

## ABSTRACT

Learning using the STEM (*Science, Technology, Engineering And Mathematic*) approach can help students understand the material and apply what they have learned. One of them is that students will be given active learning based on problem solving so that students can think critically, analyze and focus on problem solving. This research aims to determine the effect of the STEM (*Science, Technology, Engineering And Mathematic*) learning approach on the learning outcomes and collaboration skills of class XII high school students. The type of research used was *pre-experimental design* with the research design used being a *control group pretest-posttest* and collaboration skills data obtained from observation assessment sheets which were analyzed descriptively qualitatively. The research results show that learning outcomes can be seen from the average *posttest* score for the results of the t test hypothesis from the *posttest* value obtained a sig (2-tailed) value of  $0,000 < 0,05$ , which means that  $H_0$  was rejected and  $H_a$  was accepted. Collaboration skills in the experimental class had an average score of 82,76, while in the control class the average score was 73,49, so the experimental class was categorized as very good. Learning outcomes and collaboration different. The research results show that the STEM (*Science, Technology, Engineering And Mathematic*) learning approach influences the learning outcomes and collaboration skills of class XII students at Sjakhyakirti High School.

**Keywords:** STEM (*Science, Technology, Engineering And Mathematic*) Learning Approach, Learning Outcomes and Collaboration Skills

## ABSTRAK

Pembelajaran menggunakan pendekatan STEM (*Science, Technology, Engineering and Mathematic*) dapat membantu peserta didik dalam memahami materi sampai menerapkan apa yang telah dipelajari. Salah satunya adalah peserta didik akan diberikan pembelajaran yang aktif serta berbasis pemecahan masalah sehingga peserta didik dapat berpikir kritis, analisis, dan fokus pada pemecahan masalah. Penelitian ini bertujuan untuk mengetahui pengaruh pendekatan pembelajaran STEM (*Science, Technology, Engineering And Mathematic*) terhadap hasil belajar dan keterampilan kolaborasi peserta didik kelas XII SMA. Jenis penelitian yang digunakan yaitu *Pre-eksperimental design* dengan desain penelitian yang digunakan adalah *control group pretest-posttest* dan data keterampilan kolaborasi diperoleh dari lembar penilaian observasi yang dianalisis secara deskriptif kualitatif. Hasil penelitian menunjukkan bahwa hasil belajar dapat dilihat dari nilai rata-rata *posttest* kelas eksperimen 84,90 dan nilai rata-rata *posttest* kelas kontrol 70,76. Data hasil hipotesis uji t dari nilai *posttest* mendapatkan nilai sig (2-tailed) sebesar  $0,000 < 0,05$  yang artinya  $H_0$  ditolak dan  $H_a$  diterima. Keterampilan kolaborasi pada kelas eksperimen skor rata-rata 82,76 sedangkan pada kelas kontrol mendapatkan skor rata-rata 73,49 sehingga dikategorikan nilai eksperimen berkategori sangat baik. Hasil belajar dan keterampilan kolaborasi pada kelas eksperimen lebih tinggi dibandingkan dengan kelas kontrol dan berbeda signifikan. Hasil penelitian menunjukkan bahwa pendekatan pembelajaran STEM (*Science, Technology, Engineering and Mathematic*) berpengaruh terhadap hasil belajar dan keterampilan kolaborasi peserta didik kelas XII SMA Sjakhyakirti.

**Kata Kunci:** Pendekatan Pembelajaran STEM (*Science, Technology, Engineering and Mathematic*), Hasil Belajar dan Keterampilan Kolaborasi