ABSTRAK

Penurunan hasil capaian siswa pada Ujian Nasional disebabkan karena masih minimnya buku-buku yang memuat soal dengan karakterisitik Ujian Nasional yang kini memiliki kriteria seperti soal-soal pada TIMSS. Sehingga, siswa di Indonesia kurang terlatih dalam menyelesaikan soal-soal kontekstual, menuntut penalaran, argumentasi dan mengaplikasikan prinsip-prinsip pada situasi baru dalam menyelesaikannya. Penelitian ini bertujuan untuk mengembangkan instrumen tes pilihan ganda pada rumpun topik kimia fisik (Tes RTKF) sesuai kisi-kisi Ujian Nasional tahun 2016/2017 yang memenuhi kriteria validitas isi, reliabilitas, tingkat kesukaran dan daya pembeda. Metode yang digunakan dalam penelitian ini adalah metode Pengembangan dan Validasi. Tahap pengembangan dimulai dari analisis butir soal Ujian Nasional, studi literatur *frameworks* TIMSS 2015 hingga pembuatan butir soal. Tahap validasi dimulai dari validasi butir soal oleh para ahli, revisi butir soal, uji coba produk serta analisis dan pengolahan data uji coba. Berdasarkan uji validitas isi, 24 butir soal dinyatakan valid dengan nilai CVR = 1 untuk setiap butir soal. Tes RTKF yang telah dinyatakan valid dan direvisi kemudian diujicobakan kepada 41 orang siswa kelas XII. Hasil uji coba kemudian dianalisis dan diperoleh 17 butir soal yang lolos pada tahap uji reliabilitas dengan nilai Alpha Cronbach sebesar 0,739 dengan kriteria baik. Tes ini memiliki tingkat kesukaran yang bervariasi yaitu soal dengan kategori sukar sebanyak 6%, kategori sedang sebanyak 70% dan kategori mudah sebanyak 24%. Daya pembeda butir soal yang termasuk ke dalam kategori sangat baik sebanyak 18%, kategori baik sebanyak 23% dan cukup baik sebanyak 59%. Tes RTKF ini memiliki kriteria validitas, reliabilitas, tingkat kesukaran dan daya pembeda yang baik. Sehingga dapat digunakan sebagai model tes untuk menghadapi Ujian Nasional maupun di dalam proses penilaian siswa seperti ulangan harian atau tes sumatif.

Kata Kunci: Kisi-kisi Ujian Nasional, Rumpun Topik Kimia Fisik, TIMSS.

ABSTRACT

The decrease in students' scores on the national examination is caused by the lack of textbooks which contain questions that are corresponding to the national examination's criteria which have similarities to TIMSS' questions. Therefore, Indonesian students were not well-prepared on solving contextual, intellectually demanding and argumentative questions, and also they were not well-prepared on applying concepts in new situations to solve the problems. This research is aimed to develop the multiple choices instruments in the topic of physical chemistry which are relevant to national examination's outlines year 2016/2017. This test is called RTKF the abbreviation of *Rumpun Topik Kimia Fisik* which means the test of the physical chemistry topic. This RTKF test meet the criteria of validity, reliability, level of difficulty, and appropriateness of curriculum. This research used validation and development method. The development stage was started from the national examination's question analysis, literature review of TIMSS 2015 framework to questions making. The validation process was started from questions validation from the experts, questions revision, product trials to analyze and trial data processing. Based on the content validity tests, 24 questions were valid with CVR score = 1 for each question. RTKF test which had been confirmed and revised were tested to 41, 12th graders. The results of the test were analyzed and 17 questions passed the reliability tests with Alpha Cronbach score 0,739 and were categorized as good. The test had different level of difficulty, e.g 6% for difficult questions, 70% for intermediate questions, and 24% for easy questions. The appropriateness of curriculum that was counted as very good category was 18%, 23% for good category, and 59% for satisfactory category. This RTKF test has good validity criteria, reliability, level of difficulty, and appropriateness of curriculum. Thus, it can be used as a trial test modes for preparation towards the national examination or during scoring process such examination of summative test.

Keywords: National Examination's Outlines, Physical Chemistry, TIMSS.