PERBEDAAN KEEFEKTIFAN MEDIA VIDEO DAN *POWERPOINT* DALAM MENINGKATKAN KEMAMPUAN MEMBACA GAMBAR PROYEKSI ORTOGONAL SISTEM AMERIKA KELAS X SMK NEGERI 2 KLATEN

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ABSTRAK

Penelitian ini bertujuan untuk: (1) menguji keefektifan media video dalam meningkatkan kemampuan membaca gambar proyeksi sistem Amerika, (2) menguji keefektifan media *powerpoint* dalam meningkatkan kemampuan membaca gambar proyeksi sistem Amerika, 3) mengetahui perbedaan keefektifan media video dan *powerpoint* dalam meningkatkan kemampuan membaca gambar proyeksi sistem Amerika. Variabel independen penelitian adalah penggunaan media video dan *powerpoint*. Variabel dependen kemampuan membaca gambar proyeksi sistem Amerika.

Penelitian ini merupakan penelitian eksperimen dengan pendekatan kuantitatif. Subjek penelitian adalah 36 siswa kelas X TFLM A sebagai kelompok eksperimen dan 33 siswa kelas X TPL sebagai kelompok kontrol. Pengumpulan data dilakukan dengan pelaksanaan tes kemampuan membaca gambar. Tes dilakukan sebelum dan setelah perlakuan. Teknik analisis data yang digunakan analisis deskriptif kuantitatif dan membandingkan hasil tes menggunakan uji-t.

Hasil penelitian: (1) Media video efektif meningkatkan kemampuan membaca gambar proyeksi ortogonal sistem Amerika. Hal ini dibuktikan dengan $t_{hitung} = 4,914 > t_{tabel} = 1,690$ dan $p = 0,0000111 < 0,05$. (2) Media *powerpoint* efektif meningkatkan kemampuan membaca gambar proyeksi ortogonal sistem Amerika. Hal ini dibuktikan dengan $t_{hitung} = 1,892 > t_{tabel} = 1,695$ dan $p = 0,03 < 0,05$. (3) Terdapat perbedaan keefektifan yang signifikan antara media video dan *powerpoint* dalam meningkatkan kemampuan membaca gambar proyeksi ortogonal sistem Amerika. Hal ini dibuktikan dengan $t_{hitung} = 2,863 > t_{tabel} = 1,997$ dan $p = 0,003 < 0,05$. Peningkatan kemampuan membaca gambar pada kelas X TFLM A yang menggunakan media video sebesar 15,88%. Sedangkan peningkatan kemampuan membaca gambar pada kelas X TPL yang menggunakan media *powerpoint* sebesar 3,49%.

Kata kunci: video, kemampuan, proyeksi ortogonal

DIFFERENCES IN THE EFFECTIVENESS OF VIDEO MEDIA AND POWERPOINT IN IMPROVING ABILITY TO READ AMERICAN PROJECTION SYSTEM CLASS X SMK NEGERI 2 KLATEN

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This research goals are: (1) testing the effectiveness of video media in improving the ability to read American projection system, (2) testing the effectiveness of powerpoint media in improving the ability to read American projection system, (3) determine the differences in the effectiveness of video media and powerpoint in improving the ability to read American projection system. The independent variable of the research is the use of video and powerpoint media. The dependent variable is the ability to read American projection system.

This research is an experimental study with a quantitative approach. The subject of this study was 36 students of class X TFLM A as experiment group and 33 students of class X TPL as control group. Data collection method is reading American projection system test. The tests performed before and after treatment. The data analysis technique used is quantitative descriptive analysis and comparing the result of the test using paired t-test and independent t-test.

The results showed that: (1) Video media effectively improves the ability to read American projection system. This is evidenced by $t_{count} = 4.914 > t_{table} = 1.690$ and $p = 0.0000111 < 0.05$. (2) Powerpoint media effectively improves the ability to read American projection system. This is evidenced by $t_{count} = 1.892 > t_{table} = 1.695$ and $p = 0.03 < 0.05$. (3) There is a significant difference in effectiveness between video media and powerpoint in improving the ability to read American projection system. This is evidenced by $t_{count} = 2.863 > t_{table} = 1.997$ and $p = 0.003 < 0.05$. Improvement of the ability to read American projection system in class X TFLM A that using video media is 15.88%. Improvement of the ability to read American projection system in class X TPL that using powerpoint media is 3.49%.

Keywords: video, ability, orthogonal projections