

## ABSTRAK

ATIN KURNIAWATI: Pengembangan Instrumen *Authentic Assessment* Berbasis *Performance* untuk Mengukur Keterampilan Proses Sains dan Hasil Belajar Aspek Kognitif. **Tesis. Yogyakarta: Program Pascasarjana, Universitas Negeri Yogyakarta, 2015.**

Penelitian ini bertujuan (1) menguji kualitas instrumen *authentic assessment* berbasis *performance* yang telah dikembangkan untuk mengukur keterampilan proses sains dan hasil belajar belajar peserta didik dalam pembelajaran fisika materi suhu kalor, dan (2) mengetahui apakah penggunaan instrumen *authentic assessment* berbasis *performance* yang telah dikembangkan dapat membangun keterampilan proses sains peserta didik SMA/MA, (3) mengetahui apakah penggunaan instrumen *authentic assessment* berbasis *performance* yang telah dikembangkan dapat mengukur hasil belajar aspek kognitif peserta didik SMA/MA.

Metode yang digunakan dalam penelitian ini adalah R & G (*Research & Development*) dengan pendekatan yang diadaptasi dari model Borg and Gall, yaitu (1) pengumpulan informasi, (2) perencanaan, (3) pengembangan bentuk awal produk, (4) ujicoba terbatas, (5) revisi produk utama, (6) ujicoba luas, (7) revisi produk terhadap uji luas dan (8) diseminasi. Subjek uji coba terbatas adalah 15 siswa kelas X MAN Yogyakarta III, sedangkan subjek uji coba diperluas adalah 31 siswakesel XA MAN Yogyakarta III. Data dikumpulkan melalui observasi, tes dan angket. Aspek yang diteliti adalah kemampuan keterampilan proses sains dan kemampuan hasil belajar aspek kognitif. Uji coba luas menggunakan desain *One - shot Case Study*.

Hasil penelitian ini adalah sebagai berikut. (1) Kualitas instrumen yang dikembangkan menurut penilaian dosen ahli, guru fisika, teman sejawat secara umum valid dan pada uji terbatas serta uji luas secara umum valid dan reliabel. (2) Instrumen *authentic assessment* berbasis *performance* materi suhu kalor untuk peserta didik SMA/MA ini mampu membangun keterampilan proses sains. (3) Instrumen *authentic assessment* berbasis *performance* materi suhu kalor untuk peserta didik SMA/MA mampu mengukur hasil belajar aspek kognitif.

**Kata Kunci:** *authentic assessment, performance*, keterampilan proses sains, hasil belajar aspek kognitif.

## ABSTRACT

ATIN KURNIAWATI: *Developing Authentic Assessment Instrument Based on Performance to Measure Science Skill Process and Cognitive Aspect of Students' Achievement*. Thesis. Yogyakarta: Graduate School, Yogyakarta State University, 2015.

This study aims to (1) examine the quality of the developed authentic assessment instrument based on performance to measure skill science process and cognitive aspect of student's achievement on physics learning on heat and temperature physics lesson, and (2) reveal whether the use of the developed authentic assessment instrument based on performance can build skill science process students of senior high school/Madrasah Aliyah, (3) reveal whether the use of the developed authentic assessment instrument based on performance can measure cognitive aspect of student's achievement students of senior high school/Madrasah Aliyah.

This research used R & D (Research & Development) method adapted from Borg and Gall's model, consisting of (1) collecting information, (2) planning, (3) preliminary product development, (4) preliminary field testing, (5) preliminary product revision, (6) main field testing, (7) main product revision and (8) dissemination. The limited trial subjects were 15 grade X students of MAN Yogyakarta III, the real subjects were 31 grade X students of MAN Yogyakarta III. The data were collected through observation, questionnaire and test. The aspects under study were skill science process and cognitive learning achievement. The main field testing used the One – Shot Case Study model.

The results of study are as follows. (1) The quality of the developed instruments, according to the experts judgment, physics teachers and peers, in general, **was valid** but at the preliminary field test and main field test in generalit **was valid and reliabel**. (2) The developed authentic assessment instrument based on performace of heat and temperature for the students of senior high school/madrasah aliyah could build skills of the science process. (3) The developed authentic assessment instrument based on performace of heat and temperature for the students of senior high school/madrasah aliyah could measure skills cognitive achievement's aspect.

**Keywords:** *authentic assessment, performance, skill science process and cognitive achievement's aspect.*