

ABSTRAK

Suci Setia Crise Manullang, NIM 4181131025 (2022). Pengaruh Media *Physics Education Technology* (PhET) Terhadap Aktivitas Dan Hasil Belajar Siswa Pada Materi Bentuk Molekul.

Penelitian ini bertujuan untuk mengetahui pengaruh penggunaan media *Physics Education Technology* (PhET) terhadap aktivitas, hasil belajar, korelasi antara aktivitas dengan hasil belajar dan untuk mengetahui peningkatan hasil belajar siswa. Metode penelitian yang digunakan adalah quasi eksperimen. Populasi dalam penelitian ini adalah seluruh siswa kelas X MIA SMA Negeri 10 Medan. Sampel kelas diambil dengan Teknik *purposive sampling*, dimana kelas X MIA 2 sebagai kelas eksperimen yang dibelajarkan menggunakan media *Physics Education Technology* (PhET) dengan model *discovery learning* yang berjumlah 30 siswa dan X MIA 3 sebagai kelas kontrol yang dibelajarkan dengan media *Power Point* dengan model *discovery learning* yang berjumlah 30 siswa. Instrumen yang digunakan terdiri dari instrumen tes berupa soal pilihan berganda dan instrumen non tes berupa lembar observasi aktivitas siswa. Pada hasil penelitian, diperoleh data *pretest* pada kelas eksperimen memiliki rata-rata nilai 50 dan kelas kontrol memiliki rata-rata nilai 48,83. Nilai rata-rata *posttest* pada kelas eksperimen 87,83 berarti sangat aktif dan kelas kontrol 77,5 berarti aktif. Pada kelas eksperimen terdapat peningkatan hasil belajar siswa 75% berkategori tinggi dan pada kelas kontrol yakni 56% berkategori sedang. Data aktivitas siswa pada kelas eksperimen memiliki nilai 80 dan pada kelas kontrol memiliki nilai 66,66. Hal ini menunjukkan bahwa terdapat pengaruh media *Physics Education Technology* (PhET) terhadap aktivitas dan hasil belajar pada materi bentuk molekul. Serta diperoleh terdapat korelasi antara aktivitas dengan hasil belajar siswa dimana r_{hitung} sebesar 0,724 dan r_{tabel} sebesar 0,362.

Kata kunci: PhET, Aktivitas, Hasil Belajar, Korelasi dan Peningkatan Hasil Belajar.

ABSTRACT

Suci Setia Crise Manullang, NIM 4181131025 (2022). The Effect of Media Physics Education Technology (PhET) on Student Activities and Learning Outcomes on Molecul Shape.

This research aims to find out the use of Physics Education Technology (PhET) media on activities, learning outcomes, correlation between activities with learning outcomes and knowing the improvement in results student learning. The research method used is the quasi experiment. The population in this study was all students of class X MIA SMA Negeri 10 Medan. The class sample was taken with purposive sampling technique, where class X MIA 2 as an experimental class is taught using physics education technology (PhET) media with discovery learning model and X MIA 3 as a control class taught with Power Point media with discovery learning model. The instrument used consists of test instruments in the form of multiple choice questions and non-test instruments in the form of student activity observation sheets. The expected results in this study are that the media Physics Education Technology (PhET) is influential and correlated with students' learning activities and outcomes in the material molecular form and obtained improved student learning outcomes X MIA SMA Negeri 10 Medan. The results showed that the pretest data in the experimental class had an average score of 50 and the control class had an average score of 48.83. The average value of the posttest in the experimental class is 87.83 which means it is very active and the control class is 77.5 which means it is active. In the experimental class there was an increase in student learning outcomes by 75% in the high category and in the control class, namely 56% in the medium category. Student activity data in the experimental class has a value of 80 and the control class has a value of 66.66. This shows that there is an influence of Physics Education Technology (PhET) media on activities and learning outcomes on the material in the form of molecules. And there is a correlation between activity and student learning outcomes where r_{count} is 0.724 and r_{table} is 0.362.

Keywords: Physics Education Technology (PhET), Activity, Learning Outcomes, Correlation And Improvement Of Learning Outcomes.