

## Beginning Physics Experiments Class Using Multi Media in National University of Laos

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**Abstract :** National University of Laos (NUOL) requested Japan International Cooperation Agency (JICA) volunteers to begin a physics experiments class using multi media. However, there are issues. NUOL had no physics experiment class, no space for physics experiments, experiment materials were not used for many years and were scattered in various places, and there is no projector and laptop computer in the unit. This raised the question: How do authors begin the physics experiments class using multimedia? To solve this problem, the JICA took some steps, took stock of what was available and reviewed the syllabus. The JICA then revised the experiment materials to assess what was available and then developed textbooks for experiments using them; however, the question remained, what about the multimedia component of the course? Next, the JICA reviewed Physics teacher Pavy Souvannavong's YouTube channel, where he and his students upload video reports of their physics classes at NUOL using their smartphones. While they use multi-media, almost all the videos recorded were of class presentations. To improve the multimedia style, authors edited the videos in the style of another YouTube channel, "Science for Lao," which is a science education group made up of Japan Overseas Cooperation Volunteers (JOCV) in Laos. They created the channel to enhance science education in Laos, and hold regular monthly meetings in the capital, Vientiane, and at teacher training colleges in the country. They edit the video clips in three parts, which are the materials and procedures part including pictures, practice footage of the experiment part, and then the result and conclusion part. Then students perform experiments and prepare for presentation by following the videos. The revised experiment presentation reports use PowerPoint presentations, material pictures and experiment video clips. As for providing textbooks and submitting reports, the students use the e-Learning system of "Moodle" of the Information Technology Center in Dongdok campus of NUOL. The Korean International Cooperation Agency (KOICA) donated those facilities. The authors have passed the process of the revised materials, developed textbooks, the PowerPoint slides presented by students, downloaded textbooks and uploaded reports, to begin the physics experiments class using multimedia. This is the practice research report for beginning a physics experiments class using multimedia in the physics unit at the Department of Natural Science, Faculty of Education, at the NUOL.

**Keywords :** NUOL, JICA, KOICA, physics experiment materials, smartphone, Moodle, IT center, Science for Lao

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