ABSTRAK

PUTRI AZ ZAHRA SALSABILA. 2026. **PENGARUH MODEL *GUIDED INQUIRY* TERHADAP KETERAMPILAN PROSES SAINS DAN KETERAMPILAN KOLABORASI PADA MATERI BIOTEKNOLOGI (Studi Eksperimen di Kelas X SMAN 1 Manonjaya Tahun Ajaran 2025/2026)**. Jurusan Pendidikan Biologi. Fakultas Keguruan dan Ilmu Pendidikan, Universitas Siliwangi.

Keterampilan abad 21 menuntut siswa untuk memiliki kemampuan berpikir kritis, kreatif, komunikasi, kolaborasi, serta pemecahan masalah. Keterampilan Proses Sains juga menjadi salah satu keterampilan yang perlu dikembangkan pada pembelajaran abad 21. Penelitian ini bertujuan untuk mengetahui pengaruh model *guided inquiry* terhadap keterampilan proses sains dan keterampilan kolaborasi siswa kelas X pada materi bioteknologi di SMA Negeri 1 Manonjaya. Penelitian ini menggunakan metode *quasi experiment* dengan *posttest only control group design*. Populasi penelitian ini adalah seluruh kelas X SMA Negeri 1 Manonjaya sebanyak 12 kelas. Sampel diambil dengan teknik *purposive sampling* dan didapatkan kelas X-4 sebagai kelas eksperimen dan kelas X-5 sebagai kelas kontrol. Kelas eksperimen yang menggunakan model *guided inquiry* memperoleh skor rata-rata keterampilan proses sains 21,38 dan rata-rata keterampilan kolaborasinya 128,05, sedangkan skor rata-rata di kelas kontrol yang menggunakan model *discovery learning* memperoleh skor rata-rata keterampilan proses sains 18,78 dan rata-rata keterampilan kolaborasinya 120,24. Instrumen yang digunakan berupa tes untuk keterampilan proses sains dengan tipe pilihan ganda sebanyak 25 soal dan instrumen non-tes untuk keterampilan kolaborasi dengan tipe angket sebanyak 45 pernyataan yang telah diuji validitas dan reliabilitasnya. Teknik analisis data yang digunakan adalah *One Way* ANOVA. Hasil uji *One Way* ANOVA pada keterampilan proses sains diperoleh nilai sig 0,018 dan pada keterampilan kolaborasi diperoleh nilai sig 0,001 yang artinya tolak H_0 karena nilai *sig.* < 0,05. Dengan demikian, dapat disimpulkan bahwa ada pengaruh model *guided inquiry* terhadap Keterampilan Proses Sains dan ada pengaruh model *guided inquiry* terhadap Keterampilan Kolaborasi pada Materi Bioteknologi di kelas X SMA Negeri 1 Manonjaya Tahun Ajaran 2025/2026.

Kata Kunci: *Guided Inquiry*, *Discovery Learning*, Keterampilan Proses Sains, Keterampilan Kolaborasi, Bioteknologi.

ABSTRACT

PUTRI AZ ZAHRA SALSABILA. 2026. ***THE EFFECT OF GUIDED INQUIRY MODEL ON SCIENCE SKILLS PROCESS AND COLLABORATIVE SKILLS ON BIOTECHNOLOGY MATERIAL (Experimental Study in Grade X of SMAN 1 Manonjaya Academic Year 2025/2026).*** *Department of Biology Education. Faculty of Teacher Training and Education, Siliwangi University.*

21st century skills require students to have critical thinking, creativity, communication, collaboration, and problem-solving skills. Science Process Skills are also one of the skills that need to be developed in 21st century learning. This study aims to determine the effect of the guided inquiry model on science process skills and collaboration skills of grade X students on biotechnology material at SMA Negeri 1 Manonjaya. This study was conducted in January-February 2026. This study used a quasi-experimental method with a posttest only control group design. The population of this study was all 12 classes of grade X of SMA Negeri 1 Manonjaya. Samples were taken using a purposive sampling technique and obtained class X-4 as the experimental class and class X-5 as the control class. The experimental class using the guided inquiry model obtained an average score of 2,.38 for science process skills and an average score of 128,05 for collaboration skills, while the average score in the control class using the discovery learning model obtained an average score of 18,78 for science process skills and an average score of 120,24 for collaboration skills. The instruments used were a test for science process skills with 25 multiple-choice questions and a non-test instrument for collaboration skills with a questionnaire of 45 statements that had been tested for validity and reliability. The data analysis technique used was One-Way ANOVA. The results of the One-Way ANOVA test for science process skills obtained a sig. 0.018 and for collaboration skills obtained a sig. 0.001, which means rejecting H0 because the sig. <0.05. Thus, it can be concluded that there is an effect of the guided inquiry model on Science Process Skills and there is an effect of the guided inquiry model on Collaboration Skills in Biotechnology material in grade X students of SMA Negeri 1 Manonjaya in the 2025/2026 academic year.

Keywords: Guided Inquiry, Discovery Learning, Science Process Skills, Collaboration Skills, Biotechnology.