision, introducing effective reward and compensation system, and training teachers in modern teaching strategies.

III. INQUIRY-BASED TEACHING MODEL

Inquiry-based teaching is a pedagogical loom that invites students to discover academic content by posturing, investigating, and answering questions. Also known as problem-based teaching or simply as 'inquiry,' this approach puts students' questions at the center of the curriculum, and places just as much value on the component skills of research as it does on knowledge and understanding of content.

There are strong arguments for choosing an inquiry-based approach over more conventional models of direct instruction. An inquiry-based curriculum develops and validates 'habits of mind' that characterize a life-long learner: It teaches students to pose difficult questions and fosters the desire and skills to acquire knowledge about the world. Students are given opportunities to take ownership of their own learning, a skill necessary for one to succeed in college and in most professional settings. Additionally, an inquiry-based approach allows students to draw connections between academic content and their own lives, which can be particularly important for culturally and linguistically diverse learners

Inquiry based learning is a mature concept of learning. This outline of learning is an educational concept that relies more on a pupil's side of contribution than a teacher's involvement. This approach is moderately dissimilar from a conventional approach of learning. In a conservative classroom, teachers use a system, where they come to the class with a set of pre-prepared course curriculum and deliver them to the students on a chronological approach. In fact, they are the energetic facilitators of teaching by

providing a source of skills and knowledge to the students. The entire teaching process is teacher-driven, when the teacher manages and administers the entire proceedings.

On the other hand, an inquiry based learning system drives the students to learn in a productive manner. Here, the teacher or instructors act as mentors or guides to lead students to learn their lessons. The teacher-in-charge will allow the students to come with their own queries and questions that eventually help them learn with a motivated mind.

Children are inquisitive and aggravated to identify and discover everything that interests them. Their concentrated desire to learn new things will escort them to intend, construct, master and experiment with different things and issues. In an inquiry based learning system, there are two imperative entities. A child will have his or her interests and enthusiasm to drive the learning process. On the divergent, both parents and teachers just act as facilitators or counselors in the entire learning process. An inquiry based learning process is evolving and organic, apart from its dynamic and interactive nature. It means that a child, who uses this approach is very active when he or she gets an active interest in learning. An inquiry based learning process involves the following important factors:

New discovery - Something interests and intrigues children that eventually force them to know more about it. This intriguing thing can fuel a child's imagination and drive to learn more. This very precious response system works very well for any child. An urge or drive to explore new domains or things will help a child to try his or her maximum best to master the basics of lessons.

A sense of action to drive the learning process - Although children are busy learning their lessons, teachers keep observing and mentoring their activities. They will also provide many opportunities to children to ask their questions and seek clarifications. During the process of learning, children start collecting information and details regarding the lessons. In this way, children will interact with other children to learn on a mutual basis. Team learning is an excellent way to learn new things and lessons.

Results or outcome - At the end of the learning process, the children will assess their performance with the active help from their teachers. This step is a reflection period, when children compare their performance level and later assess what can be done to improve their performance. The teacher, who is in charge, will help them in the process. Once children feel confident, they can probe and test new areas, domains and territories. The outcome is academic excellence, cooperation and teamwork.

Teachers can follow the stages in this model to teach the research process to students in kindergarten through to grade:

- **Stage 1 Exploring:** Students explore by initiating the inquiry, choosing an appropriate and personally engaging topic, and developing deep questions around the topic chosen.
- **Stage 2 Investigating:** Students investigate their topic by designing a plan for inquiry, finding sources and selecting appropriation information, and formulating a clear focus.

- **Stage 3 Processing:** Students process what they have found by analyzing the information, evaluating their ideas and those from selected information, and organizing and synthesizing findings.
- **Stage 4 Creating:** Students create knowledge by making products that present the results of their inquiry, assessing their product and the process they use to construct it, and extending and transferring their learning to new contexts and inquiries.

IV. AIMS & OBJECTIVES OF REASEARCH WORK

It discusses about comparison between Inquiry-based teaching and traditional teaching system in secondary school. It has following objectives as given below:

- 1 To demarcate the restrictions of traditional teaching system using Inquiry-based teaching model.
- 2 To improve the academic achievements of 9th class students in Social Science subject by means of Inquiry-based teaching model.

For this purpose there are following steps done with the help of following tools as given below:

- The review of literature has been completed through the comparative study.
- The data collection has been prepared with the help of Achievement test.
- The data analysis has been finished by means of Statistical techniques.

The study has been done on the basis of the Achievement test. The study will consist following:

- Total 60 Secondary school students
- 30 boy students belong to rural area
- 30 girl students belong to rural area.

V. FINDINGS

The achievement test of maximum 30 marks has been conducted for collecting the primary data. The results of the study are given in the following tables
Table-1 Difference between the academic achievement in social science taught by inquiry-based teaching and traditional teaching model in rural area school

Model	N	Mean	t-value
Traditional Teaching	60	14.8	4.15476E-08
Inquiry-based teaching	60	21.4	

Table-1 conclude that there is significant difference between Difference between the academic achievement in social science taught by inquiry-based teaching and traditional teaching model in rural area school at 0.05 level of significance which is not significant. There are following findings of the study carried out given below:

- There is no significant difference between the technical achievements of boys' & girls' student through Inquiry-based teaching model.

- There is no significant difference between the technical achievements of boys' & girls' student of different ages through Inquiry-based teaching model.
- There is no significant difference between the technical achievements of boys' & girls' student of rural & urban areas through Inquiry-based teaching model.
- There is no significant difference between the technical achievements of boys' & girls' student in different subjects through Inquiry-based teaching model.

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