

ABSTRAK

Nurul Haliza Supranaya (2025). **Pendekatan *Deep Learning* melalui Model *Discovery Learning* Berbantuan Desmos Berorientasi terhadap Kemampuan Komunikasi Matematis dan *Self-confidence* Murid SMP.**

Kemampuan komunikasi matematis dan *self-confidence* merupakan aspek penting dalam pembelajaran matematika, namun berdasarkan hasil penelitian dan temuan di lapangan kedua aspek tersebut masih tergolong rendah. Penelitian ini bertujuan untuk menganalisis peningkatan kemampuan komunikasi matematis murid, menganalisis *self-confidence* murid, serta menganalisis korelasi antara kemampuan komunikasi matematis dan *self-confidence* murid yang memperoleh pendekatan *Deep Learning* melalui model *Discovery Learning* berbantuan Desmos. Penelitian menggunakan *mixed methods* tipe *The Embedded Design* dengan desain kuasi eksperimen *non-equivalent control group*. Subjek penelitian ini adalah murid kelas VIII pada salah satu SMP swasta di Kota Bandung, yang terdiri dari dua kelas yaitu kelas eksperimen berjumlah 32 murid dan kelas kontrol berjumlah 29 murid, dengan materi persamaan garis lurus. Instrumen meliputi tes uraian kemampuan komunikasi matematis, angket *self-confidence*, serta pedoman wawancara kemampuan komunikasi matematis. Hasil penelitian menunjukkan bahwa: (1) peningkatan kemampuan komunikasi matematis murid yang memperoleh pendekatan *Deep Learning* melalui model *Discovery Learning* berbantuan Desmos lebih tinggi daripada murid yang memperoleh model pembelajaran konvensional; (2) *self-confidence* murid yang memperoleh pendekatan *Deep Learning* melalui model *Discovery Learning* berbantuan Desmos lebih baik daripada murid yang memperoleh model pembelajaran konvensional; serta (3) terdapat korelasi antara kemampuan komunikasi matematis dan *self-confidence* murid yang memperoleh pendekatan *Deep Learning* melalui model *Discovery Learning* berbantuan Desmos. Pendidik disarankan mempertimbangkan pendekatan *Deep Learning* melalui model *Discovery Learning* berbantuan Desmos sebagai alternatif pembelajaran matematika dengan memastikan penguasaan materi prasyarat dan dukungan fasilitas teknologi memadai. Peneliti selanjutnya dapat mengembangkan penelitian pada materi, jenjang, model, atau media pembelajaran lain yang relevan.

Kata Kunci: *Deep Learning*, *Discovery Learning*, Desmos, kemampuan komunikasi matematis, *self-confidence*

ABSTRACT

Nurul Haliza Supranaya (2025). ***Deep Learning Approach through Discovery Learning Model Assisted by Desmos Oriented toward Mathematical Communication Ability and Self-confidence of Junior High School Students.***

Mathematical communication skills and self-confidence are important aspects in learning mathematics; however, based on research findings and field observations, both aspects are still relatively low. This study aims to analyze the improvement of students' mathematical communication skills, analyze students' self-confidence, and analyze the correlation between mathematical communication skills and self-confidence of students who obtain the Deep Learning approach through the Discovery Learning model assisted by Desmos. This research employed a mixed methods approach with The Embedded Design type and a quasi-experimental non-equivalent control group design. The subjects of this study were eighth-grade students at a private junior high school in Bandung, consisting of two classes: an experimental class of 32 students and a control class of 29 students, with the topic of linear equations. The instruments included essay tests for mathematical communication skills, self-confidence questionnaires, and interview guidelines for mathematical communication skills. The results showed that: (1) the improvement of mathematical communication skills of students who obtained the Deep Learning approach through the Discovery Learning model assisted by Desmos was higher than that of students who obtained the conventional learning model; (2) the self-confidence of students who obtained the Deep Learning approach through the Discovery Learning model assisted by Desmos was better than that of students who obtained the conventional learning model; and (3) there was a correlation between mathematical communication skills and self-confidence of students who obtained the Deep Learning approach through the Discovery Learning model assisted by Desmos. Educators are advised to consider the Deep Learning approach through the Discovery Learning model assisted by Desmos as an alternative in mathematics learning by ensuring mastery of prerequisite materials and adequate technological facility support. Future researchers can develop this research on other materials, levels, models, or other relevant learning media.

Keywords: *Deep Learning, Discovery Learning, Desmos, mathematical communication ability, self-confidence*

RINGKESAN

Nurul Haliza Supranaya (2025). ***Pendekatan Deep Learning ngaliwatan Model Discovery Learning Dibantu Desmos Berorientasi kana Kamampuan Komunikasi Matematis jeung Self-confidence Murid SMP.***

Kamampuan komunikasi matematis jeung self-confidence mangrupa aspék penting dina pangajaran matematika, nanging dumasar kana hasil panalungtikan jeung temuan di lapangan kadua aspék kasebut masih kagolong handap. Panalungtikan ieu tujuanna pikeun nganalisis paningkatan kamampuan komunikasi matematis murid, nganalisis self-confidence murid, sarta nganalisis korelasi antara kamampuan komunikasi matematis jeung self-confidence murid anu nampi pendekatan Deep Learning ngaliwatan model Discovery Learning dibantuan Desmos. Panalungtikan ieu ngagunakeun mixed methods tipe The Embedded Design kalayan desain kuasi ékspérimén non-equivalent control group. Subjek panalungtikan nyaéta murid kelas VIII di salah sahiji SMP swasta di Kota Bandung, anu diwangun ku dua kelas nyaéta kelas ékspérimén anu jumlahna 32 murid jeung kelas kontrol anu jumlahna 29 murid, kalayan matéri persamaan garis lurus. Instrumén anu digunakeun ngawengku tés uraian kamampuan komunikasi matematis, angkét self-confidence, sarta pedoman wawancara kamampuan komunikasi matematis. Hasil analisis data nétélakeun yén: (1) paningkatan kamampuan komunikasi matematis murid anu nampi pendekatan Deep Learning ngaliwatan model Discovery Learning dibantuan Desmos leuwih luhur tibatan murid anu nampi model pangajaran konvensional; (2) self-confidence murid anu nampi pendekatan Deep Learning ngaliwatan model Discovery Learning dibantuan Desmos leuwih hadé tibatan murid anu nampi model pangajaran konvensional; sarta (3) aya korelasi antara kamampuan komunikasi matematis jeung self-confidence murid anu nampi pendekatan Deep Learning ngaliwatan model Discovery Learning dibantuan Desmos. Pendidik disarankeun pikeun ngagunakeun pendekatan Deep Learning ngaliwatan model Discovery Learning dibantuan Desmos salaku alternatif pangajaran matematika kalayan mastikeun penguasaan matéri prasyarat jeung fasilitas téknologi anu nyukupan. Panalungtik salajengna tiasa ngembangkeun panalungtikan dina matéri, jenjang, model, atawa média pangajaran séjén anu relevan.

Kecap Konci: *Deep Learning, Discovery Learning, Desmos, kamampuan komunikasi matematis, self-confidence*