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# EFFECTIVENESS OF STUDENT TEAMS-ACHIEVEMENT DIVISIONS (STAD) MODEL FOR THE TEACHING OF PAK STUDIES AT SECONDARY LEVEL IN DISTRICT KOTLI AZAD KASHMIR

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**Abstract**

STAD is a Cooperative learning strategy in which small groups of learners with different levels of ability work together to accomplish a shared learning goal. The objectives were to examine the effectiveness of the STAD model, and the effectiveness of the Lecture Model, and to compare the STAD model and lecture model. It was an experimental study, and a pre-test and post-test control group design was used to conduct the research. The study sample consisted of 44 randomly selected students from Government Girls' Secondary School No. 1 Kotli. A pre-test was taken one week before the start of the experiment. Based on the scores of pre-tests, the students were divided into control and experimental groups. The students of the control group were instructed through the lecture method while the students of the experimental group were instructed through the STAD method. The treatment period was eight weeks. At the end of the experiment, the post-test was taken. The collected data were analyzed by using the SPSS 25 version and found that both the models were effective for the teaching of Pak studies, but the average marks of post-test of the experimental group were more than that of the control group. Hence it was concluded that the STAD Model was more effective for the teaching of Pak Studies than the Lecture Model. It was recommended that the STAD model be used instead of the lecture model at secondary and higher secondary levels because the students learn more in the cooperative learning environment.

**Keywords:** Effectiveness, STAD, Academic, Achievements, Treatment.

## Introduction

Education is the process by which a small number of people impart knowledge, skills, and behaviors to the rest of society. Instruction is one of its key components which enables the teachers and students to achieve their goals. A lot of teaching methods are there which are in use by the teachers. The teachers use these methods according to the nature of the subject being taught in the class (Tufail & Mahmood, 2020). The lecture method is one of the most ancient methods; it is the most efficient and easiest method, as it requires not many resources to execute. It is a teacher-centered method and a one-way mechanism of instruction. The teachers play an active role whereas students remain passive in this mode of teaching. Although this method of instruction is not suitable for the teaching of natural sciences, resources are not enough in most developing countries, which is why this method is still in the practice of teachers especially in the sub-continent (Smith & Van Doren, 2004). In the last two decades, revolutionary changes have occurred in each field of life, and its impact has also been noticed in the teaching and learning process. The world has become a global village, and teachers all over the world have become close to each other. Even they have started sharing their experiences. Therefore, they felt a need to strengthen their teaching methodologies. Educationists and researchers introduced a lot of methods with time, such as 5E, Jigsaw, GTM, ALM, and much more. (Laghari, Chachar, et.al. 2023), Cooperative learning is the demand of the modern world; the students share their ideas and experiences due to which their learning becomes easier and longer lasting. STAD is a strategy in which group learners having different ability levels will work together to achieve a common learning goal. It was designed by a colleague of Spavined at Johns Hopkins University (Prince & Felder 2006). This method drives students from concrete to abstract because they observe the contents critically and they take results. With this process, they are equipped with so many other things like critical thinking power, reasoning, and questioning, so that we can say that this method in short is based on what is working; that is the truth. (Asal, Yousuf, et. al, 2023), There are some limitations to lecture cum demonstration like some Sometimes students are not clear about concepts and those methods are successful which are student-centered, and these methods are not students centered Students face laboratory skills and there is a lack of training in these methods. This is different from traditional group work. In traditional group work, some members may undertake most of the work, while other members do not bear the burden (Smith, 2000). Educators have proved that students who have worked in cooperative groups perform better in tests, and have proactive and strong language skills, improved reasoning skills, and improved critical thinking skills. In addition, it is believed that due to the participation of the team in the task, the students seriously participate in dialogue, debate, and debate to maintain a high learning ability and improve their higher-order thinking. The contribution of cooperative learning (CL) to the promotion of second language and foreign language learning has been widely recognized. However, few scholars pay attention to how this teaching method works and how to improve learners' communication skills (Yusuf, Jusoh, & Yusuf, 2019).

## Conceptual Framework

Applying the STAD model, the group consists of heterogeneous members; their academic or language knowledge, gender, age, religious beliefs, mother tongue, culture, etc. may vary. They also help other members who have difficulty understanding the material. If the group has difficulties, the teacher will aid as a tutor. In the testing phase, each student takes a test separately. Teachers can use "Socratic" methods in various subject areas and across grades to challenge students to examine

temporary and historical issues. When modeling Socrates' behavior, the teacher asked students to ask questions in a way that asked them to think about problems. The use of devices such as the Internet, computers, and computer-aided programs has made the STAD model more effective (Syahidi, & Asyikin, 2018).

**Problem Statement**

The secondary school teachers usually teach in large classes. Therefore, they can't pay individual attention to the students. Student talking time is severely reduced and students don't like sitting in classes, especially when they are being instructed through lectures. Cooperative learning methods can be used to enhance students' learning. For these reasons, the researchers conducted this study to analyze the effectiveness of the cooperative learning (STAD) model in Pak studies teaching at the secondary level in Azad Kashmir.

**Significance of the Study**

The current study will be beneficial for the teachers, head teachers, students, parents, and curriculum developers. On the biases of the results of the current study, the teachers will be better able to plan the lesson by using cooperative learning techniques; the students will also share their experiences which ultimately results in permanent leering. The study will also be helpful for head teachers so that based on the findings of this study they will be able to guide the teachers to plan the lesson in a better way. The study will also assist the curriculum developers of teacher's education because the study will suggest fruitful methods to include in the teacher's training curriculum.

**Research Objectives**

1. To examine the effectiveness of the effectiveness of STAD model.
2. To study the effectiveness of the effectiveness of Lecture model.
3. To compare the effectiveness of the STAD model and lecture model

**Hypotheses of the Study**

**$H_{01}$**: There is no significant effect of the STAD Model on the academic achievements of the students.

**$H_{02}$**: There is no significant effect of the Lecture Model on the academic achievements of the students.

**$H_{03}$**: There is no significant difference between the effect of the STAD model and the Lecture method on the academic achievements of the students.

**Literature Review**

Before starting research, the researcher collects enough data about his present studies through various sources such as books, journals, autobiographies, and various search engines. The problem becomes clearer if one goes through the literature on that problem. For this, the investigator looked at the previous study done by other researchers. This helps researchers to relate the present problems with many factors. (Muhammad, Muhammad, Arshad, 2023), The investigators observe the problem's specificity. Many studies have suggested that the STAD Instructional Model seems more trustworthy than all the other approaches supporting the students making their grip over their studies, especially at the secondary level. Many institutes arrange discussion forums for their students with the teacher for the purpose that they can openly share their ideas and clarify themselves well. They can remove misperceptions about the lecture in class. In discussions, the students' strength is less than the strength in lectures because there are at least 10 to 20 students in a forum, but in lecture class there is a maximum of 300 students which becomes a large class for them. In these forums, they can ask questions from one another. If they have any questions, they can freely ask their teacher in class again. The main benefit of a discussion forum is that maybe one student was present in class; the other one will clear that lesson to the students who were not in the class.

***Lecture Model***

Most of the teachers had to deal with large groups of students and for this purpose, they adopted the lecture method, as it is a very easy approach to address the larger gatherings. The lecture method has advantages and disadvantages, and alternatives to this method are discussed below. Delivering a lecture involves only a one-way process that excludes the student-teacher interaction, communication, effective questioning, and practical approach. There are as many advantages as there are disadvantages to the lecture method, and advice is provided for teachers who are having difficulty with the lecture method in the classroom (Weissglass, 2004). In this approach, it is limited to a particular class, designed them, related to students for the improvement of their skills of the students. Another approach to teaching physics is the integrated approach. In this method, this method helps students to learn the contents with details. Traditional methods are more easily available in comparison with modern teaching methods. For teachers, it is no cost, especially in rural areas. Traditional teaching methods offer many ways to transfer knowledge to students because it doesn't require any technical skills to transfer it. Apart from that, modern teaching methods can affect the health of students more than traditional teaching methods.

***Student Teams-Achievement Divisions (STAD) Model***

STAD is a strategy in which group learners having different ability levels will work together to achieve a common learning goal. It was designed by a colleague of Spavined at Johns Hopkins University. STAD is considered one of the simplest and most direct methods in the entire cooperative learning (Slavin, 2010). It is established based on the completion of the teaching method. It is used to meet clear teaching goals (Majoka, 2004). It also stimulates team responsibility and promotes individual learning (Malone & McLaughlin, 2007). When we want to show something externally not internally it's called Demonstration, either it is explained through experiments or description, or to experiment practically. In short, we can say that we prove something logically with arguments. It is done when we want to increase of knowledge of something through practice and we want to prove the truth. There are two processes involved around the Demonstration of what and how. It consisted of the merits of the lecture and demonstration method. That's why it is called Lecture Cum Demonstration Method. (Sarwar, Khurram, 2023), What the teachers want to explain to the students he explains and performs through experiments in class and explains it. It is better than the lecture method because in this method students or participants are active, not passive. Among elementary school students, middle schools, and even universities, cooperative learning through the STAD model is the most useful and most needed. They find themselves effective and able to satisfy their collective learning culture. Stevens & Slavin (2013) believe through their research that this has a positive impact on the development and construction of the team. Facts have proved that students who participate in cooperative learning have higher self-esteem, improved thinking skills, and develop greater intellectual abilities (Slavin, 1994). Students can adapt to various dynamic atmospheres. They develop a higher level of self-confidence, are more resistant to change, and accept gender and cultural differences and inequalities with a broad mind and positive thinking (Johnson, 2011). Organized cooperative learning, which is a good plan for different student groups. In addition, it is believed that due to the participation of the team in the task, the students seriously participate in dialogue, debate, and debate to maintain a high learning ability and improve their higher-order thinking (Cohen, 2004). Educators have proved that students who have worked in cooperative groups perform better on tests. Strong

language skills, improved reasoning skills, and improved critical thinking skills. In addition, it is believed that due to the participation of the team in the task, the students seriously participate in dialogue, debate, and debate to maintain a high learning ability and improve their higher-order thinking (Khan, 2007).

***Working of STAD***

This is teamwork, but students are individually graded based on their contributions to the team. Usually, in STAD, 4 to 5 members are assigned to each class, and their performance level, gender, and race are mixed. Finally, students take individual tests on the material, and they may not help each other on these tests. Then compare their scores with their past averages, and award scores based on how well the students meet or exceed their performance. It encourages students to take responsibility for the other members of the group and themselves. Therefore, in this way, you can ensure that all team members with different levels of understanding have the same motivation to do their best (Michaelsen, 2012). From mathematics to language, from art to social science, STAD has been widely used in various subjects and has been used from the second year of school to university. It is best suited to teach clearly defined goals by incorporating more open assessments (such as essays or performances). In STAD, assign students to heterogeneous groups of 4 or 5 members, as shown below:

**Teach:** In the teach phase teachers commonly instruct students by using suitable materials through discussions. In the teaching phase, teachers usually introduce materials in the form of lectures and discussions. Students should be told what they will learn and why it is important. (Shahzaib, Datoo, 2023), This part is mainly done by teachers; they introduce and explain the material in an easy-to-understand way. Students also need to pay attention, because the learning content will be allocated in the next sections.

**Steps of STAD model**

| Sr. No | Steps | What the teacher does |
|---|---|---|
| 01 | Teach | Teachers usually introduce materials in the form of lectures |
| 02 | Team Study | Students will be divided into four or five groups, team members cooperate with the worksheet and answer sheet provided by the teacher |
| 03 | Test | Each student takes a quiz individually, scoring the teacher's quiz, and write down the current score and the improvement of the previous quiz |
| 04 | Recognition | Each team will receive a recognition award based on the average score of each team |

**Team Study:** In the group study phase, group members work together with the worksheets and answer sheets provided by the teacher. According to the total number of students in each class, students will be divided into four to five groups. The group consists of heterogeneous members; their academic or language knowledge, gender, age, religious beliefs, culture, etc. may vary. They also help other members who have difficulty understanding the material. If the group has difficulties, the teacher aids as a tutor (McGee, Wang & Polly, 2013).

**Test:** In the testing phase, each student takes a test separately. The teacher scores the test and writes down the current score and improvements to the preceding test. After the group discussion, the students take a quiz and test respectively. They cannot help each other in this activity. If possible, they can move the chair back and sit separately from the team. To score their test results, compare their scores with past averages and give them points based on their progress; the team's improvement score is obtained by dividing the individual's improvement score by the number of people in the group. If they perform better on the test, all students can improve their team score, and students of all levels have high, medium, and low opportunities (Malone & McLaughlin, 2007).

**Recognition:** Each team will receive a recognition award based on each team's average score. For example, a team with an average improvement of 15 to 19 points will receive an "Excellent Team" certificate; a team with an average score of 20 to 24 will receive a GREAT TEAM certificate, and a team with an average score of 25 to 30 will receive a SUPER TEAM certificate (Slavin, 2014).

**Merits of STAD Model**

The STAD model is a dynamic model used for the teaching of all types of social sciences effectively. It has a wide range of advantages which is why it has priority over other teaching methods. Some of its advantages are given below:

- Encourage learners to work together for sperm and personal benefit.
- Make students feel better about themselves and accept others more.
- Groups have more information resources than individuals.
- And they ignore the teacher (Kim & Lee, 2009).

The cooperative learning TGT model is an easy-to-apply cooperative learning type or model. There seems to be no status difference in activities involving all students, involving the role of students as peer tutors, games, and reinforcement elements. The meaning of reinforcement is any form of verbal or non-verbal response, which is part of the teacher's behavior modification of students' behaviors and aims to provide students with information or feedback to encourage them to make corrections. The technical implementation of TGT is like STAD. Each student is divided into groups of three low, medium, and high-skilled people. Therefore, each group has a comparable membership. The team game competition model of cooperative learning has five main components: class presentation, team, game, and tournament and team recognition (Slavin, 2004).

**Material and Methods**

| Exp. Group | Mean | SD | Df | t | P |
|---|---|---|---|---|---|
| Pre-test | 20.42 | 1.787 | 19 | 17.25 | .000 |
| Post-test | 44.25 | 1.587 | | | |

The design of the study was a pre-test, post-test control group. The population of the study was the students of the 10th class who were studying in the public sector schools of district Kotli. The sample of the study was 44 randomly selected students of girls' secondary school no. 1, Kotli. The Pre-test was administered before one week the start of the experiment and the post-test was administered after the treatment of eight weeks. The results of the pre-test and post-test were compared to evaluate the effectiveness of the STAD Model and Lecture Model.

**Results**

***Table Academic achievements in Pak studies before the treatment***

| Group | Mean | SD |
|---|---|---|
| Experimental | 20.65 | 1.021 |
| Control | 19.50 | 1.355 |

Table 1 shows the scores of the students before the experiment. The marks obtained by experimental group were M=20.65, SD=1.021 and the marks attained by the control group were M=19.50, SD=1.355

***Table 2 Academic achievements in Pak studies after the treatment***

| Group | Mean | SD |
|---|---|---|
| Experimental | 44.25 | 1.587 |
| Control | 38.28 | 0.251 |

Table 2 shows the scores of the student's post-experiment. The marks got by the experimental group were M=44.25, SD=1.587 and the marks attained control group were M=38.28, SD=0.251

***Table 3 Comparison between the scores of the control group***

| Control Group | Mean | SD | Df | t | P |
|---|---|---|---|---|---|
| Pre-test | 20.65 | 1.021 | 19 | 22.254 | .000 |
| Post-test | 38.28 | 0.251 | | | |

Table 3 shows that there was a significant difference between the marks of pre-test and post-test notched by the control group. The marks of the pre-test were: M 20.30, SD=1.021, and scores of the post-test were M= 38.28, SD= 0.251 t= (19) 22.254, and p=.000<0.05.

**Table 4 Comparison between results of pre-test and post-test of Experimental group**

Table 4 shows that there was a significant difference between the scores of pretests and post-test. The scores of the pretest were M= 20.42, SD=1.787, and the scores of post-tests were; M= 44.25, SD= 1.587. t= (19) 17.25 and p=.0000<0.05

**Table 5 Comparison between pretests**

| Group | Mean | SD | Df | t | P |
|---|---|---|---|---|---|
| Experimental | 20.65 | 1.021 | 38 | 1.258 | .325 |
| Control | 19.50 | 1.355 | | | |

Table 5 shows that there was no significant difference between the marks of the pre-test of both groups. The scores of the control group were M= 21.20, SD=2.278 and the scores of the control group were; M= 20.30, SD= 1.258. t= (38) 1.983 and p=.325>0.05

**Table 6 Comparison between posttests**

| Group | Mean | SD | Df | T | P |
|---|---|---|---|---|---|
| Experimental | 44.25 | 1.587 | 38 | 2.358 | .000 |
| Control | 38.28 | 0.251 | | | |

Table 6 shows that there was a significant difference between the marks of the post-test obtained by both groups. The scores of the experimental group were M= 44.25, SD=1.587, and scores of the control group were; M= 38.28, SD= 7.828. t= (38) 2.358 and p=.000<0.05.

**Discussion**

Zainab Qamar & Dr Muhammad Saeed (2023) researched to analyze the Effect of Cooperative Learning on Academic Achievement among Biology Students at the Secondary School Level and concluded that, the efficacy of cooperative learning in enhancing student learning outcomes. Educators are encouraged to incorporate this teaching technique to optimize student learning experiences. Qaisara Parveen (2012) researched to explore the effects of cooperative learning on General Science achievement among 9th-class students. Based upon previous research literature it was hypothesized that a significant difference existed between the mean posttest scores of General Science achievement of the experimental group and control group. The pretest-posttest control group design was chosen for the experiment. The study sample consisted of 36 students of the 9th class who were equally distributed among the experimental group and control group, matched based on their annual examination at general science scores. The dependent variable of General Science achievement was measured through a self-constructed 30-item achievement test used as a pretest as well as a posttest. The experiment group was taught through cooperative learning while the control group was taught through traditional teaching. The material was used such as lesson plans, worksheets, and quizzes, designed to implement a cooperative learning methodology. The data were analyzed through mean, standard deviation, and t-test and .05 was the selected level of significance. The main result of the study was that the cooperative learning method is superior to the traditional method in general science achievement of 9th-grade students.

**Findings**

It was found that:

1. The students of the control group and the experimental group scored before the treatment. The marks obtained by the experimental group were M=20.65, SD=1.021, and the marks attained by the control group were M=19.50, SD=1.355 (Table 1).
2. The students of the control group and the experimental group scored after the treatment. The marks obtained by the experimental group were M=44.25, SD=1.587, and the marks attained control group were M=38.28, SD=0.251(Table 2).
3. There was a significant difference between the marks of pre-test and post-test notched by the control group. The marks of pre-test were M= 20.30, SD=1.021, and scores of post-tests were M= 38.28, SD= 0.251 t= (19) 22.254 and p=.000<0.05 (Table 3).
4. There was a significant difference between the scores of pretests and post-test. The scores of the pretest were M= 20.65, SD=1.021, and the scores of post-tests were M= 44.25, SD= 1.587. t= (19) 17.25 and p=.0000<0.05(Table 4).

5. There was no significant difference between the marks of the pre-test of both groups. The scores of the control group were M= 21.20, SD=2.278 and the scores of the control group were; M= 20.30, SD= 1.258. t= (38) 1.983 and p=.325>0.05 (Table 5).
6. There was a significant difference between the marks of the post-test obtained by both groups. The scores of the experimental group were M= 44.25, SD=1.587, and the scores of the control group were; M= 38.28, SD= 7.828. t= (38) 2.358 and p=.000<0.05

**Conclusion**

It is concluded that:

1. The students of the control group and experimental group obtained marks in the pre-test (Finding 1).
2. The student's control group and experimental group obtained marks in the post-test (Finding 2).
3. The lecture method is effective for the teaching of Pak studies because the students who were taught through the Lecture Method obtained more marks in the post-test as compared to the marks of a pre-test.
4. The STAD Method is effective for the teaching of Pak studies because the students who were taught through the STAD Method obtained more marks in the post-test as compared to the marks of a pre-test.
5. The STAD model is more effective than the lecture model for the teaching of Pak Studies at the secondary level as the average marks of the post-test of the Experimental group were more than the average marks of the post-test of the control group.

**Recommendations**

Results of this study showed that the Lecture Method is useful in the teaching of Pak studies; therefore, this method may be used by teachers when they are supposed to be taught social science subjects like Islamic studies and civics. This study showed that the STAD Model has usefulness in the teaching of Pak studies; hence it is recommended that the students be allowed to formulate the cooperative learning style. It is recommended that the Government provide facilities in education colleges and universities necessary for the training of the Cooperative Learning approach.

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