

## ABSTRACT

### **Developing An Inquiry-Oriented Instructional Equipment in Physics through Cooperative Learning Model STAD Type on Temperature and Heat Topics at SMAN**

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As it was required by the Local-Based Curriculum, learning process should be able to help the students in developing their potencies that they could find learning concepts by themselves. In order to achieve this goal, the learning process for preposition in form of student-centered and the teacher was just as a facilitator. Unfortunately, the reality found at school was still far from what it should be. Therefore, the researcher tried to develop an instructional equipment that could bolster up the learning process which was students-centered. One of the learning strategies involving the students actively in teaching and learning process was inquiry learning strategy through cooperative learning model STAD type. The aim of this research was to develop inquiry-oriented instructional equipment through cooperative learning model STAD type which was valid, practical and effective.

This was a developmental research which used 4D model that consisted of Defining, Designing, Developing and Disseminating. The set which was developed was in the form of syllabus, lesson plan, student worksheet and handout. In collecting the data, the researcher used validation sheet for syllabus, validation sheet for lesson plan, validation sheet for student worksheet, validation sheet for handout, questionnaire for teachers' responses, questionnaire for students' responses and questionnaire for the feasibility of lesson plan. The data gotten then was analyzed by using statistic descriptive technique.

The result of data analysis showed that the instructional equipment which had been developed was valid. It could be seen from the validity test which was 85,18%. The practicality test was 89,4%. This means that the questionnaire of students' responses, the questionnaire of teachers' responses and the questionnaire of the feasibility of the lesson plan indicated that the instructional equipment was practical. Furthermore, the result of the effectiveness test showed that the average score of students' ability on cognitive aspect was 76, on affective aspect was 75 and on psychomotor aspect was 80. These numbers showed that the instructional equipment which had been developed was effective. Based on the result of data analysis, the researcher concluded that this research had develop an inquiry-oriented instructional equipment in Physics through cooperative learning model STAD type on Temperature and Heat topics which was valid, practical and effective.

## ABSTRAK

### **Pengembangan Perangkat Pembelajaran Fisika Berorientasi Inkuiri Melalui Pembelajaran Kooperatif Type STAD Pada Materi Suhu dan Kalor Di SMA**

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KTSP menuntut Pembelajaran yang dapat mengembangkan potensi siswa sehingga siswa diharapkan dapat menemukan konsep-konsep fisika secara berkelompok. Untuk itu pembelajaran harus berpusat kepada siswa dan guru lebih berperan sebagai fasilitator. Pada kenyataannya pembelajaran yang berpusat pada siswa belum terlaksana secara maksimal. Hal ini disebabkan oleh keterbatasan sarana dan prasarana serta kemampuan guru dalam merancang perangkat pembelajaran. Oleh karena itu perlu dikembangkan perangkat pembelajaran yang mendukung keterlaksanaan kegiatan pembelajaran yang berpusat pada siswa. Salah satu strategi pembelajaran yang melibatkan siswa secara aktif adalah strategi pembelajaran inkuiri melalui model pembelajaran kooperatif tipe STAD. Penelitian ini bertujuan untuk mengembangkan perangkat pembelajaran berorientasi inkuiri melalui model pembelajaran kooperatif tipe STAD yang valid, praktis dan efektif.

Jenis penelitian ini adalah penelitian pengembangan (*Development Research*) menggunakan model 4-D. Tahapan penelitian ini adalah pendefinisian (*Define*), perancangan (*Design*), pengembangan (*Develop*). Perangkat yang dikembangkan Silabus, Rencana Pelaksanaan Pembelajaran, Lembar Kerja Siswa dan *Hand Out*. Instrumen penelitian adalah validasi perangkat pembelajaran yang terdiri dari validasi Silabus, validasi RPP, validasi *hand out*, validasi LKS. Angket respon guru dan respon siswa dan lembar observasi keterlaksanaan RPP. Teknik analisis data adalah statistik deskriptif untuk mendapatkan nilai rata-rata dan persentase validitas dan kepraktisan perangkat pembelajaran.

Hasil analisis data uji kevalidan mempunyai nilai rata-rata 85,18%. Ini berarti perangkat pembelajaran yang dikembangkan berkategori valid. Selanjutnya hasil uji kepraktisan mempunyai nilai rata-rata 89,4%. Ini berarti angket respon guru dan angket respon siswa serta keterlaksanaannya menunjukkan perangkat yang dikembangkan praktis. Lebih lanjut, hasil uji keefektifan adalah rata-rata nilai siswa pada ranah kognitif adalah 76, , rata-rata nilai siswa pada ranah ranah afektif 75, dan rata-rata nilai siswa pada ranah ranah psikomotor 80. Ini berarti perangkat pembelajaran yang dikembangkan berkategori efektif. Kesimpulan Penelitian adalah pengembangan perangkat pembelajaran berorientasi inkuiri melalui pembelajaran kooperatif tipe STAD pada materi Suhu dan Kalor berkategori valid, praktis dan efektif.