

**PENGEMBANGAN LEMBAR KEGIATAN PESERTA DIDIK (LKPD)
BERBASIS *CONCEPTUAL ATTAINMENT* UNTUK MENINGKATKAN
PEMAHAMAN KONSEP DAN KETERAMPILAN PROSES SAINS
PADA MATERI KESEIMBANGAN DAN DINAMIKA ROTASI**

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ABSTRAK

Penelitian ini bertujuan untuk menghasilkan LKPD berbasis *Conceptual Attainment*, mengetahui peningkatan pemahaman konsep, dan keterampilan proses sains peserta didik setelah diimplementasikan LKPD berbasis *Conceptual Attainment*.

Penelitian ini merupakan penelitian pengembangan dengan desain penelitian model 4-D (*Four D Models*). Tahap-tahap penelitian meliputi: (1) *define* (pendefinisian), (2) *design* (perancangan), (3) *develop* (pengembangan), dan (4) *disseminate* (penyebaran). LKPD yang dirancang berdasarkan hasil observasi di SMA Negeri 1 Magelang divalidasi oleh dosen ahli dan praktisi. LKPD hasil validasi digunakan untuk uji coba terbatas di kelas XI MIA 6. LKPD didukung oleh instrumen pendukung berupa RPP dan instrumen pengumpul data berupa soal *pretest* dan *posttest*, lembar penilaian keterampilan proses sains, serta angket respon peserta didik terhadap LKPD. Hasil revisi LKPD dari uji coba terbatas digunakan untuk uji coba lapangan di kelas XI MIA 1. Data validasi dosen ahli dan praktisi diperoleh dari angket validasi yang dihitung menggunakan *Percentage of Agreement (PA)*. Data uji coba terbatas dan uji coba lapangan diperoleh dari hasil penilaian terhadap *pretest* dan *posttest*, lembar observasi keterampilan proses sains serta hasil angket respon peserta didik. Data tersebut kemudian dianalisis dengan *normalized gain* untuk *pretest* dan *posttest*, kriteria penilaian skala lima dan *PA* untuk lembar observasi keterampilan proses sains, serta diagram *pie* untuk angket respon peserta didik.

Hasil penelitian berupa dihasilkannya LKPD berbasis *Conceptual Attainment* yang layak digunakan dalam meningkatkan pemahaman konsep dan keterampilan proses sains berdasarkan penilaian validator dari aspek kesesuaian tata bahasa dan tampilan *PA* 96,97%, aspek kesesuaian pembelajaran berbasis *Conceptual Attainment* *PA* 95,24%, dan kesesuaian pembelajaran untuk meningkatkan keterampilan proses sains *PA* 95%, dimana ketiganya berada pada kategori sangat baik. Kecenderungan respon peserta didik terhadap aspek penilaian LKPD adalah setuju, dengan persentase untuk uji coba terbatas sebesar 78% dan uji coba lapangan sebesar 89%. Peningkatan pemahaman konsep berdasarkan *Normalized Gain (g)* untuk uji coba terbatas 0,56 dan uji coba lapangan 0,50, dimana keduanya dalam kategori interpretasi *gain* sedang. Peningkatan keterampilan proses sains tidak signifikan pada uji coba terbatas maupun pada uji coba lapangan dengan *range* antara 0,1 hingga 0,3.

Kata kunci: Lembar Kegiatan Peserta Didik (LKPD), *Conceptual Attainment*, pemahaman konsep, keterampilan proses sains

**DEVELOPMENT OF STUDENT WORKSHEET
WITH CONCEPTUAL ATTAINMENT METHOD TO IMPROVE
CONCEPTS UNDERSTANDING AND SCIENCE PROCESS SKILLS
IN EQUILIBRIUM AND ROTATIONAL DYNAMICS**

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ABSTRACT

The research aims were to produce Conceptual Attainment student worksheet, improvement of concepts understanding, and science process skills after using Conceptual Attainment student worksheet.

This was a development research by using 4-D models. The steps consisted of (1) define, (2) design, (3) develop, and (4) disseminate. The Conceptual Attainment student worksheet which designed based on the observation in SMA Negeri 1 Magelang, was validated by expert judgment and teacher. The student worksheet as the result of validation was used for limited test in XI MIA 6. It was supported by supported instrument, lesson plan and collected instrument which consist of pretest and posttest, science process skills observation sheet, and student questioner. Limited test revision result was used for field test in XI MIA 1. Expert judgment and teacher validation got from validation questioner which was calculated by Percentage of Agreement (PA). Limited and field test data got from pretest and posttest scores, science process skills observation sheet, and result of student questioner. Then the data were analyzed by normalized gain for pretest and posttest, ideal scale criterions and PA for science process skills observation, and pie diagram for student questioner.

The research results were produced Conceptual Attainment student worksheet which can be used to improve concepts understanding and science process skills based on validator's score from language structure and design PA 96.97%, appropriate learning with Conceptual Attainment method PA 95.24%, and learning to improve science process skills PA 95%, which all aspects got the best category. Almost students agreed to the worksheet with presentation 78% for limited test and 89% for field test. Concepts understanding improvement based on Normalized Gain (g) were 0.56 for limited test and 0.50 for field test. Science process skills improvement weren't significant for all the test with range 0.1-0.3.

Keywords: student worksheet, Conceptual Attainment, concept understanding, science process skills