

ABSTRAK

Ribka Zelin Margaretha Sitepu, NIM 4191111056 (2023). Pengembangan Lembar Kerja Peserta Didik Dengan Pendekatan Matematika Realistik Untuk Meningkatkan Kemampuan Komunikasi Matematis Siswa SMA di SMA Negeri 2 Kabanjahe.

Penelitian ini bertujuan : (1) menghasilkan sebuah produk LKPD dengan pendekatan matematika realistik yang valid, praktis, dan efektif untuk meningkatkan kemampuan komunikasi matematis siswa, (2) proses penyelesaian jawaban yang dibuat oleh siswa dalam menyelesaikan masalah pada model pembelajaran pendekatan matematika realistik. Jenis Penelitian dan pengembangan ini berlandaskan tahapan model pengembangan 4D oleh Thiagarajan yang diadaptasi menjadi 3D meliputi tahap pendefinisian, perancangan, dan pengembangan. Subjek dalam penelitian ini adalah kelas X-Mipa 1 SMAN 2 Kabanjahe berjumlah 30 orang. Instrumen pengumpulan data digunakan berupa angket dan tes kemampuan komunikasi matematis. Berdasarkan penelitian yang dilakukan, kevalidan LKPD memperoleh rata-rata penilaian sebesar 89,47% oleh ahli materi dan 88,15% oleh ahli media dengan kualifikasi sangat valid. Melalui angket kepraktisan LKPD oleh guru dan siswa diperoleh rata-rata 90,27% oleh guru dan 92,12% oleh siswa dengan kualifikasi sangat praktis. Pelaksanaan pembelajaran dengan penerapan LKPD dengan PMR dilakukan untuk melihat keefektifan LKPD memperoleh hasil, yakni ketuntasan belajar klasikal mencapai 86,67%, ketercapaian tujuan pembelajaran tercapai pada butir soal 1,2,3,4 dan 5 dan pencapaian waktu pembelajaran efisien, dari acuan penilaian keefektifan tersebut maka LKPD yang dikembangkan tergolong efektif. Peningkatan kemampuan komunikasi matematis yang terjadi adalah peningkatan dalam kategori sedang dengan rata-rata *gain score* 0,632. Berdasarkan data diperoleh, disimpulkan LKPD dengan PMR yang dikembangkan memenuhi kualifikasi valid, praktis dan efektif. Berdasarkan analisis proses jawaban siswa terhadap tes kemampuan komunikasi matematis siswa berkategori baik. Hal ini dilihat dari siswa sudah mampu menyelesaikan masalah dengan algoritma yang tepat serta berkurangnya kesalahan siswa dalam berhitung. Oleh karena itu, diharapkan guru dapat menggunakan LKPD dengan PMR untuk meningkatkan kemampuan komunikasi matematis siswa.

Kata kunci: Pengembangan, LKPD, PMR, Komunikasi

ABSTRACT

Ribka Zelin Margaretha Sitepu, NIM 4191111056 (2023). Developing Student Worksheets Using a Realistic Mathematical Approach to Improve the Mathematical Communication Skills of High School Students at SMA Negeri 2 Kabanjahe.

This research aims: (1) to produce a Student Worksheet product with realistic mathematics education that is valid, practical and effective for improving students' mathematical communication skills, (2) the process of completing answers made by students in solving problems in the mathematics education learning model realistic. This type of research and development is based on the stages of the 4D development model by Thiagarajan and Semmel which was adapted to 3D including the definition, design and development stages. The subjects in this research were class X-Mipa 1 SMAN 2 Kabanjahe, totaling 30 people. The data collection instruments used were questionnaires and tests of mathematical communication skills. Based on research conducted, the validity of Student Worksheets received an average assessment of 89.47% by material experts and 88.15% by media experts with very valid qualifications. Through a questionnaire on the practicality of Student Worksheets by teachers and students, an average of 90.27% was obtained by teachers and 92.12% by students with very practical qualifications. The implementation of learning by applying Student Worksheets with realistic Mathematics Education was carried out to see the effectiveness of the Student Worksheets. Students' work achieved results, namely classical learning completeness reached 86.67%, achievement of learning objectives was achieved in questions 1, 2, 3, 4 and 5 and achievement of efficient learning time, from the effectiveness assessment reference, the Student Worksheet was developed classified as effective. The increase in mathematical communication skills that occurred was an increase in the moderate category with an average gain score of 0.632. Based on the data obtained, it was concluded that the Student Worksheets with realistic mathematics education that were developed met the qualifications of being valid, practical and effective. Based on the analysis of the process of students' answers to the mathematical communication skills test, students were categorized as good. This can be seen from students being able to solve problems with the right algorithm and reducing student errors in calculating. Therefore, it is hoped that teachers can use LKPD with PMR to improve students' mathematical communication skills.

Keywords: Development, Worksheet, PMR, Communication