

ABSTRAK

Agung Romual Purba. NIM 5202411006. Pengaruh Model Pembelajaran Project Based Learning Dan Motivasi Belajar Terhadap Hasil Belajar Siswa Kelas XI DPIB Pada Elemen Desain Pemodelan Jalan Dan Jembatan SMK Negeri 2 Binjai.

Penelitian ini bertujuan untuk mengetahui pengaruh model pembelajaran *project based learning* dan motivasi belajar terhadap hasil belajar pada elemen desain pemodelan jalan dan jembatan siswa kelas XI DPIB SMK N 2 Binjai. Sampel penelitian ini adalah kelas XI DPIB 1 sebagai kelas perlakuan model pembelajaran *project based learning* berjumlah 33 siswa dan sebagai kelas perlakuan model pembelajaran Direct Instruction adalah kelas XI DPIB 2 yang berjumlah 33 siswa. Penelitian ini merupakan penelitian quasi eksperimen faktorial 2x2 merupakan desain pre-test, pembelajaran dan post-test. Instrumen penelitian terlebih dahulu diujicobakan, dilanjutkan dengan uji validitas, reliabilitas, indeks kesukaran, keefektifan distraktor, dan daya pembeda soal. Hasil uji coba tes hasil belajar dasar-dasar desain pemodelan dan informasi bangunan dari 25 butir soal yang diujicobakan diperoleh 23 butir soal yang valid dengan koefisien reliabilitas 0,878 termasuk dalam kategori tinggi. Hasil uji coba angket motivasi belajar siswa 25 butir soal yang diujicobakan diperoleh 23 butir soal yang valid dengan koefisien reliabilitas 0,904 termasuk dalam kategori sangat tinggi. Hasil perhitungan uji homogenitas (uji F) diperoleh hasil $f_{hitung} = 5,046$ dan $f_{tabel} = 7,815$ ($f_{hitung} < f_{tabel}$) sehingga dapat dinyatakan bahwa data kedua kelompok sampel berasal dari populasi yang homogen. Dari hasil perhitungan uji hipotesis (uji anova 2x2) hasil belajar, diperoleh $f_{hitung} = 44,38, 17,35, \text{ dan } 78,91$ dan $f_{tabel} = 4,00$ ($f_{hitung} > f_{tabel}$) pada taraf signifikan $\alpha = 0,05$ dan $dk = 69$. Sehingga, H_a diterima dan H_0 ditolak, yang berarti bahwa hasil belajar yang diajarkan menggunakan model pembelajaran *project based learning* dan model pembelajaran Direct Instruction memiliki perbedaan, siswa yang memiliki motivasi belajar tinggi dan motivasi belajar rendah memiliki perbedaan hasil belajar, dan terdapat interaksi antara model pembelajaran dan motivasi belajar siswa. Hasil penelitian ini hendaknya bermanfaat bagi pihak sekolah dan guru dalam meningkatkan hasil belajar Desain Pemodelan Jalan dan Jembatan.

Kata Kunci: Model Pembelajaran Project Based Learning, Direct Instruction, Motivasi Belajar, Hasil Belajar, DPIB.

ABSTRACT

Agung Romual Purba. NIM 5202411006. The Influence of Project Based Learning Model and Learning Motivation on Learning Outcomes of Class XI DPIB Students on Road and Bridge Modeling Design Elements of SMK Negeri 2 Binjai.

This study aims to determine the effect of project based learning model and learning motivation on learning outcomes in road and bridge modeling design elements of class XI DPIB students of SMK N 2 Binjai. The sample of this study was class XI DPIB 1 as the treatment class of project based learning model totaling 33 students and as the treatment class of Direct Instruction learning model was class XI DPIB 2 totaling 33 students. This study is a 2x2 factorial quasi-experimental study which is a pre-test, learning and post-test design. The research instrument was first tested, followed by a test of validity, reliability, difficulty index, distractor effectiveness, and question discrimination power. The results of the trial of the learning outcome test of the basics of building modeling design and information from 25 questions tested obtained 23 valid questions with a reliability coefficient of 0.878 included in the high category. The results of the trial of the student learning motivation questionnaire of 25 questions tested obtained 23 valid questions with a reliability coefficient of 0.904 included in the very high category. The results of the homogeneity test calculation (F test) obtained the calculated f result = 5.046 and f table = 7.815 (calculated $f < f$ table) so that it can be stated that the data for both sample groups comes from a homogeneous population. From the results of the calculation of the hypothesis test (2x2 anova test) of learning outcomes, it was obtained $f_{hitung} = 44.38, 17.35, \text{ and } 78.91$ and $f_{tabel} = 4.00$ ($f_{hitung} > f_{tabel}$) at a significant level of $\alpha = 0.05$ and $dk = 69$. Thus, H_a is accepted and H_0 is rejected, which means that the learning outcomes taught using the project based learning model and the Direct Instruction learning model have differences, students who have high learning motivation and low learning motivation have different learning outcomes, and there is an interaction between the learning model and student learning motivation. The results of this study should be useful for schools and teachers in improving learning outcomes in Road and Bridge Modeling Design.

Keywords: Project Based Learning Model, Direct Instruction, Learning Motivation, Learning Outcomes, DPIB.