# ABSTRAK

**Nuzirma Chania Siregar, NIM 4151111070 (2021). Pengembangan Lembar Kerja Peserta Didik Berbasis Pendekatan Matematika Realistik Berbantuan ICT Untuk Meningkatkan Kemampuan Koneksi Matematis Peserta Didik MTsN 1 Medan.**

Tujuan penelitian ini adalah untuk meningkatkan kemampuan koneksi matematis dan menghasilkan LKPD yang efektif berbasis pendekatan matematika realistik pada materi SPLDV. Model pengembangan adalah 4-D yang dibatasi yakni *Define, Design,* dan *Develop*. Penelitian ini dilakukan secara daring menggunakan bantuan aplikasi *Google Meet, GeoGebra, dan QR Code* selama pembelajaran virtual. Uji coba dilakukan sebanyak dua kali untuk memperoleh LKPD yang efektif. Hasil penelitian menunjukkan bahwa jumlah siswa yang tuntas pada tes awal kemampuan koneksi matematis adalah 3 orang dan meningkat menjadi 28 orang pada tes akhir kemampuan koneksi matematis. Adapun hasil penelitian *N-Gain* diperoleh nilai rata-rata 0,601 yang termasuk kategori "sedang". Selanjutnya, diperoleh persentase ketuntasan belajar klasikal adalah 93,33% yang berarti dalam kategori 'tuntas klasikal', tujuan pembelajaran tercapai, respon siswa dalam kategori sangat positif, dan waktu pembelajaran adalah efektif. Maka diperoleh kesimpulan bahwa LKPD berbasis pendekatan matematika realistik berbantuan ICT adalah efektif dan meningkatkan kemampuan koneksi matematis siswa.

**Kata kunci**: Pengembangan LKPD, model 4-D, pendekatan matematika realistik, kemampuan koneksi matematis.

# ABSTRACT

**Nuzirma Chania Siregar, NIM 4151111070 (2021). Development of Student's Worksheets Based on ICT-Assisted Realistic Mathematical Approach to Improve the Mathematical Connection Ability of Students at MTsN 1 Medan**

This research was aimed to improve mathematical connection skills and produce effective student's worksheet based on a realistic mathematical approach on a two-variable system of linear equations. The development model is 4-D which is limited to Define, Design, and Develop. This research was conducted online using Google Meet, GeoGebra, and QR Code applications during virtual learning. Trials were carried out twice to obtain an effective LKPD. The results showed that the number of students who completed the initial mathematical connection ability test was 3 and increased to 28 people on the final mathematical connection ability test. The results of the N-Gain study obtained an average value of 0.601 which was included in the "medium" category. Furthermore, the percentage of classical learning completeness is 93.33%, which means that in the 'classical complete' category, the learning objectives are achieved, the students' responses are in the very positive category, and the learning time is effective. Then, the conclusion is the student's worksheet based on realistic mathematics approach assisted by ICT is effective and improves students' mathematical connection skills.

**Keywords**: Development of student's worksheet, 4-D models, realistic mathematical approaches, mathematical connection skills.