DEVELOPING WEB-BASED LEARNING 'NUTRIOLIC' WITH GUIDED INQUIRY IN NUTRITION TO FACILITATE JUNIOR HIGH SCHOOL STUDENT SCIENTIFIC LITERACY

RESEARCH PAPER

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

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INTERNATIONAL SCIENCE EDUCATION PROGRAM
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Universitas Pendidikan Indonesia
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APPROVAL SHEET

DEVELOPING WEB-BASED LEARNING 'NUTRIOLIC' WITH GUIDED INQUIRY IN NUTRITION TO FACILITATE JUNIOR HIGH SCHOOL STUDENT SCIENTIFIC LITERACY

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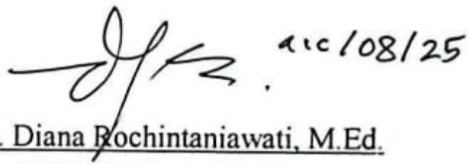

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Hereby declare that this thesis is my original work. I guarantee that the entire contents of this work, both in part and in whole, are not plagiarized from the work of others, except for those parts that have been quoted and clearly recognized as the source.

If in the future violations of academic ethics or plagiarism are found, I am willing to accept sanctions in accordance with applicable regulations at the Indonesian Education University.

Bandung, 12th August 2025

Syahaarah Salsabila Gunawan

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Developing Web-Based Learning 'Nutriolic' with Guided Inquiry in Nutrition to Facilitate Junior High School Student Scientific Literacy

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ABSTRACT

This research aimed to develop a web-based learning media named *Nutriolic* by employing a guided inquiry approach, focusing on nutrition content to enhance junior high school students' scientific literacy. Scientific literacy is recognized as one of the essential 21st-century skills, encompassing the ability to explain scientific phenomena, design and evaluate scientific investigations, and interpret data and evidence in a scientific manner. The development process adopted the ADDIE model (Analysis, Design, Development, Implementation, Evaluation) to produce an interactive, relevant, and student-centered learning tool. The feasibility of *Nutriolic* was tested through expert validation, teacher trials, and student responses. Results showed that material feasibility gained an average score of 4.8 (96%), while media feasibility achieved 4.7 (94%), both categorized as highly feasible. Student trials produced an average score of 4.6 (92%) for media feasibility and 4.4 (88%) for scientific literacy feasibility, also classified as highly feasible. Moreover, students expressed very positive feedback regarding its design, accessibility, ease of use, and effectiveness in helping them understand nutrition concepts more comprehensively. These findings indicate that *Nutriolic* is not only feasible in terms of content and design, but also effective for supporting flexible and independent learning activities both inside and outside the classroom. Therefore, *Nutriolic* can serve as an alternative interactive learning media that aligns with the *Merdeka* Curriculum and holds strong potential to facilitating students' scientific literacy in nutrition topics.

Keywords : **Guided inquiry, Nutrition, Science literacy, Web-based learning.**

Pengembangan Pembelajaran Berbasis Web 'Nutriolic' dengan Pendekatan Inkuiri Terbimbing dalam Materi Gizi untuk Meningkatkan Literasi Ilmiah Siswa Sekolah Menengah Pertama

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ABSTRACT

Penelitian ini bertujuan untuk mengembangkan media pembelajaran berbasis web bernama *Nutriolic* dengan menggunakan pendekatan inkuiri terbimbing, yang difokuskan pada materi gizi untuk meningkatkan literasi sains siswa SMP. Literasi sains merupakan salah satu keterampilan penting abad ke-21 yang meliputi kemampuan menjelaskan fenomena ilmiah, merancang serta mengevaluasi penyelidikan ilmiah, dan menafsirkan data maupun bukti secara ilmiah. Proses pengembangan media ini dilakukan dengan menerapkan model ADDIE (Analysis, Design, Development, Implementation, Evaluation) sehingga menghasilkan perangkat pembelajaran yang relevan, interaktif, dan sesuai dengan kebutuhan nyata siswa. Kelayakan *Nutriolic* diuji melalui validasi para ahli, uji coba guru, dan respon siswa. Hasil validasi menunjukkan bahwa kelayakan materi memperoleh skor rata-rata 4,8 (96%) dan kelayakan media memperoleh skor 4,7 (94%), keduanya dikategorikan sangat layak. Uji coba siswa menghasilkan skor rata-rata kelayakan media sebesar 4,6 (92%) dan literasi sains 4,4 (88%), juga termasuk kategori sangat layak. Selain itu, siswa memberikan respon yang sangat positif terkait tampilan, kemudahan penggunaan, serta kemampuannya dalam membantu memahami konsep gizi dengan lebih baik. Temuan ini menegaskan bahwa *Nutriolic* tidak hanya layak dari sisi konten maupun desain, tetapi juga efektif digunakan untuk pembelajaran yang fleksibel dan mandiri, baik di dalam maupun di luar kelas. Dengan demikian, *Nutriolic* dapat menjadi alternatif media pembelajaran interaktif yang sejalan dengan Kurikulum Merdeka dan berpotensi memfasilitasi literasi sains siswa pada topik gizi.

Kata Kunci : **Inkuiri terbimbing, Literasi sains, Nutrisi, Pembelajaran berbasis web.**

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