

## ABSTRAK

**Monika Laura Sihombing, NIM 4203121065 (2020) Pengembangan Instrumen Penilaian Keterampilan Proses Sains pada Kegiatan Praktikum Fisika SMA Materi Elastisitas.**

Penelitian ini bertujuan untuk mengetahui proses pengembangan instrumen penilaian Keterampilan Proses Sains (KPS) serta kelayakan instrumen yang telah dikembangkan, dengan fokus pada validitas dan reliabilitas dan juga mengetahui tingkat KPS siswa. Metode penelitian yang digunakan adalah penelitian dan pengembangan model 4D, yang dimodifikasi menjadi tiga tahap: pendefinisian, perancangan, dan pengembangan, karena tahap penyebaran tidak dibutuhkan dalam penelitian ini. Teknik pengambilan sampel menggunakan purposive sampling, di mana sampel dipilih berdasarkan kriteria tertentu yang relevan dengan tujuan penelitian. Pengumpulan data dilakukan melalui angket, wawancara, dan lembar kerja peserta didik. Instrumen penelitian berbentuk non-tes, yaitu lembar penilaian keterampilan proses sains, yang divalidasi oleh validator sebelum diuji coba pada peserta didik. Hasil analisis validitas menunjukkan bahwa instrumen ini memiliki skor validitas yang valid, dengan rata-rata 0,77. Skor ini menunjukkan bahwa instrumen tersebut mampu mengukur apa yang seharusnya diukur. Uji reliabilitas menunjukkan tingkat kesepakatan 94%, yang menunjukkan bahwa instrumen ini reliabel dan konsisten dalam pengukurannya. Penilaian keterampilan siswa per indikator menunjukkan rata-rata 81% dengan kategori baik, yang menunjukkan bahwa siswa secara umum memiliki keterampilan proses sains yang baik. Analisis hasil kelompok menunjukkan bahwa kelompok 4 memperoleh skor tertinggi 83%, sedangkan kelompok 1 memperoleh skor terendah 77%. Perbedaan ini menunjukkan variasi keterampilan proses sains antar kelompok, namun secara keseluruhan menunjukkan efektivitas instrumen dalam menilai keterampilan proses sains siswa. Dengan demikian, instrumen yang dikembangkan dalam penelitian ini terbukti valid dan reliabel, serta efektif dalam menilai keterampilan proses sains siswa. Hasil penelitian ini diharapkan dapat menjadi acuan bagi pengembangan instrumen penilaian keterampilan proses sains di masa mendatang.

**Kata Kunci:** Fisika, Indikator, Keterampilan Proses Sains, Elastisitas

## ABSTRACT

**Monika Laura Sihombing, NIM 4203121065 (2020) Development of Science Process Skills Assessment Instruments in Physics Practicum Activities for High School Elasticity Materials.**

*This research aims to determine the process of developing the Science Process Skills (KPS) assessment instrument as well as the feasibility of the instrument that has been developed, with a focus on validity and reliability and also knowing the level of students' KPS. The research method used is research and development of 4D models, which is modified into three stages: definition, design and development, because the deployment stage is not needed in this research. The sampling technique uses purposive sampling, where samples are selected based on certain criteria that are relevant to the research objectives. Data collection was carried out through questionnaires, interviews and student worksheets. The research instrument is in the form of a non-test, namely a science process skills assessment sheet, which is validated by a validator before being tested on students. The results of the validity analysis show that this instrument has a valid validity score, with an average of 0.77. This score shows that the instrument is able to measure what it is supposed to measure. The reliability test shows an agreement level of 94%, which shows that this instrument is reliable and consistent in its measurement. The assessment of student skills per indicator shows an average of 81% in the good category, which shows that students generally have good science process skills. Analysis of group results shows that group 4 obtained the highest score of 83%, while group 1 obtained the lowest score of 77%. These differences indicate variations in science process skills between groups, but overall indicate the effectiveness of the instrument in assessing students' science process skills. Thus, the instrument developed in this research was proven to be valid and reliable, as well as effective in assessing students' science process skills. It is hoped that the results of this research can become a reference for developing instruments for assessing science process skills in the future.*

**Keywords:** *Physics, Indicators, Science Process Skills, Elasticity*