

**PENGARUH PEMBELAJARAN STEM-*SUSTAINABLE AGRICULTURE*
TERHADAP KESADARAN DAN AKSI BERKELANJUTAN PESERTA
DIDIK DALAM MENCEGAH *FOOD LOSS AND WASTE***

TESIS

diajukan untuk memenuhi sebagian dari syarat untuk memperoleh gelar Magister
Program Studi Pendidikan Biologi



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**PROGRAM STUDI MAGISTER PENDIDIKAN BIOLOGI
FAKULTAS PENDIDIKAN MATEMATIKA DAN ILMU PENGETAHUAN
ALAM
UNIVERSITAS PENDIDIKAN INDONESIA
2024**

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Magister Pendidikan pada Program Studi Pendidikan Biologi Fakultas Pendidikan
Matematika dan Ilmu Pengetahuan Alam

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Januari 2024

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TERHADAP KESADARAN DAN AKSI BERKELANJUTAN PESERTA
DIDIK DALAM MENCEGAH *FOOD LOSS AND WASTE***

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Dengan ini saya menyatakan bahwa tesis yang berjudul “Pengaruh Pembelajaran STEM-*Sustainable Agriculture* Terhadap Kesadaran Dan Aksi Berkelanjutan Peserta Didik Dalam Mencegah *Food Loss And Waste* “ ini beserta seluruh isinya adalah benar hasil karya sendiri. Saya tidak melakukan penjiplakan atau pengutipan dengan cara yang tidak sesuai etika yang berlaku. Atas pernyataan di atas, saya siap menanggung resiko/sanksi apabila dikemudian hari ditemukan adanya pelanggaran etika keilmuan atau klaim dari pihak lain terhadap keaslian karya saya. Berikut tersaji jumlah per-kata dengan plagiarisme menggunakan aplikasi *Turnitin*.

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KATA PENGANTAR

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Tesis ini memberikan informasi mengenai bagaimana pengaruh pembelajaran STEM-*sustainable agriculture* terhadap kesadaran dan aksi berkelanjutan peserta didik dalam mencegah *food loss and waste*. Penulis menyadari tesis ini masih jauh dari sempurna karena masih terdapat kekurangan yang harus diperbaiki. Hal ini dikarenakan terbatasnya kemampuan dan wawasan ilmu pengetahuan yang penulis miliki. Oleh karena itu, kritik dan saran yang membangun akan diterima berguna untuk perbaikan pendidikan di masa yang akan datang. Akhir kata, semoga tesis ini dapat memberi manfaat bagi dunia pendidikan, khususnya Pendidikan Biologi.

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Bandung, Januari 2024



Zevira Fransisca Aurora

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ABSTRAK

Permasalahan *food loss and waste* (FLW) merupakan permasalahan sampah terbanyak kedua yang ada di dunia. Mengurangi FLW merupakan bagian dari *sustainable development goals* (SDGs) tujuan ke 12 yaitu konsumsi dan produksi yang bertanggung jawab dan tujuan ke 13 mengenai *climate action*. Rendahnya kesadaran dan aksi peduli peserta didik merupakan penyebab permasalahan FLW. Kesadaran dan aksi peserta didik secara berkelanjutan harus diterapkan dengan tujuan untuk mencegah permasalahan FLW yang ada di kehidupan sehari-hari peserta didik. Penelitian ini bertujuan untuk mengetahui pengaruh pembelajaran STEM-*sustainable agriculture* terhadap kesadaran dan aksi berkelanjutan peserta didik dalam mencegah FLW. Metode penelitian yang digunakan yaitu *quasi experimental* dengan desain *pretest-posttest non equivalent control group*. Penelitian ini berfokus pada 2 kelompok penelitian, yaitu kelompok eksperimen dan kelompok kontrol. Kelompok eksperimen mendapat perlakuan berupa pembelajaran STEM-*sustainable agriculture* pada materi perubahan lingkungan. Sedangkan, kelompok kontrol mendapat perlakuan pembelajaran seperti yang biasa dilakukan oleh guru di kelas pada materi perubahan lingkungan. Penentuan sampel penelitian dilakukan menggunakan teknik *cluster random sampling*. Sampel penelitian ini sebanyak 141 peserta didik yang terdiri dari 4 kelas penelitian. Instrumen yang digunakan untuk mengukur kesadaran dan aksi berkelanjutan peserta didik merupakan instrumen non tes berupa kuesioner. Kuesioner kesadaran dan aksi berkelanjutan dikembangkan dari indikator hasil sintesis beberapa artikel yang sesuai dengan topik penelitian. Instrumen pendukung yang digunakan yaitu instrumen wawancara guru dan peserta didik, serta jurnal harian peserta didik. Berdasarkan temuan dan analisis data penelitian, dapat diketahui bahwa pembelajaran STEM-*sustainable agriculture* berpengaruh secara signifikan terhadap kesadaran dan aksi berkelanjutan peserta didik dalam mencegah FLW.

Kata kunci: Pembelajaran STEM-*sustainable agriculture*, kesadaran berkelanjutan, aksi berkelanjutan, *food loss and waste*

**THE INFLUENCE OF STEM-SUSTAINABLE AGRICULTURE
LEARNING ON STUDENTS' SUSTAINABLE AWARENESS AND
SUSTAINABLE ACTION IN PREVENTING FOOD LOSS AND WASTE**

Zevira Fransisca Aurora

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ABSTRACT

The problem of food loss and waste (FLW) is the second most waste problem in the world. Reducing FLW is part of the sustainable development goals (SDGs), goal 12 namely responsible consumption and production and goal 13 namely climate action. Low awareness and caring actions of students are the cause of FLW problems. Awareness and action of students on an ongoing basis must be applied with the aim of preventing FLW problems that exist in students' daily lives. This study aims to determine the effect of STEM-sustainable agriculture learning on students' sustainable awareness and action in preventing FLW. The research method used is quasi-experimental with a pretest-posttest non-equivalent control group design. This study focused on 2 research groups, namely the experimental group and the control group. The experimental group received treatment in the form of STEM-sustainable agriculture learning on environmental change material. Meanwhile, the control group received learning treatment as usually done by teachers in class on environmental change material. The determination of the research sample was carried out using the cluster random sampling technique. The sample of this study was 141 students consisting of 4 research classes. The instrument used to measure students' sustainable awareness and action is a non-test instrument in the form of a questionnaire. The sustainable awareness and sustainable action questionnaire is developed from indicators synthesized from several articles in accordance with the research topic. The supporting instruments used are teacher and student interview instruments, as well as students' daily journals. Based on the findings and analysis of research data, it can be seen that learning STEM-sustainable agriculture has a significant effect on students' sustainable awareness and action in preventing FLW.

Keywords: STEM-sustainable agriculture learning, sustainable awareness, sustainable action, food loss and waste

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