

ABSTRAK

BERTA NURWIDYASTUTI: Pengembangan Model Pembelajaran *Problem Based Learning (PBL)* pada Pelajaran Matematika SMP Kelas VII Semester Genap untuk Meningkatkan Kemampuan Investigasi dan Ranah Afektif. **Tesis. Yogyakarta: Program Pascasarjana, Universitas Negeri Yogyakarta, 2015.**

Penelitian ini bertujuan untuk menghasilkan model pembelajaran *Problem-Based Learning (PBL)* untuk meningkatkan kemampuan investigasi dan ranah afektif yang valid, praktis dan efektif. Langkah-langkah Model Pembelajaran *Problem Based Learning (PBL)* tercantum dalam RPP dan LK. Kualitas produk hasil pengembangan ditentukan berdasarkan pada kriteria dari Nieveen, yaitu valid, praktis dan efektif. Materi yang digunakan dalam penelitian pengembangan ini adalah segitiga dan segiempat di kelas VII SMP.

Penelitian ini merupakan penelitian pengembangan (*research & development*). Model pengembangan yang digunakan adalah model pengembangan Borg & Gall yang telah dimodifikasi menjadi tiga langkah penelitian, yaitu pendahuluan, produksi, dan pengembangan. Uji coba dilakukan tiga tahap yaitu (1) uji coba/validasi ahli; (2) uji coba terbatas; dan (3) uji coba lapangan. Uji coba lapangan dilaksanakan di SMPN 6 Yogyakarta. Instrumen penelitian yang digunakan adalah lembar validasi, lembar penilaian guru, lembar tanggapan siswa terhadap pembelajaran dan pemanfaatan LK, lembar observasi keterlaksanaan pembelajaran, tes prestasi belajar, tes kemampuan investigasi, dan angket minat belajar matematika. Analisis data kevalidan dan analisis data kepraktisan masing-masing dilakukan dengan cara mengkonversi data kuantitatif berupa skor hasil penilaian menjadi data kualitatif berupa nilai standar skala lima. Analisis keefektifan produk yang dikembangkan dilakukan dengan cara menentukan peningkatan hasil tes prestasi belajar dan tes kemampuan investigasi.

Hasil validasi menunjukkan bahwa produk yang dikembangkan, yaitu buku model pembelajaran *Problem-Based Learning (PBL)*, RPP, lembar kerja (LK), tes prestasi belajar, dan tes kemampuan investigasi (TKI) memiliki kategori “sangat baik”. Aspek kepraktisan mencapai kategori “baik” ditinjau dari penilaian guru terhadap buku model pembelajaran *Problem-Based Learning (PBL)*, RPP, dan lembar kerja (LK), tanggapan siswa terhadap pembelajaran dan pemanfaatan LK dan keterlaksanaan pembelajaran. Produk pengembangan, yaitu buku model pembelajaran *Problem-Based Learning (PBL)*, RPP, dan lembar kerja (LK) juga memenuhi kriteria “efektif” yang diperoleh dari hasil tes prestasi belajar menunjukkan bahwa 29 orang atau 82,86% siswa telah mencapai KKM, dan hasil tes kemampuan investigasi menunjukkan terjadi peningkatan yang signifikan sebesar 18,4%. Reliabilitas tes prestasi belajar sebesar 0,749, tes kemampuan investigasi sebesar 0,7616 dan angket minat belajar siswa sebesar 0,894. Dengan demikian, secara keseluruhan penelitian yang dilakukan menunjukkan bahwa produk yang dikembangkan layak untuk digunakan ditinjau dari aspek kevalidan, kepraktisan dan keefektifan.

Kata kunci: pengembangan model pembelajaran, *problem based learning*, minat belajar matematika

ABSTRACT

BERTA NURWIDYASTUTI: *Developing Problem Based Learning (PBL) Model on Mathematics Lesson to Enhance Investigation Skills and Affective Factor of 7th Grade Students.* **Thesis. Yogyakarta: Postgraduate Program, Yogyakarta State University, 2015.**

This study aims at developing *Problem Based Learning (PBL)* to enhance investigation skills and affective factor which is valid, practical and effective. The quality of this product development is based on Nieveen's criteria. The stages of Problem Based Learning (PBL) model are implemented through the lesson plan and worksheet which only focus on triangle and quadrilateral for 7th grade students.

This study was research and development which applied Borg and Gall development methodology that has been adjusted into three steps, product planning and design, producing, and developing. The field-testing was done in three stages, namely (1) preliminary field-testing/expert validation; (2) limited field-testing; and (3) main field-testing. The main field-testing was conducted in SMPN 6 Yogyakarta. The research instruments were validation sheet, teacher evaluation sheet, students responses sheet of the learning process and the use of worksheet, learning process observation sheet, academic test, investigation skill test, and questionnaire of students' interest in learning mathematics. The data analysis was done by converting the quantitative data, the appraisal score, into qualitative data, standard scale of five. Then, the effectiveness analysis of the product development was done by determining the increase percentage of academic test and test of investigation skills.

The validation results show that the developed products, *Problem Based Learning (PBL) Model* book, the lesson plan, worksheet, academic test, and investigation skill test have 'very good' criteria. Then, the practical aspect achieves 'good' criteria based on teacher's appraisal on Problem Based Learning (PBL) Model book, lesson plan, and worksheet, students' responses of the learning process and the use of worksheet. In addition, the Problem Based Learning (PBL) Model book and the worksheet fulfill the effective criteria. It was grounded from the academic test result which shown that 29 students or 82.86% of the total students have achieved the passing grade and the result of investigation skill test's result shows a significant increase around 18.4%. The reliability of the academic test is about 0.749, the investigation skill test is about 0.7616, and the questionnaire of students' interest in learning mathematics is about 0.894. In general, this study has shown that the developed products are reliable to be used as they fulfill the valid, practical and effectiveness aspects.

Keywords: *learning model development, problem based learning, students' interest in learning mathematics*