PENGARUH *BLENDED LEARNING* BERBANTUAN GAMIFIKASI TERHADAP PEROLEHAN DAN PENINGKATAN KEMAMPUAN KOMUNIKASI MATEMATIS MAHASISWA CALON GURU SEKOLAH DASAR DENGAN MEMPERHATIKAN *SELF-REGULATED LEARNING*

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ABSTRAK

Muhammad Ghiyats Ristiana. (2024). Pengaruh *Blended Learning* berbantuan Gamifikasi terhadap Perolehan dan Peningkatan Kemampuan Komunikasi Matematis Mahasiswa Calon Guru Sekolah Dasar dengan memperhatikan *Self-Regulated Learning*.

Kemampuan komunikasi matematis (KKM) menjadi salah satu hal yang penting untuk dimiliki seseorang, terutama bagi guru sekolah dasar. Namun, kemampuan komunikasi matematis yang dimiliki oleh calon guru sekolah dasar masih kurang. Salah satu model pembelajaran yang mungkin dapat mengatasi hal tersebut adalah *blended learning* berbantuan gamifikasi. Berdasarkan itu, penelitian ini bertujuan untuk menganalisis dan mendeskripsikan secara komprehensif tentang pengaruh *blended learning* berbantuan gamifikasi terhadap perolehan dan peningkatan kemampuan komunikasi matematis mahasiswa calon guru sekolah dasar dengan memperhatikan tingkat *self-regulated learning*. Metode dalam penelitian ini adalah *mix method* dengan desain *explanatory sequential*. Tahap kuantitatif dilakukan terlebih dahulu dengan desain *one group pretest-posttest, factorial design 3x2,* dan analisis korelasi. Kemudian dilanjutkan tahap kualitatif dengan menggunakan perspektif *grounded theory* untuk memperoleh konjektur yang mengaitkan *self-regulated learning* dengan kemampuan komunikasi matematis mahasiswa calon guru sekolah dasar. Dari penelitian ini diperoleh kesimpulan: 1) terdapat perbedaan pengaruh tingkat *self-regulated learning* terhadap peningkatan KKM; 2) terdapat efek interaksi antara pembelajaran dan tingkat *self-regulated learning* terhadap perolehan KKM; 3) KKM mahasiswa yang memiliki tingkat *self-regulated learning* tinggi pada mahasiswa yang mendapatkan *blended learning* berbantuan gamifikasi dapat memberikan penjelasan matematika menggunakan bahasa sendiri, menyampaikan hubungan antar konsep matematika, menggunakan simbol atau notasi matematika, menggunakan diagram, grafik atau gambar sebagai pendukung untuk menjelaskan konsep matematika, mengidentifikasi variabel yang relevan, menyusun persamaan atau fungsi, menggambarkan situasi masalah dalam bentuk grafik, diagram, tabel atau ilustrasi lain, menggunakan prinsip atau aturan matematika, membuktikan suatu pernyataan matematika menggunakan argumen yang logis, mengidentifikasi ide matematika, membandingkan beberapa cara penyelesaian, mengubah representasi masalah, dan membuat solusi alternatif.

Kata Kunci: *blended learning,* gamifikasi, kemampuan komunikasi matematis, *self-regulated learning*

ABSTRACT

Muhammad Ghiyats Ristiana. (2024). *The Effect of Gamified Blended Learning on Prospective Primary School Teachers' Mathematical Communication Ability limited by Self-Regulated Learning.*

Mathematical communication ability (MCA) has become one of the important qualities for someone to possess, especially for elementary school teachers. However, the mathematical communication ability possessed by prospective elementary school teachers are still lacking. One of the learning models that might address this issue is gamified blended learning. Therefore, this research aims to comprehensively analyze and describe the influence of gamification-assisted blended learning on the acquisition and improvement of mathematical communication ability of prospective elementary school teacher students, considering the level of self-regulated learning. The method in this study was a mixed method with an explanatory sequential design. The quantitative stage was conducted first with a one group *pretest-posttest* design, a 3x2 factorial design, and correlation analysis. This was followed by the qualitative stage using a grounded theory perspective to obtain conjectures linking self-regulated learning with the mathematical communication skills of prospective elementary school teacher students. From this research, the conclusions are as follows: 1) there is a difference in the effect of the level of SRL on the improvement of MCA; 2) there is an interaction effect between learning and the level of self-regulated learning on the acquisition of mathematical communication ability; 3) the mathematical communication ability of students with a high level of self-regulated learning who receive blended learning with gamification assistance can explain mathematics using their own language, convey relationships between mathematical concepts, use mathematical symbols or notations, use diagrams, graphs, or images as supporting tools to explain mathematical concepts, identify relevant variables, formulate equations or functions, depict problem situations in the form of graphs, diagrams, tables, or other illustrations, use mathematical principles or rules, prove a mathematical statement using logical arguments, identify mathematical ideas, compare several solution methods, change problem representations, and create alternative solutions.

Keywords: *blended learning, gamification, mathematical communication ability, self-regulated learning*

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