

ABSTRAK

Lilis Azizah (1222060048) : “Implementasi Model *Socio-Scientific Issues* (SSI) Berbasis *Outdoor Learning* Untuk Meningkatkan Literasi Sains Pada Materi Perubahan Lingkungan”

Penelitian ini dilatarbelakangi oleh rendahnya literasi sains siswa pada materi perubahan lingkungan. Rendahnya kemampuan siswa dalam menjelaskan fenomena secara ilmiah, menginterpretasikan data dan bukti ilmiah, serta mengevaluasi hasil penyelidikan, yang merupakan indikator utama literasi sains menurut PISA. Literasi sains merupakan keterampilan seseorang dalam menginterpretasikan sains, mengkomunikasikan sains, serta mengaplikasikan pengetahuan sains yang dimiliki sehingga dapat berdampak dalam kehidupan nyata.

Penelitian ini bertujuan 1) Untuk mendeskripsikan keterlaksanaan proses pembelajaran dengan Model *Socio-Scientific Issues* (SSI) berbasis *Outdoor Learning* pada materi Perubahan Lingkungan, 2) Untuk menganalisis peningkatan literasi sains siswa dengan dan tanpa menggunakan Model *Socio-Scientific Issues* (SSI) berbasis *Outdoor Learning* pada materi Perubahan Lingkungan, 3) Untuk menganalisis pengaruh Model *Socio-Scientific Issues* (SSI) berbasis *Outdoor Learning* terhadap peningkatan literasi sains siswa pada materi Perubahan Lingkungan, 4) Untuk mendeskripsikan respon siswa terhadap pembelajaran dengan menggunakan model *Socio-Scientific Issues* (SSI) berbasis *Outdoor Learning* terhadap literasi sains pada materi Perubahan Lingkungan

Penelitian ini menggunakan menggunakan pendekatan kuantitatif dengan metode kuasi eksperimen, desain *non-equivalent control group* serta teknik *purposive sampling*. Sampel dalam penelitian ini dibagi ke dalam dua kelas yaitu kelas X.2 sebagai eksperimen dan kelas X.1 kontrol dengan jumlah masing-masing kelas 20 siswa. Teknik pengumpulan data menggunakan lembar observasi, soal tes literasi sains, dan angket respon siswa.

Hasil penelitian menunjukkan bahwa keterlaksanaan pembelajaran dengan model SSI berbasis *outdoor learning* pada aktivitas guru diperoleh sebesar 88% (sangat baik) dan aktivitas siswa diperoleh sebesar 88% (sangat baik). Peningkatan keterampilan literasi sains ditunjukkan dengan nilai *N-Gain* pada kelas eksperimen sebesar 0,50 (sedang), sedangkan pada kelas kontrol sebesar 0,26 (rendah). Uji hipotesis menghasilkan nilai Sig. (2-tailed) sebesar $0,060 > 0,05$, yang berarti tidak terdapat pengaruh yang signifikan terhadap model *Socio-Scientific Issues* (SSI) berbasis *outdoor learning* terhadap peningkatan literasi sains. Selain itu, respon siswa terhadap pembelajaran dengan model *Socio-Scientific Issues* (SSI) berbasis *Outdoor Learning* memperoleh hasil sebesar 78,2% (baik). Implementasi model *Socio-Scientific Issues* (SSI) berbasis *Outdoor Learning* dapat menjadi alternatif untuk meningkatkan keterampilan literasi sains siswa.

Kata Kunci : Keterampilan literasi sains, *Socio-Scientific Issues* (SSI), *Outdoor Learning*, Perubahan Lingkungan

ABSTRACT

Lilis Azizah (1222060048): “Implementation of the Socio-Scientific Issues (SSI) Model Based on Outdoor Learning to Improve Scientific Literacy on Environmental Change Topics”

This research was motivated by the low level of students' scientific literacy in the topic of environmental change. Students demonstrated difficulties in explaining phenomena scientifically, interpreting scientific data and evidence, and evaluating the results of scientific investigations, which are key indicators of scientific literacy according to PISA. Scientific literacy refers to an individual's ability to interpret science, communicate scientific knowledge, and apply scientific knowledge in ways that contribute to real-life situations.

This study aimed to: 1) describe the implementation of the learning process using the Socio-Scientific Issues (SSI) model based on Outdoor Learning on the topic of Environmental Change; 2) analyze the improvement of students' scientific literacy with and without the use of the Socio-Scientific Issues (SSI) model based on Outdoor Learning on the topic of Environmental Change; 3) analyze the effect of the Socio-Scientific Issues (SSI) model based on Outdoor Learning on the improvement of students' scientific literacy on the topic of Environmental Change; and 4) describe students' responses to learning using the Socio-Scientific Issues (SSI) model based on Outdoor Learning in relation to scientific literacy on the topic of Environmental Change.

This research employed a quantitative approach with a quasi-experimental method, using a non-equivalent control group design and purposive sampling technique. The sample consisted of two classes, namely Class X.2 as the experimental group and Class X.1 as the control group, with 20 students in each class. Data were collected using observation sheets, scientific literacy tests, and student response questionnaires.

The results showed that the implementation of learning using the SSI model based on Outdoor Learning achieved a score of 88% (very good) for teacher activities and 88% (very good) for student activities. The improvement in students' scientific literacy was indicated by an N-Gain score of 0.50 (moderate) in the experimental class and 0.26 (low) in the control class. The hypothesis test resulted in a Sig. (2-tailed) value of $0.060 > 0.05$, indicating that there was no statistically significant effect of the Socio-Scientific Issues (SSI) model based on Outdoor Learning on the improvement of students' scientific literacy. Furthermore, students' responses to learning using the Socio-Scientific Issues (SSI) model based on Outdoor Learning reached 78.2% (good). The implementation of the Socio-Scientific Issues (SSI) model based on Outdoor Learning can serve as an alternative approach to improving students' scientific literacy skills.

Keywords: Scientific literacy skills, Socio-Scientific Issues (SSI), Outdoor Learning, Environmental Change