THE PROFILE OF STUDENS' SCIENTIFIC ATTITUDE AND SCIENTIFIC LITERACY IN LEARNING BIOTECHNOLOGY

RESEARCH PAPER

Submitted as Requirement to Obtain Degree of *Sarjana Pendidikan* in International Program on Science Education (IPSE) Study Program

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INTERNATIONAL PROGRAM ON SCIENCE EDUCATION

FACULTY OF MATHEMATICS AND SCIENCE EDUCATION

UNIVERSITAS PENDIDIKAN INDONESIA

2021

THE PROFILE OF STUDENS' SCIENTIFIC ATTITUDE AND SCIENTIFIC LITERACY IN LEARNING BIOTECHNOLOGY

Skripsi ini diajukan untuk memenuhi salah satu syarat
memperoleh gelar Sarjana Pendidikan
pada Program Studi International Program on Science Education (IPSE)
Fakultas Pendidikan Matematika dan Ilmu Pengetahuan Alam

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July 2021

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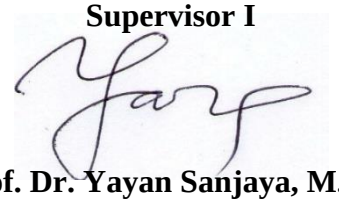

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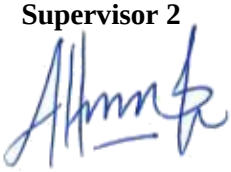

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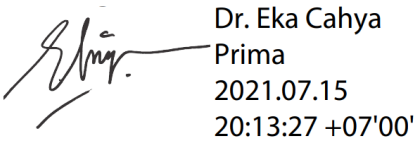

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DECLARATION

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ACKNOWLEDGEMENTS

The author expresses her thankfulness to Allah SWT for His Mercy in allowing her to complete this research paper. Furthermore, the author would like to convey his profound gratitude and appreciation to the following people on this occasion:

1. As the first supervisor, Prof. Dr. Yayan Sanjaya, M.Si., with his humility and broad knowledge, assisted the author the most in extending ideas and time to provide constructive suggestions for the author's advancement in becoming a better, thoughtful, and responsible thinker. May Allah SWT reward him for his kindness and support.
2. As my second supervisor, Lilit Rusyati, M.Pd, constantly makes time for the author, guiding them through each stage, providing constructive feedback, and never tiring of encouraging them to keep fighting till the end. The words *"semangat ya"* that she conveyed when the author was in confusion became the author's guide to start and return to work that was postponed. May Allah SWT grants her health and happiness, always.
3. Eliyawati, M.Pd. as my academic supervisor and the expert judgements, who always giving the sharing, gives advice, motivating all the time during all the activity in the college from 2017 until finishing this research paper.
4. Ibu, Bapak, and Teh Mitha, the incomparable author's support system, for always totally rooting and cheering the author's on from the beginning. People who have always had the author's back become first-hand witnesses of the author's progress. Without their true love and care, the author would never have made it to this page. May Allah SWT grant them eternal pleasure.
5. All IPSE Lecturer, Laborant, and Administrator (Mrs Diana, Mrs Rika, Mrs Eli, Mrs Lilit, Mrs Margie, Mr Eka, Mr Nanang, Mr Ikmanda, Mr Latief, Mrs Resik, and Mrs Dhea) , thank you for your helping, supporting, guiding, and giving the knowladge to the author since 2017 until finishing this study.
6. Head master and all the science teachers of SMP Alfa Centauri for helping and facilitating the author during taking the data for this research paper. The

author would also thank the students for being cooperative, kind and entertaining during the internship program.

7. All IPSE 2017 mates (Miftah, Salma, Yusril, Sulis, Tiara, Naya, Raisha, Dhika, Nadira, Kamila, Tashya, Arsanti, Annisa, Sofi, Rossy, Shafa, Imel, Xavierina, Diana, Nur Shinta, Naufal, Erika, and Novi) who always help, listen to me through my difficult times and cheer me up. Thank you for complementing each other in every journey we have been through,
   may our path crosses again in the future!
8. Miftah Ummi Hanifa who worked together to finish the research paper while striving to become stronger persons. The author would like to express her gratitude for their willingness to help with academic or personal issues.
9. PPBS friends and Mojang Jajaka Kabupaten Kuningan, thank you for being a place where I can grow and learn new things that I might not be able to get anywhere else.
10. To everyone who has given to the 21 years of my life that I cannot mention one by one, thank you for everything you've taught me, and may our paths cross again in the future!

THE PROFILE OF STUDENS' SCIENTIFIC ATTITUDE AND SCIENTIFIC LITERACY IN LEARNING BIOTECHNOLOGY

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ABSTRACT

Scientific literacy appears to become crucial in the 21st century since it can aid in developing responsible citizens who are fully aware and actively involved in world issues. In 21st century learning, education focuses not only on student understanding but also on student attitudes. Assessing scientific attitude as an affective dimension is more difficult than the cognitive and psychomotor. The purpose of this research is to profile the scientific attitude and scientific literacy of junior high school students in learning biotechnology and the difference between students' scientific attitude and scientific literacy based on school and gender. The non-experimental method with survey design was employed. The sampling method was stratified random sampling, with total of participants were 171 ninth grade junior high school students who came from two public schools in Kuningan City and one private school in Bandung City. The instrument developed and used in this research was an online questionnaire consisting of 43 statements and 25 simple multiple-choice questions in Bahasa. Scientific attitudes dimensions include curiosity, objectivity, critical thinking, open-mindedness, and perseverance involved in this research. Scientific literacy aspects, such as Scientific Competencies, Scientific Knowledge, and Attitudes toward Science were covered in the test. The results showed there is no significance of students' scientific based on school and gender. While the students scientific literacy showed there is a significance difference based on school type. As a result, since scientific attitudes and literacy are the most essential learning outcomes of science study, they must be formed and trained beginning in school age.

Keyword: Scientific Attitude, Scientific Literacy, Biotechnology, and Learning Outcomes

PROFIL SIKAP ILMIAH DAN LITERASI SAINS SISWA DALAM PEMBELAJARAN BIOTEKNOLOGI

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ABSTRAK

Literasi sains tampaknya menjadi penting di abad kedua puluh satu karena dapat membantu dalam pengembangan warga negara yang bertanggung jawab yang sepenuhnya sadar dan terlibat aktif dalam isu-isu dunia. Dalam pembelajaran abad 21, pendidikan tidak hanya menitikberatkan pada pemahaman siswa tetapi juga menitikberatkan pada sikap siswa. Menilai sikap ilmiah sebagai dimensi afektif lebih sulit daripada kognitif dan psikomotor. Tujuan penelitian ini adalah untuk mengetahui profil sikap ilmiah dan literasi sains siswa SMP pada materi bioteknologi serta perbedaan sikap ilmiah dan literasi sains siswa berdasarkan sekolah dan jenis kelamin. Metode non-eksperimental dengan desain survei digunakan. Metode pengambilan sampel adalah stratified random sampling, dengan jumlah partisipan sebanyak 171 siswa kelas IX SMP yang berasal dari dua sekolah negeri di Kota Kuningan dan satu sekolah swasta di Kota Bandung. Instrumen yang dikembangkan dan digunakan dalam penelitian ini berupa angket online yang terdiri dari 43 pernyataan dan 25 soal pilihan ganda sederhana bahasa Indonesia. Dimensi sikap ilmiah, seperti rasa ingin tahu, objektivitas, berpikir kritis, berpikiran terbuka, dan ketekunan terlibat dalam penelitian ini. Aspek literasi sains, seperti Kompetensi Ilmiah, Pengetahuan Ilmiah, dan Sikap terhadap Sains tercakup dalam tes tersebut. Hasil penelitian menunjukkan tidak ada signifikansi ilmiah siswa berdasarkan sekolah dan jenis kelamin. Sedangkan literasi sains siswa menunjukkan ada perbedaan yang signifikan berdasarkan tipe sekolah. Akibatnya, karena sikap ilmiah dan literasi adalah hasil belajar yang paling penting dari studi sains, mereka harus dibentuk dan dilatih sejak usia sekolah.

Kata Kunci: Sikap Ilmiah, Literasi Sains, Topik Bioteknologi, dan Hasil Belajar

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