

Pengembangan Virtual Laboratory Berbasis Model Discovery Learning Pada Perubahan Energi Untuk Meningkatkan Keterampilan Dasar Proses Sains dan Literasi Digital Pada Siswa Kelas IV SD Negeri Mejing 2

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ABSTRACT

Research-based simulation and experiment activities support students to be able to practice their basic science process skills. The teacher assessed that the online learning that was currently being carried out had hampered simulation and experimental activities. Online learning affects students' operational performance and basic science process skills. In addition, along with the development of technology and information, digital literacy skills are needed to help distance online learning activities. Thus, alternative media are needed to assist the implementation of practicum in online learning activities. This research aims to produce learning media as a virtual laboratory based on a valid and effective discovery learning model to improve students' operational performance, basic science process skills, and digital literacy. Researchers conduct research and development using the ADDIE model to realize these goals. The virtual laboratory media will then be subjected to a validation test. The validation process includes the validation of media experts and material experts. After the media is valid, the media will be tested in 2 stages: limited and class trials. The class trial will be conducted in grades 4A and 4B of SD N Mejing 2. The data obtained from the class trial will then be analyzed. The analysis of media feasibility data obtained from the average value of the expert validation panel, student responses and teacher responses will then be converted into qualitative data. Media effectiveness data were analyzed using the manova, n-gain, and effect size tests.

Kata Kunci: Virtual laboratory, discovery learning model, basic science process skills, digital literacy, online learning