

**KEEFEKTIFAN MEDIA PEMBELAJARAN *GOOGLE SITES*
BERORIENTASI STEM MATERI PENCEMARAN LINGKUNGAN
DALAM MENINGKATKAN HASIL BELAJAR SISWA KELAS X SMA
LABORATORIUM UNDIKSHA**

Anak Agung Sri Kencana Dewi, NIM 1913041020

**Program Studi Pendidikan Biologi, Jurusan Biologi dan Perikanan Kelautan,
Fakultas Matematika dan Ilmu Pengetahuan Alam,
Universitas Pendidikan Ganesha,
Singaraja.**

ABSTRAK

Penelitian ini dilakukan untuk mengetahui keefektifan media pembelajaran *Google Sites* berorientasi STEM materi pencemaran lingkungan dalam meningkatkan hasil belajar siswa kelas X di SMA Laboratorium Undiksha. Penelitian ini merupakan penelitian *quasi-eksperimental* atau eksperimental semu dengan menggunakan rancangan sama subjek (*treatment by subject design*) dengan bagan (*randomized pre and post test group design*). Rancangan sama subjek adalah rancangan serial, dimana semua subjek menjadi kontrol dan juga diberikan perlakuan, dalam periode waktu yang berbeda. Subjek dalam penelitian ini ialah seluruh siswa kelas X MIPA SMA Laboratorium Undiksha. Penelitian ini menggunakan 1 sampel yang dibagi menjadi 2 kelompok periode baik periode I yang dibelajarkan dengan pembelajaran STEM tanpa media pembelajaran *Google Sites* maupun periode II yang dibelajarkan dengan media pembelajaran *Google Sites* berorientasi STEM. Data hasil belajar siswa pada materi pencemaran lingkungan dikumpulkan melalui tes hasil belajar. Untuk mengetahui perbedaan secara signifikansi rata-rata nilai hasil belajar siswa, peneliti menganalisis dengan menggunakan uji *t-dependent sample* dengan taraf signifikansi 5%. Lalu untuk mencari keefektifan media pembelajaran *Google Sites* berorientasi STEM dalam meningkatkan hasil belajar peneliti menggunakan persentase ketuntasan klasikal yaitu minimal 80% siswa mencapai KKM (70). Hasil analisis data diperoleh bahwa selisih rerata nilai hasil belajar yang dilihat dari perolehan *N-gain* pada kelompok periode II sebesar 0,71 lebih besar dibandingkan dengan kelompok periode I yaitu 0,27. Serta persentase ketuntasan klasikal yang diperoleh pada kelompok periode II menunjukkan nilai $P > 80\%$. Berdasarkan uji *t-dependent sample* menunjukkan bahwa nilai p ($0,001 < 0,05$). Maka dapat disimpulkan bahwa adanya perbedaan hasil belajar antara kelompok periode I dan kelompok periode II, serta media pembelajaran *Google Sites* berorientasi STEM efektif dalam meningkatkan hasil belajar siswa kelas X SMA Laboratorium Undiksha.

Kata kunci : Keefektifan, Media Pembelajaran *Google Sites* Berorientasi STEM, Hasil Belajar Siswa.

**THE EFFECTIVENESS OF STEM-ORIENTED *GOOGLE SITES*
LEARNING MEDIA ENVIRONMENTAL POLLUTION MATERIALS IN
INCREASING LEARNING OUTCOMES OF CLASS X STUDENTS OF
SMA LABORATORIUM UNDIKSHA**

Anak Agung Sri Kencana Dewi, NIM 1913041020

**Biology Education Study Program,
Majoring of Marine Biology and Fisheries,
Faculty of Mathematics and Natural Sciences,
Ganesha University Education,
Singaraja.**

Abstract

This research was conducted to determine the effectiveness of STEM-oriented Google Sites learning media on environmental pollution in improving the learning outcomes of class X students at Undiksha Laboratory High School. This research is a quasi-experimental or quasi-experimental study using the same subject design (treatment by subject design) with charts (randomized pre and post test group design). The same-subject design is a serial design, in which all subjects become controls and are also given treatment, in different time periods. The subjects in this study were all class X MIPA SMA Undiksha Laboratory. This study used 1 sample which was divided into 2 period groups, both period I which was taught with STEM learning without Google Sites learning media and period II which was taught with STEM-oriented Google Sites learning media. Data on student learning outcomes on environmental pollution material was collected through a learning achievement test. To find out the significant difference in the average value of student learning outcomes, the researcher analyzed it using the sample t-dependent test with a significance level of 5%. Then to find the effectiveness of STEM-oriented Google Sites learning media in improving learning outcomes researchers used the percentage of classical completeness, namely a minimum of 80% of students achieved KKM (70). The results of data analysis showed that the difference in the average value of learning outcomes as seen from the N-gain in the period II group was 0.71 greater than that in the period I group, which was 0.27. As well as the percentage of classical completeness obtained in the period II group showed a P value > 80%. Based on the t-dependent sample test, it shows that the p-value (0.001 < 0.05). So it can be concluded that there are differences in learning outcomes between the period I group and the period II group, and the STEM-oriented Google Sites learning media is effective in improving class X student learning outcomes at Undiksha Laboratory High School.

Keywords: *Effectiveness, Google Sites Learning Media is STEM-oriented, Student Learning Outcomes.*