



STUDENTS' PERCEIVED CHALLENGES IN INQUIRY-BASED SCIENCE LEARNING IN ONLINE DISTANCE LEARNING MODALITY

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ABSTRACT

The K-to-12 science curriculum promotes inquiry-based science learning (IBSL) as a pedagogy to achieve scientific literacy. But the COVID-19 pandemic has disrupted its conventional approach as education migrated to new normal. This sequential explanatory research was conducted to explore the students' challenges encountered in IBSL in online distance learning modality (ODLM) at a public integrated high school in the Division of San Pablo City. A total of 261 students who were chosen from Grades 7-12 through stratified random sampling served as respondents. The researchers-developed "Challenges in IBSL in ODLM Questionnaire" was used as the primary gathering tool. Descriptive statistics was employed. Results revealed that majority of the students encountered not much challenges in learning resources, competence to technology tools, online self-efficacy, teachers' pedagogy, motivation, and support system. However, specific indicators received higher mean, implying that certain challenges existed. To further explore such challenges, semi-structured interview was conducted among 12 randomly selected participants. Thematic analysis was utilized. Results disclosed other domains of challenges. Some students experienced limited interaction and received minimal assistance among peers. Lack of constant communication impeded continuous science learning. Fundamental science topics were not rigorously discussed. The absence of experiments resulted to poor laboratory skills. Online science pedagogies were not fully utilized. Challenges are evident; hence, these findings provide pedagogical insights to enhance the use of IBSL in new learning modality.

Keywords: Sequential explanatory research, inquiry-based science learning, challenges, online distance learning modality, Philippines