



## Development of Physics Learning Media : A Literature Review

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### ABSTRACT

**Objective:** The primary objective of this study is to investigate the development of physics learning tools by comparing the forms of digital and conventional media, along with their respective impacts. **Method:** The employed methodology involves a comprehensive literature review, defined as an inquiry into scholarly articles, books, and other sources related to the issue, research field, or specific theory. Literature review is characterized by providing a general overview, summarization, and evaluation of scholarly works. The research method encompasses multiple steps, including: (1) Identifying topics related to Assessment as Learning and metacognitive skills. (2) Searching and selecting relevant articles through Scopus and Google Scholar. (3) Analyzing and synthesizing literature. (4) Organizing the text. **Results:** The findings reveal the existence of 40 journals elucidating on physics learning media, encompassing both digital and conventional forms. Commonly utilized digital learning media include Adobe Flash, websites, e-modules, and interactive tools. Digital learning media is evaluated to enhance student learning outcomes and understanding. It enables students to perceive, hear, and interact with the material dynamically, thereby triggering a deeper understanding. The effectiveness of learning media has been substantiated to improve students' comprehension of physics and also heighten their interest in the subject matter. **Novelty:** This research offers insights into designing interactive and modern learning media to enhance students' understanding and learning outcomes in physics, contributing to the achievement of educational objectives.

## INTRODUCTION

Physics learning is a teaching and learning process conducted by educators to contemplate distinctive phenomena through observation and discovery of facts, concepts, standards, and hypotheses that can influence the physics learning process. Physics has become a subject that dreaded and disliked by students. This inclination often stems from the student learning groups, creating an impression that physics is a challenging subject, appears very serious, always requires conceptual understanding toward the subject, and a practical perspective (Larsson & Danielsson, 2023; Lathwesen & Belova, 2021; Mawas et al., 2020).

To address these challenges, learning media play a crucial role in preparing physics-related learning materials. Media serves as the presentation of data between the source and the recipient. Media can become medium of educational, if it conveys messages or data for educational contains educational goals (Gaol & Sitepu, 2019; Hasanah et al., 2022; Shiong et al., 2023; Sumandiyar et al., 2021; Vera et al., 2022). The development of Industry 4.0 influences the foundation of new innovations in the field of education and has implications that need particular attention, especially in the physics learning process (Bongomin et al., 2020; Elayyan, 2021; Hernandez-de-Menendez et al., 2020; Javaid et al., 2021; Li, 2020). This is particularly related to learning efficiency, time productivity, and other supporting facilities.

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