

The Analysis of Student Argumentation Skill and Perception Toward Laboratory Learning Outcome on Online Practicum

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ABSTRACT

The General Chemistry Laboratory Work is a transitional gate from the habits practiced by students at the high school level to the habituation of student life which provides basic skills for students in the Chemistry Education Study Program. For this reason, it is necessary to ensure that students get the right learning outcomes in this lecture activity. However, the pandemic conditions in the last two years have made this practicum carried out in an online mode which changes the practicum process to no longer be in the laboratory. This makes it necessary to carry out an in-depth analysis to determine the achievement of the desired learning outcomes in General Chemistry Laboratory Work, especially from the student side. Therefore, this study aims to 1) determine the perceptions of prospective teacher students regarding the basic practicum skills they acquired during online basic chemistry practicums, 3) determine the profile of scientific argumentation skills of prospective chemistry teacher students who received basic chemistry practicums online.

In line with these objectives, this research follows survey research steps with stages starting from instrument development, data collection, data analysis, and data interpretation. The survey was conducted on all Chemistry Education Program students taking Basic Chemistry courses during the Covid-19 pandemic. The sample consisted of 168 students consisting of two batches, two classes each. Perception questionnaires on laboratory learning outcomes and rubrics on argumentation abilities were applied to data collection. Data were analyzed descriptively.

The results of the analysis show that overall, students have excellent perceptions of laboratory learning outcomes. That is, they feel that by using the online mode, practicums still provide good learning outcomes for them. This result is different from the student's argumentation ability which as a whole is still lacking, especially in the reason (ground) component. This shows that their argumentation skills as one of the learning outcomes actually still need to be improved even though they feel they are already good.

Kata Kunci: *general chemistry, laboratory learning outcome, perception, argumentation skills, covid-19*