

Measuring Students' Science Inquiry Skills through Designing and Experimenting on Ecosystem Materials: A Quasi-Experiment.

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- **Abstract:** A one-group quasi-experimental design was used to investigate the effect of the inquiry model on students' science process skills (N=70) through experimental planning and experiment execution. Hence, the Posttest Only Control Design was determined to answer the research questions. Seventy students were selected by random cluster sampling. Data were collected with multiple-choice questions (n=23) which were integrated with two indicators, namely experimental planning and research implementation. The results significantly impacted planning experiments and conducting student experiments by using the research learning model. The average post-test score for practical class science process skills was 79.6, while the control class was 65.34. In addition, $t(\text{count}) = 4.96$ while $t(\text{table}) = 2.385$ obtained $t(\text{count})$ when testing the hypothesis by t-test (0.1%). Overall, our research provides clear evidence of the importance of research models in science learning and suggests the need for assessment methods to investigate student science process skills.
- **Keywords:** quasi-experimental, experiment, Design, sampling, conducting, evidence, suggests.