Chapter V

Conclusions and Recommendations

5.1 Conclusions

The following conclusions were drawn from the study "The Effect of the Two Stay Two Stray (TSTS) Type Cooperative Learning Model on the Mathematical Communication Skills of Students of SMP Negeri 1 STM Hulu" and the descriptive and inferential statistical analysis described in Chapter IV:.

1. Students in the experimental class and the control class had similar starting abilities.

   The mean pretest scores, which did not differ considerably, support this. The control group's pretest mean was 60.40 with an SD of 5.575, whereas the experimental group's was 59.72 with an SD of 6.248. This result suggests that before the administration of the medication, the initial talents of both groups were somewhat similar.
2. Compared to the control group, the experimental group's pupils' mathematical communication abilities improved more.

   The posttest results demonstrate this, with the experimental class scoring an average of 88.88 (SD 6.051) and the control class scoring an average of 80.08 (SD 5.423). The experimental class's higher progress shows how well the TSTS model supports mathematical communication abilities.
3. The data satisfy the fundamental presumptions of parametric analysis, according to the results of the homogeneity and normality tests.

   in order to conduct valid hypothesis testing using the t-test. The variance between the two groups is homogeneous, and the data in both groups are normally distributed.
4. **The posttest results of the experimental class and the control class differ significantly, according to the t-test results.**

   It may be inferred that the use of the TSTS model has a substantial impact on students' mathematical communication skills because the computed t-value is higher than the t-table and the significance value is less than 0.05. As a result, the research hypothesis is approved.
5. In comparison to traditional instruction, this study finds that the Two Stay Two Stray (TSTS) cooperative learning model significantly and favorably improves junior high school students' mathematics communication abilities. Increased contact, information exchange, and active idea delivery are made possible by the TSTS paradigm, which helps to improve mathematical communication abilities.

5.2 Research Consequences

The following are some considerations that related parties may take into consideration in light of the research findings:

1. Implications for Theory

The cooperative learning theory, which contends that student engagement can enhance communication skills and strengthen knowledge production, is supported by this study. In mathematics learning environments, the TSTS approach has shown promise, especially for improving mathematical communication abilities. These results can be used as an empirical guide for future studies on cooperative models' efficacy.

2. Useful Consequences for Teachers

   The TSTS model is a different student-centered learning approach that math teachers might employ. TSTS's signature visit-and-visit rhythm fosters a dynamic, cooperative learning environment and motivates students to clearly communicate mathematical concepts to their peers and other groups.

3. Consequences for Schools

   To promote a collaborative learning culture, schools can include the TSTS model into teacher competency development training and promote its use in the classroom. Flexible classrooms and other supportive facilities can optimize the application of this paradigm.

4. Consequences for Additional Study

   This study can serve as a foundation for examining how TSTS affects content, educational attainment, or other mathematical aptitude factors like problem-solving skills, mathematical literacy, or mathematical reasoning.

5.3 Advice

The following are some considerations that related parties may take into consideration in light of the research findings:

1. For Instructors
   - Since the TSTS model has been shown to be successful in enhancing mathematical communication skills, teachers are encouraged to adopt it for content that calls for verbal explanation and active engagement.
   - In order to facilitate the best possible interaction and exchange of ideas, group composition should consider the diversity of abilities.
2. For Education
   - By offering classrooms that encourage group movement activities, schools can help adopt cooperative learning.

- Workshops or training activities on the use of the TSTS model can be held to improve teachers' pedagogical competence.

3. For Future Scholars
   - To strengthen the data's generalizability, future researchers can broaden the study by utilizing a full experimental design or a larger sample.
   - To provide a more complete picture of the effects of TSTS, additional factors like learning motivation, self-efficacy, or teamwork abilities might be included.