

## **ABSTRACT**

### **The Development of Physics Education Learning Device in Senior High School integrated by Tawakal Value Based on Concept Attainment Learning Model with Science Environment Technology and Society Approach**

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This research was motivated by the important of learning device that balanced soft skills and hard skills to improve mastering of student's concepts. One of the learning devices that supported these objectives was to use the model Concept Attainment. Optimizing Concept Attainment was supported by Science Environment Technology and Society (SETS) approach. On the other hand, the development of learning device had to accommodate the cultivation of religious values in self-learners. Religion value was important to human. One of the ways was to integrate religious values into learning physics.

The aim of this study was to develop Physics Education Learning Device in Senior High School integrated by Tawakal Value Based on Concept Attainment Learning Model with Science Environment Technology and Society approach. This research is a research and development using 4-D models. The research phases were define, design, develop, and disseminate. Define phase was consisted by front end analysis, learner analysis, concept analysis, task analysis and instructional design analysis. Design phase was consisted by designing learning devices such as lesson plans, handouts, LKPD, and assessment. Develop phase was consisted by testing the validity, practicalities and effectiveness gained through learning device validation sheet, the practicalities questionnaires, observation sheets, and student competence result. Disseminate phase consisted by effectiveness test which data obtained from the knowledge assessment, affective assessment and skills assessment.

The results of define phase produced learning instructional design. The results of design phase produced lesson plans, handouts, LKPD and assessment that were designed to follow the steps based Concept Attainment learning model with SETS approach integrated by tawakal value. The results of develop phase showed that validity test used with two valid kappa coefficients had been done by two raters. Inter-rater agreement for content learning device validity was 0,86, language validity was 0,78, and construct validity was 0,79. The test results showed that the practicalities of learning devices obtained from teacher respon sheet were 90,3%, and students respon sheet were 83,85%. Furthermore, the effectiveness obtained from knowledge assessment was 87,07%, affective assessment was 89,7%, and skills assessment was 80%. The result of disseminate phase were an average affective assessment was 78,8%, knowledge assessment was 90,75%, skills assessment was 83,9%. The conclusion was The Development of Physics Education Learning Device in Senior High School integrated by Tawakal Value Based on Concept Attainment Learning Model with Science Environment Technology and Society approach with valid, practical and effective criteria so it can be applied to the learning process.

## ABSTRAK

### **Pengembangan Perangkat Pembelajaran Fisika SMA/MA Terintegasi Nilai Tawakal Berbasis Model Pembelajaran *Concept Attainment* dengan pendekatan *Science Environment Technology and Society***

**Sherly Glauri**

Penelitian ini dilatarbelakangi pentingnya perangkat pembelajaran yang menyeimbangkan *soft skill* dan *hard skill* untuk meningkatkan penguasaan konsep peserta didik. Salah satu perangkat pembelajaran yang mendukung tujuan tersebut adalah menggunakan model *Concept Attainment*. Untuk mengoptimalkan model *Concept Attainment* ini didukung dengan Pendekatan *Science Environment Technology and Society (SETS)*. Disisi lain, pengembangan perangkat pembelajaran harus mengakomodir penanaman nilai-nilai agama dalam diri peserta didik. Mengingat nilai-nilai agama sangatlah penting tertanam dalam diri manusia, salah satunya adalah mengintegrasikan nilai-nilai agama ke dalam pembelajaran fisika.

Penelitian ini bertujuan untuk mengembangkan perangkat pembelajaran fisika SMA/MA terintegrasi nilai tawakal berbasis model pembelajaran *Concept Attainment* dengan Pendekatan *SETS*. Jenis Penelitian adalah penelitian pengembangan (*research and development*) menggunakan model 4-D. Adapun tahap penelitian adalah pendefinisian (*define*), perancangan (*design*), pengembangan (*development*) dan penyebaran (*disseminate*). Tahap *define* dilakukan analisis awal-akhir, analisis peserta didik, analisis konsep, analisis tugas dan analisis desain instruksional pembelajaran. Tahap *design* dilakukan perancangan perangkat pembelajaran berupa RPP, *handout*, LKPD, dan penilaian. Tahap *development* dilakukan uji validitas, praktikalitas dan efektivitas yang diperoleh melalui lembar validasi perangkat pembelajaran, angket praktikalitas, lembar observasi, dan data hasil belajar peserta didik. Tahap *disseminate* dilakukan uji efektivitas yang datanya diperoleh dari penilaian kompetensi sikap, pengetahuan, dan keterampilan peserta didik.

Hasil penelitian tahap *define* adalah dihasilkannya desain instruksional pembelajaran. Hasil penelitian pada tahap *design* diperoleh RPP, *handout*, LKPD dan penilaian yang dirancang mengikuti langkah-langkah pembelajaran berbasis *Concept Attainment* dengan Pendekatan *SETS* terintegrasi nilai tawakal. Hasil penelitian tahap *development* menunjukkan bahwa uji validitas dengan menggunakan koefisien kappa yang melibatkan 2 rater (validator) menyatakan perangkat yang dikembangkan berada pada kategori valid. Kesepakatan antar rater untuk validitas isi perangkat pembelajaran adalah 0.86, validitas bahasa adalah 0.78, dan validitas konstruk adalah 0.79. Hasil uji praktikalitas menunjukkan bahwa perangkat pembelajaran sangat praktis dengan persentase rata-rata kepraktisan oleh guru terhadap RPP adalah 91,7%, persentase rata-rata *handout* adalah 92,6%, persentase rata-rata LKPD adalah 89.3%, dan persentase rata-rata penilaian adalah 87,5%, dan hasil analisis terhadap angket praktikalitas peserta didik terhadap *handout* sebesar 83,94% dan LKPD sebesar 83,75%. Selanjutnya, hasil dari uji efektifitas diperoleh dari penilaian kompetensi sikap dengan rata-rata 87,07%, rata-rata klasikal kompetensi pengetahuan 89,7%, rata-rata kompetensi keterampilan 80%. Hasil penelitian pada tahap *disseminate* diperoleh penilaian kompetensi sikap dengan rata-rata 78.8%, rata-rata kompetensi pengetahuan 90,75%, rata-rata kompetensi keterampilan 83.9%. Dengan demikian penelitian ini menunjukkan bahwa perangkat pembelajaran fisika SMA/MA terintegrasi nilai tawakal berbasis model pembelajaran *Concept Attainment* dengan Pendekatan *SETS* memenuhi kriteria valid, praktis dan efektif sehingga layak diterapkan pada proses pembelajaran.