

ABSTRAK

Diantari, Rai Putri (2025), *Pengembangan Tes Literasi Sains Berkonteks Socio-Scientific Issues (SSI) untuk Siswa SMP*. Tesis, Program Studi S2 Pendidikan IPA, Program Pascasarjana, Universitas Pendidikan Ganesha.

Tesis ini sudah disetujui dan diperiksa oleh Pembimbing I: Dr. I Nyoman Tika, M.Si. dan Pembimbing II: Dr. Ni Made Wiratini, S.Pd., M.Sc.

Kata-kata kunci: literasi sains, *socio-scientific issues*, SSI, instrumen tes

Penelitian ini dilakukan berdasarkan permasalahan minimnya ketersediaan asesmen berbasis literasi sains yang berkonteks SSI. Penelitian ini bertujuan untuk (1) mendeskripsikan karakteristik tes literasi sains berkonteks SSI, (2) menganalisis validitas tes, (3) menganalisis kepraktisan tes, (4) menganalisis keakuratan tes. Penelitian ini merupakan penelitian desain yang mengacu pada model Plomp yang terdiri dari tahap studi pendahuluan dan tahap pengembangan. Pada tahap studi pendahuluan dilakukan analisis kebutuhan dan analisis konteks, penyusunan kisi-kisi, penyusunan tes, validasi tes oleh ahli serta revisi. Pada tahap pengembangan dilakukan uji coba terbatas dan uji coba lapangan. Data dikumpulkan melalui wawancara, studi dokumentasi, angket, dan tes. Data dianalisis secara deskriptif kualitatif dan kuantitatif. Uji coba melibatkan 100 orang siswa kelas IX. Hasil penelitian menunjukkan (1) tes yang dikembangkan sebanyak 30 butir pilihan ganda. Kompetensi literasi sains yang diukur dalam tes yaitu (a) menjelaskan fenomena secara ilmiah, (b) membangun dan mengevaluasi desain untuk penyelidikan ilmiah dan menginterpretasikan data dan bukti ilmiah secara kritis, serta (c) meneliti, mengevaluasi, dan menggunakan informasi ilmiah untuk pengambilan keputusan dan tindakan. Sebanyak 10 SSI yang relevan terhadap materi IPA fase D digunakan sebagai stimulus soal. (2) Hasil uji validasi memperoleh skor 1,00 yang berarti tes memiliki validitas sangat tinggi dari segi isi, konstruk, dan bahasa. (3) Tes memperoleh skor kepraktisan sebesar 87,63 yang berada pada kategori sangat praktis. (4) Hasil uji keakuratan menunjukkan 28 soal dinyatakan valid, dan 2 soal tidak valid. Indeks daya pembeda seluruh butir soal memenuhi kriteria untuk diterima. Setiap pengecoh pada setiap butir soal diterima dan berfungsi. Reliabilitas naskah soal bernilai 0,911 berada pada kategori sangat tinggi. Hasil penelitian tersebut menunjukkan tes literasi sains berkonteks SSI valid, praktis, dan akurat untuk mengukur kemampuan literasi sains siswa SMP.

ABSTRACT

Diantari, Rai Putri (2025), *Development of a Scientific Literacy Test Using Socio-Scientific Issues (SSI) as Context for Junior High School Students*. Thesis, Program Studi S2 Pendidikan IPA, Program Pascasarjana, Universitas Pendidikan Ganesha.

This thesis has been approved and examined by Supervisor I: Dr. I Nyoman Tika, M.Si. dan Pembimbing II: Dr. Ni Made Wiratini, S.Pd., M.Sc.

Key words: science literacy, *socio-scientific issues*, SSI, test instrument

This study was conducted based on the problem of the lack of availability of science literacy assessments in the context of SSI. This study aims to (1) describe the characteristics of science literacy tests in the context of SSI, (2) analyze the validity of the tests, (3) analyze the practicality of the tests, and (4) analyze the accuracy of the tests. This study is a design-based research following Plomp's model, which consists of a preliminary study phase and a development phase. In the preliminary study phase, needs analysis and context analysis were conducted, followed by the development of a test blueprint, test creation, expert validation of the test, and revisions. In the development stage, limited trials and field trials were conducted. Data were collected through interviews, documentation studies, questionnaires, and tests. Data were analyzed descriptively qualitatively and quantitatively. The trials involved 100 ninth-grade students. The results of the study showed (1) that the test developed consisted of 30 multiple-choice items. The science literacy competencies measured in the test were (a) explaining phenomena scientifically, (b) constructing and evaluating designs for scientific investigations and critically interpreting scientific data and evidence, and (c) researching, evaluating, and using scientific information for decision-making and action. Ten SSI relevant to the science curriculum phase D were used as stimulus questions. (2) The validation test results obtained a score of 1.00, which means that the test has very high validity in terms of content, construct, and language. (3) The test obtained a practicality score of 87.63, which is in the very practical category. (4) The accuracy test results showed that 28 questions were valid and 2 questions were invalid. The discrimination index for all test items meets the criteria for acceptance. Each distractor in each test item is accepted and functions properly. The reliability of the test paper is 0.911, which falls into the very high category. The research results indicate that the SSI-contextualized science literacy test is valid, practical, and accurate for measuring the science literacy skills of junior high school students.