

ABSTRAK

Mujiono. (NIM:161442015). 2019. Implementasi Sistem Among Pada Pembelajaran Matematika Untuk Membangun Karakter dan Kemampuan Pemecahan Masalah Siswa. Tesis, Program Studi Magister Pendidikan Matematika, Jurusan Pendidikan Matematika dan Ilmu Pengetahuan Alam, Fakultas Keguruan dan Ilmu Pendidikan, Universitas Sanata Dharma.

Tujuan penelitian ini adalah mengembangkan paket pembelajaran matematika berbasis Sistem *Among* pada materi Sistem Persamaan Linear Tiga Variabel, kemudian mengimplementasikannya ke dalam pembelajaran untuk mengetahui dampaknya terhadap karakter siswa dan kemampuan pemecahan masalah siswa.

Penelitian ini terdiri dari dua tahap, yaitu: tahap 1 adalah penelitian pengembangan dengan menyusun paket pembelajaran berbasis Sistem *Among* pada materi sistem persamaan linear tiga variabel, kemudian dianalisis kualitas paket pembelajaran berdasarkan teknik analisis data kuantitatif dan kualitatif. pengembangan yang digunakan adalah model Plomp, yaitu (1) tahap investigasi awal, (2) tahap desain, (3) tahap realisasi/konstruksi, (4) tahap tes, evaluasi (uji coba) dan revisi, dan (5) implementasi. Hasil penelitian pengembangan menunjukkan bahwa kualitas paket pembelajaran matematika yang dikembangkan telah memenuhi kriteria valid, praktis, dan efektif. Hasil uji coba paket pembelajaran di sekolah bahwa tingkat kepraktisan paket pembelajaran menurut penilaian guru juga telah memenuhi kriteria baik atau praktis dengan skor 4,18. Keefektifan paket pembelajaran berdasarkan hasil tes kemampuan pemecahan masalah yang menunjukkan rata-rata nilai siswa dalam satu kelas, yaitu 76,32, dimana hasil tersebut sudah di atas nilai kriteria ketuntasan minimal sekolah, yaitu 67. Dampak implementasi Sistem *Among* dalam pembelajaran matematika ternyata dapat membangun karakter siswa yang diwujudkan melalui sikap rasa ingin tahu, sikap berpikir kritis, sikap penemuan dan kreatifitas, sikap berfikiran terbuka dan kerjasama, sikap ketekunan dalam diri siswa dengan kategori baik dengan skor 3,2, pada siswa kelas X IPS 2 MA Sunan Pandanaran.

Penelitian tahap 2 adalah penelitian kualitatif yang bertujuan untuk memperoleh deskripsi kemampuan pemecahan masalah siswa MA Sunan Pandanaran berdasarkan model Polya ditinjau dari kemampuan matematikanya, yaitu siswa dengan kemampuan matematika tinggi, sedang, dan rendah. Hasil penelitian menunjukkan bahwa: (1) siswa dengan kemampuan tinggi mempunyai kemampuan pemecahan masalah sangat baik dengan nilai rata-rata 88, (2) siswa dengan kemampuan sedang mempunyai kemampuan pemecahan masalah sangat baik dengan nilai rata-rata 78 (3) siswa dengan kemampuan rendah mempunyai kemampuan pemecahan masalah cukup dengan nilai rata-rata 70.

Kata Kunci : Sistem *Among*, Paket Pembelajaran Matematika, Pemecahan Masalah

ABSTRACT

Mujiono (NIM: 161442015). 2019. *The Implementation of Among System on Mathematics Teaching and Learning Process to Build Students Character and Problem Solving Skills. A Thesis, Master Program in Mathematics Education Department of Mathematics and Natural Science Education, Faculty of Teacher Training and Education, Sanata Dharma University.*

This research aims at developing Among system-based learning materials of Mathematics on three variables linear equation system for later implementing the materials in a teaching and learning process to know the impact towards students' character and problem solving skills.

This research consists of two stages. The first one is the developmental research by constructing Among system-based learning materials on three variables linear equation system. The materials were analyzed qualitatively and quantitatively. The materials were developed using a model proposed by Plomp consisting of five stages: (1)Initial Investigation, (2)Design, (3)Realization/Construction, (4)Test, Evaluation, and Revision and (5)Implementation. The result of the development indicated that the quality of the materials fulfilled these criteria: valid, practical, and effective. The score of the test towards the materials in the teaching and learning process is 4,18. It showed that the practicality of the materials based on the teacher's assessment fulfilled the criterion "Good" or "Practical". The effectiveness of the materials based on the result of the problem solving test showed that the average value of students in the class is 76, higher than the minimum completeness criteria of the school which is 67. The impact of the implementation of Among system towards the teaching and learning process of Mathematics of the students of Class X IPS 2 of MA Sunan Pandanaran turned out to be able to build students character that is realized through: Curiosity, Critical Thinking, Discovery and Creativity, Open Mindedness and Cooperation, and Perseverance which are categorized as "Good" by the value 3,2. The impact of implementing the system among mathematics learning can actually foster a scientific attitude students included curiosity, critical thinking, discovery and creativity, open mindedness and cooperation, persistence in students with good categories with a score of 3.2, in class X Social Sciences 2 MA Sunan Pandanaran.

The second stage is the qualitative research. It aims to gain the description of the students of MA Sunan Pandanaran problem solving skills based on a model proposed by Polya. In terms of the mathematical abilities, the students are categorized as high, medium, and low. The results indicated that (1) the high-ability students have excellent problem solving skills with an average value of 88, (2) the medium-ability students have excellent problem solving skills with an average value of 78, and (3) the low-ability students have adequate problem solving skills with an average value of 70.

Keywords: *Among Systems, Mathematics Learning Package, Problem Solving*