**THE FEASIBILITY TEST ON VIRTUAL INSTRUMENT SYSTEM-BASED LABORATORY AS NATURE OF SCIENCE (NOS) LEARNING MEDIA**

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**ABSTRACT**

The disruption era placed the digital industrial world as the paradigm and the new reference in the order of life that caused significant changes known as the Industrial Revolution 4.0. It also affects laboratory as an integral part of science learning that contains teaching materials, media, facilities, strategies and assessment systems. To optimize the real laboratory as the development of hands-on science, it should be supported the creation of a virtual laboratory model to facilitate a variety of complete practicums to emphasize the inquiry approach or syntax of “Observing”, “Asking”, “Testing”, “Analyzing” and “Delivering” with interactive animation. This study aims at producing the virtual instrument system based-laboratory model as a learning medium for Nature of Science (NOS). The Research and Development (R&D) method in this study employed the Five Phases of the Spiral Teaching Model adapted from the "Five Phases of Instructional Design" by Cennamo and Kalk, [1]. The syntax of this spiral model was done through 5 (five) development phases, i.e. (1) define, (2) design, (3) demonstrate, (4) develop, and (5) deliver. The results of this study were the laboratory model based on virtual instrument system as the learning media for NOS that was feasible based on the assessment results from the material and media experts. This developed product was also considered practical according to junior high school teachers and students who joined science courses.

**Keywords:** *laboratory, virtual instrument system, learning media, nature of science*