

ABSTRACT
APPLICATION OF PROBLEM BASED LEARNING MODEL FOR
IMPROVING STUDENT LEARNING OUTCOMES CHEMISTRY
THE REDOX REACTIONS MATERIAL IN GRADE 10
OF VOCATIONAL HIGH SCHOOL 2 METRO

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The aim of this study was to improve the quality of learning by analyzing and finding out accurately: (1) chemistry learning plan design focusing on redoks materials using problem based learning model, (2) process of chemistry learning, (3) assessment instruments at the end of the learning activity, and (4) improvement of learning outcomes in chemistry. This study was a three-phase action research cycle. This study was conducted in vocational high school 2 Metro class X_{AP} and X_{ATPH}. Data were collected using observation and tests, and the quantitative descriptive analysis. Cycle I the students have not been able to find its own problems due to the lack of participation of learners and lack confidence in communicating the results of discussion. There was cycle II, students have been able find existing problems and increase in participation and the level of confidence. Cycle III, participation and level of confidence of learners are better than the second cycle. Research result: (1) the learning plan was made by initially determining student needs , followed by constructing learning objectives that measure the ability to solve the problems, (2) during learning proces, honest, cooperation, and dicipline was complete, but the eagerness wasn't complete yet (3) assessment instrument using a written test which the description of the instrument has been tested and the results are valid 0,976 and reliable 0,972 average difficulty level of items, and the distinguish power of items is well, (4) the result of cognitive study wasn't complete for student at grade X up to 82.14% and 17,86% wasn't administration of a compound of formula and the psikomotor was up to answering question ability, and language used, but giving agrument wasn't finished yet.

Keywords: learning outcomes, chemistry, problem based learning model