

ABSTRAK

ALVINA APRILIANA. (2026). **Peningkatan Kemampuan Pemahaman Konsep Matematis dan *Self-efficacy* Siswa SMA melalui Model *Problem-Based Learning* – Pendekatan *Deep Learning* berbantuan *Kahoot*.**

Rendahnya kemampuan pemahaman konsep matematis dan *self-efficacy* siswa merupakan salah satu permasalahan yang perlu mendapat perhatian dalam pembelajaran matematika. Penelitian ini bertujuan untuk mengetahui: (1) apakah peningkatan kemampuan pemahaman konsep matematis siswa yang memperoleh model *Problem-Based Learning* - pendekatan *deep learning* berbantuan *Kahoot* lebih tinggi daripada siswa yang memperoleh pembelajaran biasa; (2) apakah *self-efficacy* siswa yang memperoleh model tersebut lebih baik daripada siswa yang memperoleh pembelajaran biasa; dan (3) apakah terdapat korelasi positif antara peningkatan kemampuan pemahaman konsep matematis dan *self-efficacy* siswa. Penelitian ini menggunakan metode *quasi experimental* dengan desain *non-equivalent control group design*. Subjek penelitian adalah siswa kelas XI SMAN 1 Margaasih Tahun Pelajaran 2025/2026 yang terdiri atas dua kelas, yaitu kelas XI-3 sebagai kelas eksperimen dan kelas XI-2 sebagai kelas kontrol, masing-masing berjumlah 36 siswa. Instrumen penelitian berupa tes kemampuan pemahaman konsep matematis dan angket *self-efficacy* yang telah memenuhi kriteria validitas dan reliabilitas. Data dianalisis menggunakan *IBM SPSS Statistics 23*. Hasil penelitian menunjukkan bahwa: (1) peningkatan kemampuan pemahaman konsep matematis siswa yang memperoleh model *Problem-Based Learning* dengan pendekatan *deep learning* berbantuan *Kahoot* lebih tinggi daripada siswa yang memperoleh pembelajaran biasa hasil analisis N-Gain sebesar 0,002 ; (2) *self-efficacy* siswa yang memperoleh model tersebut lebih baik daripada siswa yang memperoleh pembelajaran biasa hasil uji nonparametrik sebesar 0,000; dan (3) terdapat korelasi positif dan signifikan antara peningkatan kemampuan pemahaman konsep matematis dan *self-efficacy* siswa dengan koefisien korelasi *Spearman's rho* sebesar 0,661. Dengan demikian, model *Problem-Based Learning* dengan pendekatan *deep learning* berbantuan *Kahoot* efektif untuk meningkatkan kemampuan pemahaman konsep matematis dan *self-efficacy* siswa.

Kata Kunci: *Problem-Based Learning*, *deep learning*, *Kahoot*, kemampuan pemahaman konsep matematis, *self-efficacy*.

ABSTRACT

ALVINA APRILIANA. (2026). *The Improvement of Senior High School Students' Mathematical Conceptual Understanding and Self-Efficacy through the Problem-Based Learning Model with a Deep Learning Approach Assisted by Kahoot.*

The low level of students' mathematical conceptual understanding ability and self-efficacy is one of the issues that requires attention in mathematics learning. This study aimed to determine: (1) whether the improvement in the mathematical conceptual understanding ability of students who received the Problem-Based Learning model with a deep learning approach assisted by Kahoot was higher than that of students who received conventional learning; (2) whether the self-efficacy of students who received the model was better than that of students who received conventional learning; and (3) whether there was a positive correlation between the improvement in mathematical conceptual understanding ability and students' self-efficacy. This study employed a quasi-experimental method with a non-equivalent control group design. The research subjects were eleventh-grade students of SMAN 1 Margaasih in the 2025/2026 academic year, consisting of two classes: Class XI-3 as the experimental group and Class XI-2 as the control group, with 36 students in each class. The research instruments included a mathematical conceptual understanding test and a self-efficacy questionnaire that met the validity and reliability criteria. The data were analyzed using IBM SPSS Statistics 23. The results showed that: (1) the improvement in the mathematical conceptual understanding ability of students who received the Problem-Based Learning model with a deep learning approach assisted by Kahoot was higher than that of students who received conventional learning, with an N-Gain analysis significance value of 0.002; (2) the self-efficacy of students who received the model was better than that of students who received conventional learning, with a nonparametric test significance value of 0.000; and (3) there was a positive and significant correlation between the improvement in mathematical conceptual understanding ability and students' self-efficacy, with a Spearman's rho correlation coefficient of 0.661. Therefore, the Problem-Based Learning model with a deep learning approach assisted by Kahoot is effective in improving students' mathematical conceptual understanding ability and self-efficacy..

Keywords: *Problem-Based Learning, deep learning, Kahoot, mathematical conceptual understanding, self-efficacy.*

RINGKESAN

ALVINA APRILIANA. (2026). ***Kanaékan Kamampuh Pamahaman Konsép Matematis jeung Self-efficacy Siswa SMA Ngaliwatan Modél Problem-Based Learning kalayan Pamarekan Deep Learning Dibantuan ku Kahoot.***

Handapna kamampuh pamahaman konsép matematis jeung self-efficacy siswa mangrupa salasahiji pasualan anu perlu meunang perhatian dina pangajaran matematika. Ieu panalungtikan miboga tujuan pikeun mikanyaho: (1) naha paningkatan kamampuh pamahaman konsép matematis siswa anu meunang modél Problem-Based Learning kalayan pamarekan deep learning dibantuan ku Kahoot leuwih luhur batan siswa anu meunang pangajaran biasa; (2) naha self-efficacy siswa anu meunang modél éta leuwih hadé batan siswa anu meunang pangajaran biasa; jeung (3) naha aya korélasi positip antara paningkatan kamampuh pamahaman konsép matematis jeung self-efficacy siswa. Ieu panalungtikan ngagunakeun métode quasi experimental kalayan désain non-equivalent control group design. Subjék panalungtikan nyaéta siswa kelas XI SMAN 1 Margaasih Taun Ajaran 2025/2026 anu diwangun ku dua kelas, nyaéta kelas XI-3 salaku kelas ékspérimén jeung kelas XI-2 salaku kelas kontrol, masing-masing jumlahna 36 siswa. Instrumén panalungtikan mangrupa tés kamampuh pamahaman konsép matematis jeung angkét self-efficacy anu geus nyumponan kritéria validitas jeung réliabilitas. Data dianalisis ngagunakeun IBM SPSS Statistics 23. Hasil panalungtikan nuduhkeun yén: (1) paningkatan kamampuh pamahaman konsép matematis siswa anu meunang modél Problem-Based Learning kalayan pamarekan deep learning dibantuan ku Kahoot leuwih luhur batan siswa anu meunang pangajaran biasa kalayan hasil analisis N-Gain sagedé 0,002; (2) self-efficacy siswa anu meunang modél éta leuwih hadé batan siswa anu meunang pangajaran biasa kalayan hasil uji nonparamétrik sagedé 0,000; jeung (3) aya korélasi positip jeung signifikan antara paningkatan kamampuh pamahaman konsép matematis jeung self-efficacy siswa kalayan koéfisién korélasi Spearman's rho sagedé 0,661. Ku kituna, modél Problem-Based Learning kalayan pamarekan deep learning dibantuan ku Kahoot éféktif pikeun ngaronjatkeun kamampuh pamahaman konsép matematis jeung self-efficacy siswa.

Kecap Galeuh: Problem-Based Learning, deep learning, Kahoot, kamampuh pamahaman konsép matematis, self-efficacy.