

ABSTRACT

Angelica Natasya Elisabeth Nababan, IDN 4213141031 (2025). Development of LKPD based on Learning Cycle 5E on Movement Systems Material in Class XI SMA Kartika I-2 Medan.

This study aims to produce valid, practical, and effective LKPD based Learning Cycle 5E for biology learning, especially on the subject of the Musculoskeletal System for 11th grade students at Kartika I-2 High School in Medan. This is based on problems obtained from the results of preliminary observations and interviews conducted previously. This research is a research and development study using the 4D development model, which consists of four stages, namely define, design, development, and disseminate. The subjects in this study were validators, biology teachers, and 11th grade students at Kartika I-2 High School in Medan. The object of this study was LKPD learning media based on the 5E learning cycle for biology learning, specifically on the subject of the Musculoskeletal System. The data collection techniques used were observation, interviews, tests, and questionnaires. The data collection instruments used in this study were teacher interview sheets, material validation questionnaires, learning validation questionnaires, media validation questionnaires, teacher response questionnaires, student response questionnaires, as well as pretest and posttest questions. The results of the study showed that the validation results by material experts obtained an average percentage of “90.6%” with a category of “very feasible”, while the validation results by learning experts obtained an average percentage of “84.6%” with a category of “very feasible”. Meanwhile, validation by media experts yielded an average percentage of “90%” with a rating of “very feasible.” For media practicality, validation by education practitioners yielded a percentage of “93%” with a rating of “very practical,” and student response questionnaires yielded a percentage of “92%” with a rating of “very practical.” The effectiveness of the media was assessed based on the increase in the average student score from “50.76” before using the media, which was categorized as “incomplete,” to “87.11” after using the media, which was categorized as “complete.” Through the N-Gain test of the pretest and posttest scores for the media, an N-Gain of “0.75” and an N-Gain score (%) of “74.58%” were obtained, with an interpretation of “effective.”

Key Words : LKPD, Learning Cycle 5E, Movement Systems