

ABSTRAK

Atmajaya, I Kadek Agustian Bayu (2021), *Pengaruh pembelajaran berbasis proyek berbantuan e-learning terhadap keterampilan proses sains dan hasil belajar IPA*. Tesis, Pendidikan IPA, Program Pascasarjana, Universitas Pendidikan Ganesha.

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Kata-kata kunci: pembelajaran berbasis proyek berbantuan *e-learning*, keterampilan proses sains, hasil belajar IPA

Keterampilan proses dan hasil belajar sains peserta didik masih merupakan isu yang menjadi perhatian para peneliti. Banyak strategi pembelajaran yang telah dikembangkan untuk meningkatkan keterampilan proses dan hasil belajar sains peserta didik, salah satunya adalah model pembelajaran berbasis proyek. Studi model pembelajaran berbasis proyek sudah banyak dilakukan, namun demikian studi tentang pembelajaran berbasis proyek berbantuan *e-learning* dalam pengembangan keterampilan proses dan hasil belajar sains peserta didik masih terbatas. Penelitian ini bertujuan untuk menyelidiki pengaruh model pembelajaran berbasis proyek berbantuan *e-learning* terhadap keterampilan proses dan hasil belajar sains peserta didik. Penelitian ini adalah penelitian eksperimen semu dengan rancangan *pretest-posttest nonequivalent control group*. Terdapat 63 orang peserta didik yang terlibat dalam penelitian ini, dimana 32 orang ditetapkan sebagai kelompok eksperimen dan 31 orang ditetapkan sebagai kelompok kontrol. Kelompok eksperimen dibelajarkan dengan model pembelajaran berbasis proyek berbantuan *e-learning*, sedangkan kelompok kontrol dibelajarkan dengan model pembelajaran konvensional. Data tentang keterampilan proses sains dikumpulkan dengan tes keterampilan proses sains dengan indeks reliabilitas $r = 0,864$, dan data tentang hasil belajar sains dikumpulkan dengan tes hasil belajar dengan indeks reliabilitas $r = 0,919$. Data dianalisis dengan teknik MANCOVA. Hasil penelitian menunjukkan: (1) terdapat perbedaan keterampilan proses dan hasil belajar sains secara simultan antara kelompok eksperimen dan kelompok kontrol, dimana rata-rata skor kelompok eksperimen lebih besar dari kelompok kontrol; (2) terdapat perbedaan keterampilan proses sains antara kelompok eksperimen dan kelompok kontrol, dimana rata-rata skor kelompok eksperimen lebih besar dari kelompok kontrol; (3) terdapat perbedaan hasil belajar sains antara kelompok eksperimen dan kelompok kontrol, dimana rata-rata skor kelompok eksperimen lebih besar dari kelompok kontrol. Model pembelajaran berbasis proyek berbantuan *e-learning* efektif dalam mengembangkan keterampilan proses sains dan hasil belajar IPA peserta didik.

ABSTRACT

Atmajaya, I Kadek Agustian Bayu (2021), The effect of project-based learning assisted by e-learning on science process skills and science learning outcomes. Thesis, Science Education, Post Graduate Study Program, Ganesha University of Education

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Keywords: project-based learning assisted by e-learning, science process skills, science learning outcomes

Students' process skills and science learning outcomes were still issue of concern to researchers. Learning strategies have been widely developed to improve students' process skills and science learning outcomes, one of which was a project-based learning model. Research on project-based learning model have been widely carried out, however research on project-based learning facilitated by e-learning in developing students' process skills and science learning outcomes were still limited. This research aimed to investigate of project-based learning facilitated by e-learning on students' process skills and science learning outcomes. This research was a quasi-experiment research with pretest-posttest nonequivalent control group design. There were 63 students involved in this study, of which 32 were assigned to the experimental group and 31 were assigned to the control group. The experimental group was taught using a project-based learning model facilitated by e-learning, while the control group was taught using a conventional learning model. Data on science process skills were collected with a science process skills test with a reliability index of $r = 0.864$, and data on science learning outcomes was collected with a learning outcome test with a reliability index of $r = 0.919$. Data were analyzed by MANCOVA. The results show: (1) there are differences in process skills and science learning outcomes simultaneously between the experimental group and the control group, where the average score of the experimental group is greater than the control group; (2) there are differences in science process skills between the experimental group and the control group, where the average score of the experimental group is greater than the control group; (3) there are differences in science learning outcomes between the experimental group and the control group, where the average score of the experimental group is greater than the control group. The project-based learning model facilitated by e-learning is effective in developing students' process skills and science learning outcomes.