

**Development Training of Physics Problems Equal to Physics Olympiad in Mechanics Subject for Senior High School Teachers to Revitalize the Understanding of Newton's Law of Motion as an Effort on Improving the Quality of National Science Olympiad**

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ABSTRACT

National Science Olympiad is a science competition for students, one of them at the senior high school level. One senior high school subject which is being competed in the National Science Olympiad is physics, which is usually called by Physics Olympiad. Physics Olympiad is a competition that obtains a lot of attention from education authorities as well in school in most parts of Indonesia. However, teachers do not have the confidence to guide their students to participate in this competition. Therefore, it is necessary to conduct a community service activity that aims to i) introduce physics problems their solutions equal to Physics Olympiad problems to teachers at senior high school, ii) give training to teachers in order to make physics problems which are equal to Physics Olympiad, including the solutions, and finally iii) give training to teachers at senior high school to develop problems of Mechanics equal to that given in Physics Olympiad. The results obtained from this community service activity are i) physics problems, especially Mechanics, have been introduced to teachers, ii) teachers have been trained to make physics problems equal to that given in Physics Olympiad, especially in the field of Mechanics, and iii) teachers have developed these physics problems into proper Physics Olympiad problems.

Kata Kunci: *Physics Problems, Physics Olympiad, Newton's Law of Motion, Mechanics*