

CRITICAL THINKING LEVELS ON ACID-BASE MATERIALS OF HIGH SCHOOL STUDENTS CLASS XI IN YOGYAKARTA CITY

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ABSTRACT

This study aims to determine the quality of critical thinking questions that are developed based on the review conducted by three reviewers as material experts, evaluation experts, and education experts, and determine the level of ability of critical thinking in the acid-base material of students class XI from six Public High Schools, six Private High Schools, and combination of both (Public High School and Private High School) in Yogyakarta City batch 2018/2019 based on students' answer patterns to critical thinking questions developed.

This study included an ex-post facto study designed with a sample design that was applied to high school class XI students in Yogyakarta City 2018/2019, which consisted of six Public High Schools, namely SMA N 3, SMA N 4, SMA N 6, SMA N 6, SMA N 8, SMA N 9, SMA N 10, and six Private High Schools, which included SMA Muhammadiyah 1, SMA Muhammadiyah 2, SMA Stella Duce 1, SMA Stella Duce 2, SMA BOPKRI 1, and SMA BOPKRI 2 respectively taken two classes. The level of critical thinking ability is measured by using 15 items of critical thinking which are elaborated from 7 critical thinking criteria referred to by Radno Harsanto (2015). Before being applied to the sample, the questions were validated theoretically, which was reviewed by three reviewers, included material experts, evaluation experts, and education experts. The data obtained were calculated the number of correct answers for each item and for the items that represent a criterion of one high school, the entire Public or Private High School, and the total percentage of 12 high schools that are sampled. The percentage obtained is then converted into category from very poor to very good.

The results showed that the quality of critical thinking developed based on the review conducted by three reviewers as material experts, evaluation experts, and education experts were considered good and worthy of being used as a research instrument to test students' critical thinking skills, but with little improvement. The level of critical thinking skills in acid-base material in high school students class XI in Yogyakarta City batch 2018/2019 out of the six Public High Schools is 40.2% (moderate / sufficient), six Private High Schools are 34.8% (less good), and a combination of both (Public High School and Private High School) of 37.5% (not good).

Kata Kunci: *critical thinking, acid-base, Yogyakarta City*