

**Penerapan Model Levels of Inquiry Based Instruction (LoIBI) Berbantuan
Multimedia Visual pada Pembelajaran Fisika SMA dalam Meningkatkan *Scientific
Explanation Skills* dan *Inquiry Skills* Siswa**

Sulastriya Ningsi, 1605516

Abstrak

Telah dilakukan penelitian tentang penerapan model pembelajaran LoIBI berbantuan multimedia visual pada materi teori kinetik gas pada siswa SMA. Tujuan penelitian ini untuk mendapatkan gambaran mengenai peningkatan *scientific explanation skills* dan *inquiry skills* siswa yang mendapatkan model *levels of inquiry based instruction* (LoIBI) berbantuan multimedia visual dibandingkan dengan siswa yang mendapatkan model *levels of inquiry based instruction* (LoIBI) tanpa bantuan multimedia visual. Metode penelitian yang digunakan adalah kuasi eksperimen dengan desain *randomized control group pretest-posttest design*. Subyek penelitian adalah 32 orang siswa kelas XI IPA 3 dan 32 orang siswa XI IPA 4 di salah satu SMA Negeri di Kab. Bandung Barat, Prov. Jawa Barat. Instrumen penelitian yang digunakan adalah lembar observasi keterlaksanaan model pembelajaran, tes *scientific explanation skills* berbentuk tes tertulis jenis esai dan tes *inquiry skills* siswa berbentuk tes pilihan ganda terkait materi teori kinetik gas. Hasil penelitian menunjukkan bahwa Peningkatan *scientific explanation skills* siswa yang mendapatkan penerapan model LoIBI berbantuan multimedia visual lebih tinggi secara signifikan dibandingkan dengan siswa yang mendapatkan penerapan model LoIBI tanpa bantuan multimedia visual dan tidak ada perbedaan peningkatan secara signifikan dari *inquiry skills* siswa yang mendapatkan penerapan model LoIBI berbantuan multimedia visual dengan siswa yang mendapatkan penerapan model LoIBI tanpa bantuan multimedia visual. Selain itu, berdasarkan skor rata-rata N-Gain *scientific explanation skills* siswa meningkat dengan kategori tinggi setelah diterapkan model pembelajaran LoIBI berbantuan multimedia visual dan meningkat dengan kategori sedang setelah diterapkan pembelajaran LoIBI tanpa bantuan multimedia visual. Sedangkan *inquiry skills* siswa meningkat dengan kategori sedang, baik setelah diterapkan model pembelajaran pembelajaran LoIBI berbantuan multimedia visual maupun tanpa bantuan multimedia visual.

Kata Kunci: Model pembelajaran LoIBI berbantuan multimedia visual, teori kinetik gas, *scientific explanation skills* dan *inquiry skills* siswa

Sulastriya Ningsi, 2018

PENERAPAN MODEL LEVELS OF INQUIRY BASED INSTRUCTION (LoIBI) BERBANTUAN MULTIMEDIA VISUAL PADA PEMBELAJARAN FISIKA SMA DALAM MENINGKATKAN SCIENTIFIC EXPLANATION SKILLS DAN INQUIRY SKILLS SISWA

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Implementation of Levels of Inquiry Based Instruction (LoIBI) Visual Multimedia Assisted Model at High School Physics Learning in Improve Scientific Explanation Skills and Inquiry Skills Students

Sulastriya Ningsi, 1605516

Abstract

Research has been carried out on the application of LoIBI learning models with visual multimedia assisted material on the kinetic theory of gas in high school students. The purpose of this study is to obtain an overview of the increase in scientific explanation skills and student inquiry skills that get the visual multimedia assisted level of inquiry based (LoIBI) model compared to students who obtain the level of inquiry based instruction (LoIBI) model without the help of visual multimedia. The research method used was quasi-experimental design with randomized control group pretest-posttest design. The research subjects were 32 students of class XI 3 Science and 32 students of XI Science 4 in one of the State High Schools in the District. Bandung Barat, Prov. West Java. The research instrument used is an observation sheet for the implementation of the learning model, scientific explanation skills test in the form of a written essay type test and student inquiry skills test in the form of multiple choice tests related to the gas kinetic theory material. The results showed that the increase in scientific explanation skills of students who received the application of visual multimedia assisted LoIBI models was significantly higher compared to students who received the application of the LoIBI model without the help of visual multimedia and there was no significant difference in the improvement of student inquiry skills that received the application of assisted LoIBI models. visual multimedia with students who get the application of the LoIBI model without the help of visual multimedia. In addition, based on the average score of N-Gain scientific explanation, students' skills increased with a high category after applying the LoIBI learning model assisted by visual multimedia and increased with the medium category after applying LoIBI learning without the help of visual multimedia. While the student's inquiry skills increased in the medium category, both after applying the LoIBI learning learning model with visual multimedia assistance and without the help of visual multimedia.

Keywords: learning model of LoIBI visual multimedia assisted, theory kinetic of gasses, scientific explanation skills and inquiry skills.

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