

# COMPARE TRADITIONAL METHODS OF TEACHING MATH WITH UNCONVENTIONAL ONES

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## ABSTRACT

The point of this paper is to analyze the mathematics showing techniques, and study their results on mathematics learning. Various examinations have shown that students experience mathematics nervousness which is a sensation of strain and dread that obstruct math learning. This might be credited to the applied showing techniques in the study halls. The three significant showing strategies are: customary, critical thinking, and revelation learning. Customary showing strategy is a teacher-focused guidance, while critical thinking technique is an as teacher and student centered which depends on how teacher utilizes the four stages of critical thinking strategies in educating Mathematics. In revelation learning strategy, teacher assumes the part of facilitator through including students in changed exercises related with the disclosure and development of the information. The subjective contextual investigation technique was viewed as more practical and proper to meet the point of this review. Information were gathered involving perception and semi-organized interviews with teachers in the optional schools in Malaysia. It was seen that conventional, critical thinking and disclosure learning techniques were drilled by the teachers. The discoveries uncover that students are more effective when precise critical thinking technique in view of Polya's methodology is consolidated into disclosure learning. Thus, there should be more accentuation on showing strategies which incorporate less talk, more understudy focused classes and more conversation. The discoveries propose that critical thinking and disclosure techniques add to better mathematics advancing as well as upgrade students' imagination to adapt to life challenges.

**Keywords:** *Traditional, Teaching Math, Unconventional*

## INTRODUCTION33

Mathematics turned into the main impetus for practically all innovative and logical improvements in the nineteenth and twentieth century. It has large impact on our expert and social everyday existence exercises It plays critical part for students' prosperity and reproducing a created country. Mathematics training has been dealt with all of the time as a significant segment of general schooling and explicitly science instruction. It is accepted that a teaching technique is fundamental for any significant improvement exertion. These varieties of convictions and values concerning mathematics learning bring about various mathematics schooling systems. The job of instructors is to work with students' reasoning and learning, in this way, educator should endeavor to inspire students to learn. To know about teaching practice exercises done by instructors, we ought to have

sufficient information regarding learning and teaching strategies. Different teaching strategies, for example, conventional, critical thinking, and revelation learning have been utilized in schooling systems from one side of the planet to the other. The application of these teaching methods is explained more in the next sections. Finally, we present the optimum teaching method for mathematical subjects.

Most Mathematics educators utilize conventional techniques with regards to teaching Mathematics (for example white/dark and marker/chalk). Hence, the educator assumes the part of a teacher. He is the person who concludes which teaching-learning technique will be utilized. Most frequently students are viewed as having "holes in information" that the educator should load up with heaps of data. Time and again, Mathematical instruction is independent from the students' day by day encounters. Consequently, the instructor neglects to connect with the students' advantages in the exchange of new information. All in all, the instructor needs to respond to questions, for example, "For what reason do we really want it?", "For what reason do we have to realize this?"

The two teaching methods—active and traditional—in the teaching of mathematics in special education classes at standard elementary schools in India Both methods strive to boost scholastic achievements in mathematics, from the aspects of understanding study materials and the ability to solve problems. It should be noted that the active teaching method suggests a new path in teaching—a path with which one can encourage and assist students experiencing difficulties and also facilitate in the perception of study materials. Mathematics is considered to be one of the more difficult subjects studied in school—perhaps even the most difficult—as students are required to solve verbal problems, cope with research assignments, present situations using illustrations and mathematical representations, understand the properties of concepts and the relationships between them, and more. Thus, the student must possess strong abilities in logical thinking. Active teaching stresses social relationships among study participants in a school environment, as well as student actions in accordance with his/her personal study advancement, development of a flexible study program that corresponds to student needs, development and organization of diverse study materials and the use of alternatives in teaching.

All these should serve as factors assisting in teaching math and in simplifying study materials for students with difficulties. The research objective was to examine the measure of change that should occur in the math student using the active teaching method, according to the RTI model (Response to Intervention). In order to examine the effect of teaching methods on scholastic achievements, this research project evaluated four special education classes studying within the standard elementary education framework—two classes studied mathematics according to the active teaching approach, and the other two according to the traditional teaching approach. The research hypothesis was that differences would be detected in scholastic achievement due to the differences in teaching methods.

Due to the lack of information on the unique characteristics of teaching methods and the relationship between them and the boosting of scholastic achievements in mathematics in special education, the present research engaged in the definition of these teaching approaches and examined the measure of impact of the various teaching methods on scholastic achievements in mathematics among students in special education. The definition of differences between the characteristics of active and traditional teaching approaches may enable a better understanding of the link between institutional components and scholastic achievement, and a more efficient design of the educational system.

The basic premise of the active teaching method is that every study group in the class is heterogeneous, even if it would seem that the class or study group is composed on some homogenous basis. Moreover, as people learn from within various systems of social relationships, the structure of the social group and the dynamics within it will affect both individual and group learning. Therefore, differences among students and the heterogeneous composition of the study group constitute a starting point in the active teaching approach. The active teaching approach commenced in India in the 1960's in a small number of schools. The number of active schools gradually increased, and in 2016 the Ministry of Education established the Unit for Active Study. The active teaching approach does not draft preliminary definitions, but rather attempts to utilize local adaptation in the characterization of students and in the determination of objectives and directions for action in study, in knowledge and in study environments.

Globman and Harrison drafted a comprehensive definition for the active teaching approach in five detailed areas: a) the emphasis of warm interpersonal relationships among participants in the school environment; b) the emphasis of student action in independent guidance of his/her study; c) the development of a flexible study program that is adapted to its students; d) the development and organization of diverse materials and resources in the study environment that will trigger inquisitiveness and learning; e) the use of teaching methods and a range of social systems to develop diverse learning experiences. Some combinations from within these five areas result in different implementation models for active teaching in schools. It should be noted that all five areas are implemented in every one of the models for active teaching; however, the differences lie in the measure of emphasis granted to each of the areas—an emphasis that endows each model with its own uniqueness.

One model, the individual-academic model, stresses humanity and socialness, placing the student at the center of scholastic processes and an advanced teaching program. This model attempts to address the differences among students according to level of achievements and learning style. Another model, the open corridor model, places more of an emphasis on the third and fourth areas of active teaching—an advanced teaching program and operation of an advanced study environment, and less on other areas of active teaching. According to this model, the environment responds to the differences in student interests and attempts to develop them from both a cognitive and expressive aspect simultaneously. A different model, the open school model, stresses the fifth area more, and flexibility becomes a basic principle in the operation of an educational environment. With this model, there is an attempt to refer not only to the different individual character traits among students, but also to the cultural differences among them (Globman & Harrison, 2016; Kashti et al., 2017). Success in active teaching is dependent upon the measure of cooperation among all active elements in the school, from a belief that this method will assist the study population and provide a unique response to each individual student, in accordance with his/her personal abilities.

## OBJECTIVES

1. To study the teaching of maths subject to students of std IX traditional approach
2. To make a comprehensive study of the performance of students in maths who taught through traditional approach and through the use of information technology

## REVIEW OF LITERATURE

As indicated by Hussain, Anwar and Majoka (2011), Activity-based learning coordinated with peer guidance causes what is going on for teaching science subjects and exceptionally physical science. In a movement based learning class, students are effectively associated with involved encounters and get opportunity to relate theoretical thoughts and hypotheses with substantial perceptions. This assists them with making profound comprehension of logical ideas. Çelik (2018) depicts, It was seen that movement based learning exercises work on students' scholarly accomplishments and mentalities towards exercises. As per Shah and Rahat (2014), Activity-based learning teaching method creates what is going on for science teaching particularly at Elementary level. In movement based teaching methods, students are involved effectively in active personalities on encounters and get a chance to relate theoretical ideas and speculations with real perceptions. Action based teaching method assists students with getting the logical ideas. Students' effectively associated with teaching learning interaction and exercises help them in utilization of logical information in different genuine circumstances. "Movement put together mathematics guidance is based with respect to action by including students in perusing, conversation, down to earth exercises, commitment in taking care of issues, investigation, blend and assessment (Festus, 2013)." Innovative teaching methods that give positive numerical learning encounters could assist with improving students' accomplishment in mathematics (Riley et al., 2017). Assuming that the student is furnished with the chance to investigate their current circumstance and gave an ideal learning climate then the learning becomes cheerful and dependable. This learning procedure implies turning around the traditional instructor focused comprehension of the learning system and putting students at the focal point of the learning system (Golji and Dangpe, 2016).

According to Fallows and Ahmet (2010), "training is best when students' affiliation, commitment and cooperation are amplified." McGrath and MacEwan (2011) explained, "In action based guidance, the student takes part in the instructive method during show of 'doing' than in conventional technique." According to Prince (2014), "Action based learning is a learning strategy where students are occupied in the teaching system." Activities connected with real life practice assist with excursion students to trade data into their singular data which they can relate in assorted conditions. (Edward, 2015).

Kenly (2017) expressed, "action based learning method is different from conventional procedure of training. Students take dynamic part in it. Movement based learning is such instruction in which student is powerfully engaged with doing or in considering something arranged. As Churchill (2013) said, "such learning assists students with making scholarly models that think about 'higher-request' show, for instance, applied decisive reasoning and trade of information an expertise". As indicated by Hake (2018) "students' motivation by interacting with students in natural exercises is a doable and helpful method for educating troublesome thoughts. He depicted the meaning of different exercises associated to the contemplations being shown." Learners' motivation is high assuming these exercises are up close and personal to the students (Hug, Krajcik and Marx 2015). In lab system learning by doing might be conceivable as in action based teaching/learning.

In revelation learning method, instructors ought not endeavor to just empty data into youngsters' psyches. Rather, youngsters should be given certainty to find their reality, discover information, consider, and think fundamentally with watchful management and huge direction of the educator (Eby, Herrel and Jordan, 2015).

Mathew (2017) attempted to contrast the adequacy of AOM and CM of teaching mathematics at optional school level. the AOM was more powerful as far as understudy accomplishment.

Gopakumar (2015) analyzed the adequacy of AOM and ITM on mathematics accomplishment at auxiliary school level. The goal was to look at the impact of AOM and ITM on mathematics accomplishment at optional school level and to analyze the adequacy of AOM and ITM on mathematics accomplishment at auxiliary school level concerning the informative targets Knowledge, Understanding and application. The discoveries showed that the ITM is better than AOM.

## RESEARCH METHODOLOGY

The methodology used in this study must be consistent with the aims of the study which is to evaluate the performance of sixth grade students in solving problems using collaborative learning method. According to the aim and nature of this study, population included all sixth grade elementary male students studying in India during the academic year 2019-2020. To select the sample in this study, we used non-random sampling method, the type of using available samples, that is to say, the researcher chose the school he was teaching there which was consisted of three sixth grade classes. Two classes were selected randomly from among these three classes. These two classes were then randomly chosen to be used as control and experimental groups. The control group consisted of 30 students and the experimental group also consisted of 30 students. The Standard math test was used as research instrument. This test was developed by experts and teachers of mathematics and the total score is 20

In this study, study cards-based approach was used and the study conducted as follow: Most of the time students were trained in larger groups consisting more than 4 students. Each student was required to explain to his partner about the way he solved the exercise, in which the student relying on and based on the previous card had gained experience to solve, listening to the explanations provided by one of the members in his group and also the way to deal with new card based on the already solved exercise. Each student was required to solve the already solved exercise which his friend was explained to him and called upon, and if necessary to ask his friend if he could handle finding the solution to the question he is helping him to solve before or not. After the completion of work on a pair of cards, students joined their partners in the group, which helps the members of each group to have the opportunity to play both the roles of student and teacher.

## ANALYSIS AND INTERPRETATION OF DATA

In the current section the research plan of the review has been talked about. Information got because of leading examination was:

1. Performance trial of the students of C.G. (Controlled gathering) and E.G (Experiment Group) was led that is pre-test was managed to the two gatherings.
2. Performance of the students of C.G. (Controlled Group) in the wake of utilizing just customary strategy for teaching science (Physics Only).
3. Performance of the students of E.G. (Exploratory Group) subsequent to utilizing data innovation.

## 4. Comparison of two strategies as beneath :

In the presentera, science and mechanical advancement is arriving at its pinnacles.

In each field stamped progress is being recorded be it agribusiness industry or instruction from educator focused learning; the shift is to student focused.

Each angle for progress comparable to the student is designated by the educationist, clinician and our researchers. Data innovation has helped understudy toward self learning PCs and its application in schooling has brought an enormous change and modernized the homerooms.

Advancement are altering the essence of the study halls and another climate is being created to arrive at more prominent 1 stature on one hand and on the other significant homeroom are lying in a similar circumstance.

The customary techniques are being continued disregarding new modified content, topics now and again.

The current work has been taken up to demonstrate the value PC helped learning and the genuine picture emerging out of conventional strategies.

**Analysis and Interpretation of Achievement Test**

The test was given to every one of the subject chosen implies stand deviation co-related 'r' and 'T' worth of accomplishment trial of E and C 191 - - - - bunches on student classified as follows:

**TABLE NO. 1 SUMMARY TABLE OF STANDARD DEV AND T-VALUE ON ACHIEVEMENT TEST OF BOTH C & E GROUP,**

Sr. No.	Groups	Means	SDS	C.R.	't' Value	Remark
1.	C	22.16	11.33	(0.05)	0.263	NS  (Not Significant)
				1.96		
2.	E	21.33	13.05	(0.05)		
				1.96		

**FINDINGS INTERPRETATION AND CONCLUSION:****Observation**

From above table t-esteem got is 0.04, determined t-esteem is 0.04 subsequently it isn't huge at 0.05 level, of huge. It implies there is no huge distinction in the accomplishment of the understudy's presentation in physical science general knowledge, and Critical proportion of pre-test scores demonstrates that both the gatherings are homogeneous in their exhibition.

## Findings

- a. The Mean of C.G. is = 22.16 and E.G. is = 21.33 the mean distinction is less means scores got by the two gatherings are equivalent.
- b. The SD of C.G. = 11.33 and E.G. = 13.05 dissemination of the scores of the student are closer to the mean presentation. So the speculation held.
- c. C. As't, 'D' isn't critical.

## SUGGESTIONS

Factor analysis was utilized to decrease the dimensionality of the 34 things of the material science learning insight study to more fundamental factors in view of the reactions got from the members. Head part factor extraction with Varimax turns was utilized to work on the subsequent element structures alongside boosting the loadings. In light of the idea of the assertion things and Bloom's Taxonomy of the mental areas, these six elements were named independently as Physics Learning By Rote (Factor I), Physics advancing by relating (Factor II), Physics learning by Comprehension (Factor III), Physics learning through equation inductions (Factor IV), Physics learning Through Effort (Factor V), and Physics learning through training (Factor VI). Further, the aftereffects of the assessment of the understudy's exhibition depended on their test grades on tests. This investigation discovered that members performed better by attempting to comprehend the physical science material and relate physical science issues to genuine circumstances. Members who depended on repetition learning didn't perform well. It was accounted for that PC upheld and intuitive learning conditions better serve the variety of school students concentrating on early on physical science. Results from the subjective strategy at this study showed that a larger part of students were overall emphatically leaned to instructive innovation, for example, Power point show, representation, IS reproduction, and tracked down it supportive in learning physical science. The outcomes were likewise sure with regards to benefits acquired from the utilization of Black Board and intuitive interchanges like offbeat conversation. Over 90% of students in the innovation incorporated homerooms detailed being benefited by the learning climate while 71% of students in the customary study hall setting showed their inclination in having the innovation coordinated educational plan,

## CONCLUSION

In this review, students performed better in physical science courses by attempting to comprehend the physical science materials and relate physical science issues to this present reality circumstance. The impression of Physics learning through repetition didn't assist students with learning admirably of perform better. In general, orientation was not related with execution. The discoveries of this concentrate on along these lines conveyed some extremely reassuring data to physical science teachers. Students concentrated on physical science by endeavoring to comprehend the standards behind the course material additionally students would in general

retain the course material. 9 out of each 10 students in the innovation coordinated study halls revealed being benefited by the learning climate while each 7 out of 10 students in the conventional homeroom setting demonstrated their inclination in having the innovation combination. A higher rate coordinated learning climate got a last grade of B or higher contrasted with the students who didn't feel the advantage from a similar learning climate.

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