

ABSTRACT

Muhamad Noor Taufik, 2018. *The Development Of Mathematics Learning Material Based Problem Based Learning For The Student Of Class X SMK Negeri 1 Lahat.*

Based on the observation at SMK N 1 Lahat, some problems were found, including the average of math score was still under the minimum criteria (KKM), and the learning activities were still teacher centered. This study aims: 1) to develop mathematics materials based on problem based learning that involves many students's activities, 2) to know how the validity, the practicality, and the effectiveness of mathematics materials based on problem based learning for ten graders SMK Negeri 1 Lahat.

This research is a ADDIE model research and development. The analysis stage is done by digging and gathering the important information related to the mathematics teaching learning problems. The designing stage is done by designing the initial draft for teaching materials. The development stage is the improvement for the initial draft based on expert lecturer and teachers validation. then a trial will be held in SMK Negeri 1 Lahat. The implementation stage is done by testing the students learning outcomes to find out the effectiveness of teaching materials developed at this stage is also done by filling questionnaire responses filled by teachers and students. The last is the evaluation stage, in this stage the researcher evaluates each stage of teaching materials development to find out whether the product development is valid, practical and effective so that it can be applied or not in the teaching learning process.

The results showed that on the aspect of validity, the percentage of validation of learning materials average 87,5% and validation of learning implementation plan of 95%, meaning that the material developed in valid criteria. On the aspect of practicality, the results of questionnaire responses by the teachers of 90% are in very good category, and students response of 81%, meaning that the material developed in the criteria very practical. On the effectiveness, it is known from the student learning outcomes in the cognitive domain obtained from the value of pretest and posttest where the average of achievement of completeness criteria minimum of 32,99%. The used of this teaching material gives the effect of 0,38 which is in the medium category. Furthermore, students learning outcomes on the affective aspect obtained an average percentage of 87,19% and the students score on the psychomotor aspect obtained an average percentage of 83,72%. This result gives an idea that the use of mathematics based on problem based learning has been effectively implemented.

Keywords: *Learning materials, Problem Based Learning.*

ABSTRAK

Muhamad Noor Taufik, 2018. Pengembangan Bahan Ajar Matematika Berbasis *Problem Based Learning* Bagi Siswa Kelas X SMK Negeri 1 Lahat. Tesis Pascasarjana Fakultas Teknik Universitas Negeri Padang.

Berdasarkan pengamatan di SMK Negeri 1 Lahat, didapati beberapa masalah antara lain nilai matematika rata-rata di bawah KKM, dan kegiatan pembelajaran masih berpusat pada guru. Penelitian ini bertujuan untuk: (1) mengembangkan bahan ajar matematika berbasis *Problem Based Learning* yang banyak melibatkan aktivitas siswa, (2) untuk mengetahui bagaimana kevalidan, kepraktisan dan efektivitas bahan ajar matematika berbasis *Problem Based Learning* bagi siswa kelas X SMK Negeri 1 Lahat.

Penelitian ini adalah penelitian dan pengembangan (R&D) dengan model ADDIE. Tahap *analysis* dilakukan dengan cara menggali dan mengumpulkan informasi-informasi penting terkait dengan masalah yang terjadi dalam pembelajaran matematika. Tahap *design* dilakukan dengan merancang draf awal dari bahan ajar. Tahap *development* merupakan tahap perbaikan draf awal berdasarkan validasi dosen ahli dan guru, lalu dilakukan uji coba terbatas di SMK Negeri 1 Lahat. Tahap *implementation* dilakukan pengujian tes hasil belajar siswa untuk mengetahui keefektifan dari bahan ajar yang dikembangkan. Pada tahap ini juga dilakukan pengisian angket respons yang di isi oleh guru dan siswa. Terakhir adalah tahap *evaluation*, peneliti melakukan evaluasi pada tiap tahapan pengembangan bahan ajar untuk mengetahui apakah produk pengembangan sudah valid, praktis dan efektif sehingga dapat diaplikasikan atau belum dalam pembelajaran.

Hasil penelitian menunjukkan bahwa pada aspek validitas, persentase nilai validasi bahan ajar rata-rata 87,5% dan validasi rencana pelaksanaan pembelajaran sebesar 95% artinya bahan ajar yang dikembangkan dalam kriteria valid. Pada aspek praktikalitas, hasil angket respon guru sebesar 90% berada pada kategori sangat baik, dan respon siswa sebesar 81% artinya bahan ajar yang dikembangkan dalam kriteria sangat praktis. Pada aspek efektivitas, diketahui dari hasil belajar siswa pada ranah kognitif yang diperoleh dari nilai *pretest* dan *posttest* dimana rata-rata ketercapaian kriteria ketuntasan minimal sebesar 32,99%. Penggunaan bahan ajar ini memberi pengaruh sebesar 0,38 yang berada dalam kategori sedang. Selanjutnya hasil belajar siswa pada aspek afektif memperoleh nilai persentase rata-rata 87,19% dan nilai siswa pada aspek psikomotor memperoleh persentase rata-rata 83,72%. Hasil ini memberi gambaran bahwa penggunaan bahan ajar matematika berbasis *problem based learning* sudah efektif dilaksanakan.

Kata Kunci: Bahan Ajar, *Problem Based Learning*.