## DEVELOPMENT OF SEMESTER LEARNING PLANS CONTAINED WITH CASE STUDY AND PROJECT BASED LEARNING IN THE DOCTORAL PROGRAM OF CHEMISTRY EDUCATION TO DEVELOP STUDENT PROBLEM SOLVING ABILITY

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## **ABSTRACT**

Learning in the industrial revolution 4.0 and society 5.0 requires lecturers to innovate in developing learning that can facilitate students to have problem solving abilities and superior life skills. The development of problem solving abilities of doctoral students can be created through the selection of project-based learning (PjBL) and case studies. However, currently learning planning tools for the doctoral program of chemistry education FMIPA UNY in the form of RPS containing case studies and project-based learning are not yet available. Availability of Semester Learning Plans containing PjBL and case studies can be a solution in developing problem solving abilities, especially the completion of studies for students of the chemistry education doctoral program is the solution that must be chosen. This study aims to analyze the characteristics of the RPS containing case studies and project-based learning for learning all subjects in the doctoral program of Chemistry Education, Faculty of Mathematics and Natural Sciences, UNY. The results of development research are the successful development of RPS containing case studies and project-based learning for learning all subjects in the doctoral program of chemistry education, FMIPA UNY and available online in the form of a website so that it is easily accessible. The targeted outputs are RPS products for all courses in the doctoral program of chemistry education, Faculty of Mathematics and Natural Sciences, UNY and copyright certificates.

Kata Kunci: RPS, case study, project-based learning