

ABSTRAK

NUR IMANIYANTI. Perbedaan Kemampuan Komunikasi Matematis dan Self-Efficacy Siswa yang Diajar dengan Model Pembelajaran Kooperatif Tipe *Team Assisted Individualization* dan *Think Pair Share* Berbantuan Buku Digital. Tesis. Medan: Program Studi Pendidikan Matematika Pascasarjana Univeritas Negeri Medan.

Penelitian ini bertujuan untuk menganalisis perbedaan kemampuan komunikasi matematis dan self-efficacy siswa yang dibelajarkan melalui model pembelajaran kooperatif tipe *Team Assisted Individualization* dan *Think Pair Share* berbantuan buku digital, serta mengkaji ada tidaknya interaksi antara model pembelajaran dan kemampuan awal matematis terhadap kedua variabel tersebut. Penelitian ini dilaksanakan di SMKS Muhammadiyah 8 Medan dengan pendekatan kuasi eksperimen. Sampel penelitian terdiri atas dua kelas XI, masing-masing diberi perlakuan dengan model TAI dan TPS. Data diperoleh melalui tes kemampuan awal matematis, tes kemampuan komunikasi matematis, dan angket self-efficacy, kemudian dianalisis menggunakan ANOVA dua jalur. Hasil penelitian menunjukkan bahwa siswa yang dibelajarkan dengan model TAI memperoleh rata-rata skor kemampuan komunikasi matematis sebesar 81,61, sedangkan siswa dengan model TPS memperoleh rata-rata 74,31. Pada aspek self-efficacy, siswa pada kelas TAI memperoleh rata-rata skor 73,41, sedangkan kelas TPS memperoleh 57,23. Temuan ini menunjukkan bahwa model TAI lebih unggul dalam meningkatkan kemampuan komunikasi matematis dan self-efficacy siswa. Sementara itu, hasil analisis menunjukkan tidak adanya interaksi antara model pembelajaran dan kemampuan awal matematis terhadap kedua variabel. Artinya, peningkatan kemampuan komunikasi matematis dan self-efficacy melalui model TAI berlaku secara merata, tanpa dipengaruhi oleh tinggi rendahnya kemampuan awal siswa.

Kata Kunci: buku digital, komunikasi matematis, *Team Assisted Individualization* (TAI), *Think Pair Share* (TPS), self-efficacy.

ABSTRACT

NUR IMANIYANTI. Differences in Mathematical Communication Ability and Self-Efficacy of Students Taught With Team Assisted Individualization and Think Pair Share Cooperative Learning Models Assisted by Digital Books. Thesis. Medan: Mathematics Education Graduate Program, State University of Medan.

This study aims to analyze the differences in students' mathematical communication skills and self-efficacy taught using the cooperative learning models *Team Assisted Individualization* (TAI) and *Think Pair Share* (TPS) assisted by digital books, as well as to investigate whether there is an interaction between learning models and students' prior mathematical ability on both variables. The research was conducted at SMKS Muhammadiyah 8 Medan using a quasi-experimental design. The sample consisted of two Grade XI classes, each receiving different treatments using TAI and TPS models. Data were collected through diagnostic tests of prior knowledge, mathematical communication tests, and self-efficacy questionnaires, then analyzed using two-way ANOVA. The results indicate that students taught using the TAI model achieved an average mathematical communication score of 81.61, compared to 74.31 in the TPS group. For self-efficacy, the TAI group obtained an average score of 73.41, while the TPS group achieved 57.23. These findings suggest that the TAI model is more effective in enhancing both students' mathematical communication skills and self-efficacy. Furthermore, the analysis revealed no interaction between the learning model and prior mathematical ability on either variable. In other words, the improvements achieved through the TAI model apply equally across all levels of initial ability.

Keywords: digital book, mathematical communication, Team Assisted Individualization (TAI), Think Pair Share (TPS), self-efficacy.

