

ABSTRACT

SITI AISYAH HASIBUAN. Development of PISA Model Mathematics Problem on Change and Relationship Content to Measure the Mathematical Problem Solving Ability of Students in SMP Negeri 6 Padangsidempuan. Postgraduate School of the State University of Medan 2019

This study aims to describe: 1) the validity and mathematical problems of the PISA model on the developed change and relationship content; 2) the practicality of the PISA mathematical problem model on the developed change and relationship content; 3) students' mathematical problem-solving abilities on mathematical problems PISA models developed content change and relations. This research is a formative evaluation research development. The subjects of this study were 32 students of Grade VIII-2 of SMP Negeri 6 Padangsidempuan. Data collection techniques used were walkthrough, documents, tests, and questionnaires. From the results, it can be concluded that this research has produced valid, reliable questions with high interpretation and positive student responses to the test questions that have been developed. The results of students' mathematical problem-solving ability tests reached an average score of 69.74% with enough categories. Then it can be concluded that the mathematical problems developed by PISA are categorized invalid and practical criteria and have a potential effect on students' mathematical problem-solving abilities.

Keywords: development of PISA model mathematical problems, content change and relationship, problem-solving abilities.

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ABSTRAK

SITI AISYAH HASIBUAN. Pengembangan Soal Matematika Model PISA pada Konten *Change and Relationship* untuk Mengukur Kemampuan Pemecahan Masalah Matematis Siswa SMP Negeri 6 Padangsidimpuan. Program Pascasarjana Universitas Negeri Medan 2019

Penelitian ini bertujuan untuk mendeskripsikan: 1) validitas dan soal matematika model PISA pada konten *change and relathionship* yang dikembangkan; 2) kepraktisan soal matematika model PISA pada konten *change and relathionship* yang dikembangkan; 3) kemampuan pemecahan masalah matematis siswa pada soal matematika model PISA konten *change and relathionship* yang dikembangkan. Penelitian ini adalah penelitian pengembangan tipe *formative evaluation*. Subjek penelitian ini adalah siswa kelas VIII-2 SMP Negeri 6 Padangsidimpuan sebanyak 32 siswa. Teknik pengumpulan data yang digunakan adalah *walk through*, dokumen, tes, dan angket. Dari hasil dapat disimpulkan bahwa penelitian in telah menghasilkan soal yang valid, reliabel dengan interpretasi tinggi, dan respon positif siswa terhadap soal tes yang telah dikembangkan. Hasil tes kemampuan pemecahan masalah matematis siswa mencapai skor rata-rata sebesar 69,74% dengan kategori cukup. Maka dapat disimpulkan bahwa soal matematika model PISA yang dikembangkan dikategorikan dalam kriteria valid dan praktis serta memiliki efek potensial terhadap kemampuan pemecahan masalah matematis siswa.

Kata kunci: pengembangan soal matematika model PISA, konten *change and relationship*, kemampuan pemecahan masalah.

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