INSTABRIGHT e-GAZETTE
ISSN: 2704-3010
Volume VII, Issue IV
April 2026
Available online at https://www.instabrightgazette.com

EVALUATING THE BIOLOGY LABORATORY SKILLS OF JUNIOR HIGH SCHOOL SCIENCE TEACHERS: A BASIS FOR DESIGNING A CONTEXTUALIZED TEACHING GUIDE

RAYCKALEN DE GRANO ABANTE
Master of Arts in Education
Major in Science
Rizal College of Taal, Inc.
rayckalendgabante@gmail.com

ABSTRACT

The aimed of this study was to evaluate the biology laboratory skills possessed by Junior High School science teachers. Utilizing a descriptive correlational research design, the researcher gathered a quantitative data through online survey questions via google forms. The study reveals that JHS science teachers struggle significantly with managing microscope components and safety protocols, conducting bioenergetic experiments, and designing experiment using human torso models. While overall performance on the Biology Laboratory Skills Test (BLaST) is generally independent of demographics like sex or years of service, it is notably influenced by educational attainment and school type. Age emerges as a critical factor specifically in the management of laboratory equipment. Conversely, when it comes to demonstrating laboratory safety, holding a bachelor's degree is the most significant predictor of success. Finally, the study highlights that both teaching position and education are the primary factors influencing a teacher's proficiency in designing effective laboratory experiments. The study concludes that targeted professional development focused on laboratory safety, equipment management, and experimental design is essential to address

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the significant skill gaps among Junior High School science teachers, particularly given that academic attainment and teaching position are the primary drivers of their instructional proficiency. To address the identified, the gap in lab performance the study proposes the development of biology teaching guide.

Keywords: *Bioenergetic Experiments, biology laboratory skills, managing laboratory equipment, demonstrating safety, designing experiments, biology teaching guide*