

## ABSTRAK

**Mahardani, Made Laksmi.** 2022. *Pengembangan Buku Ajar IPA Berbasis Keterampilan Proses Sains untuk Meningkatkan Hasil Belajar Siswa.* Tesis Pendidikan IPA, Program Pascasarjana Universitas Pendidikan Ganesha

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Kata kunci: buku ajar, IPA, keterampilan proses sains

Penelitian ini bertujuan untuk mengembangkan buku ajar IPA berbasis keterampilan proses sains untuk siswa kelas VIII semester II. Pengembangan mengikuti panduan model pengembangan 4-D Thiagarajan yang meliputi *Define* (pendefinisian), *Design* (perencanaan), *Develop* (pengembangan), dan *Disseminate* (penyebaran). Data uji validitas dikumpulkan melalui instrumen lembar validitas. Sebanyak 2 orang ahli di bidang isi dan penyajian, 1 orang ahli di bidang bahasa, dan 1 orang ahli di bidang kegrafikaan yang dilibatkan sebagai validator. Metode yang digunakan untuk mengumpulkan data kepraktisan berupa angket respon guru dan angket respon siswa. Uji kepraktisan melibatkan 2 orang guru IPA dan 32 orang siswa kelas VIII selaku responden angket. Metode yang digunakan untuk mengumpulkan data hasil uji efektivitas produk adalah *One-Group Pretest-Posttest Design*. Uji efektifitas dilakukan terhadap 32 orang siswa kelas VIII. Hasil analisis data menunjukkan buku ajar IPA berbasis KPS memiliki karakteristik yaitu menerapkan indikator keterampilan proses sains yang secara eksplisit disajikan sebagai subbab dalam setiap materi. Hasil analisis data penelitian menunjukkan rata-rata skor validitas buku ajar IPA berbasis KPS pada aspek isi dan penyajian sebesar 86,5% dengan kategori sangat valid, skor validitas aspek bahasa sebesar 88,5% dengan kategori sangat valid, aspek kegrafikaan memperoleh skor validitas sebesar 100% dengan kategori sangat valid. Hasil analisis respons guru terhadap kepraktisan buku ajar IPA berbasis KPS menunjukkan rerata skor sebesar 87,5% dengan kategori sangat praktis. Respon siswa terhadap kepraktisan buku ajar menunjukkan rerata skor sebesar 82,3% berkategori sangat praktis. Skor N-Gain hasil analisis *pretest* dan *posttest* hasil belajar siswa sebesar 0,5 dengan kategori efektif. Hasil ini mengindikasikan bahwa pembelajaran yang dilakukan menggunakan buku ajar IPA berbasis KPS yang dikembangkan valid, praktis, dan efektif untuk meningkatkan hasil belajar siswa.

## **ABSTRACT**

**Mahardani, Made Laksmi. 2022.** *Development of Science Textbooks for Class VIII Semester II Based on Science Process Skills to Improve Student Learning Outcomes. Thesis. Science Education. Post-Graduate Program of Ganesha University of Education*

*This thesis has been checked and approved by Advisor I: Dr. A.A.Istri Agung Rai Sudiarmika, M.Pd. and Advisor II: I Ketut Sudiana, M. Kes.*

Keywords: science, science process skills, textbooks.

This study aimed to develop science textbooks based on science process skills for grade VIII second semester students. The development followed the guidelines of Thiagarajan's 4-D development model which included Define, Design, Develop, and Disseminate. The validity test data was collected through the instrument validity sheet. A total of 2 experts in the field of content and presentation, 1 experts in the field of language, and 1 expert in the field of graphics were involved as validators. The method used to collect practicality data was in the form of teachers' response questionnaires and students' response questionnaires. The practicality test involved 2 science teachers and 32 class VIII students as questionnaire respondents. The method used to collect data on product effectiveness test results was One-Group Pretest-Posttest Design. The effectiveness test was carried out on 32 students of class VIII. The results of the data analysis showed that KPS-based science textbooks had the characteristics of applying science process skills indicators which were explicitly presented as sub-chapters in each material. The results of the research data analysis showed that the average score of the validity of science textbooks based on KPS in the aspect of content and presentation was 86.5% with a very valid category, the validity score of the language aspect was 88.5% with a very valid category, the graphic aspect obtained a validity score of 100% with a very valid category. The results of the analysis of teacher responses to the practicality of KPS-based science textbooks showed an average score of 87.5% with a very practical category. Student responses to the practicality of textbooks showed an average score of 82.3% in the very practical category. The N-Gain score from the pretest and posttest analysis of student learning outcomes was 0.5 with an effective category. These results indicated that the learning carried out using KPS-based science textbooks developed was valid, practical, and effective to improve student learning outcomes.