ABSTRAK

KEEFEKTIFAN LKPD BERBASIS PROYEK PENGOLAHAN LIMBAH KULIT BUAH NAGA DALAM MENINGKATKAN KETERAMPILAN BERPIKIR KRITIS DAN *SELF-REGULATED LEARNING*

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Penelitian ini bertujuan untuk mengetahui keefektifan LKPD berbasis proyek pengolahan limbah kulit buah naga dalam meningkatkan keterampilan berpikir kritis dan *self-regulated learning* peserta didik pada materi *alternative energy*. Penelitian dilakukan di SMAN 1 Sumberejo menggunakan metode *quasi experiment* dengan desain *pretest-posttest nonequivalent group design*. Sampel penelitian terdiri dari kelas X E1 dan X E4 dengan jumlah 66 peserta didik. Instrumen yang digunakan berupa soal esai keterampilan berpikir kritis dan angket *self-regulated learning*. Hasil penelitian menunjukkan rata-rata N-Gain keterampilan berpikir kritis sebesar 0,65 pada kelas eksperimen 1 dan 0,67 pada kelas eksperimen 2. Uji *paired sample t-test* menunjukkan nilai signifikansi 0,001 < 0,05 yang berarti terjadi peningkatan keterampilan berpikir kritis peserta didik. Sementara itu, uji *One Way ANOVA* menunjukkan tidak terdapat perbedaan peningkatan berdasarkan kemampuan awal peserta didik (0,165 > 0,05). Hasil angket *self-regulated learning* memperoleh persentase 89,93% dan 92,81% dengan kategori sangat tinggi. Selain itu, uji korelasi bivariat menunjukkan adanya hubungan positif antara keterampilan berpikir kritis dan *self-regulated learning* dengan nilai *Pearson correlation* sebesar 0,50 berkategori sedang. Dengan demikian, LKPD berbasis proyek pengolahan limbah kulit buah naga efektif dalam meningkatkan keterampilan berpikir kritis dan *self-regulated learning* peserta didik.

Kata Kunci : LKPD Berbasis Proyek, Keterampilan Berpikir Kritis, *Self-Regulated Learning*

ABTRACT

EFFECTIVENESS OF PROJECT-BASED LKPD ON DRAGON FRUIT PEEL WASTE PROCESSING IN IMPROVING CRITICAL THINKING AND SELF-REGULATED LEARNING SKILLS -REGULATED LEARNING

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This study aimed to determine the effectiveness of project-based LKPD using dragon fruit peel waste processing in improving students' critical thinking skills and *self-regulated learning* on *alternative energy* material. The research was conducted at SMAN 1 Sumberejo using a quasi-experimental method with a *pretest-posttest nonequivalent gr oup design*. The sample consisted of classes X E1 and X E4 with a total of 66 students. The instruments used were essay tests on critical thinking skills and *self-regulated learning* questionnaires. The results showed that the average N-Gain of critical thinking skills was 0.65 in experimental class 1 and 0.67 in experimental class 2. The *paired sample t-test* showed a significance value of 0.001 < 0.05, indicating an improvement in students' critical thinking skills. Meanwhile, the *One Way ANOVA* test showed no significant difference in improvement based on students' initial abilities (0.165 > 0.05). The *self-regulated learning* questionnaire results obtained percentages of 89.93% and 92.81%, both categorized as very high. In addition, the bivariate correlation test showed a positive relationship between critical thinking skills and *self-regulated learning* with a *Pearson correlation* value of 0.50 in the moderate category. Therefore, project-based LKPD using dragon fruit peel waste processing was effective in improving students' critical thinking skills and *self-regulated learning*.

Keywords : Project-Based Worksheet, Critical Thinking Skills, Self-Regulated leraning