TEACHING SCIENCE IN THE CONTEXT OF STUDENT'S ENVIRONMENT

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Abstract

This topic discusses about the use of students' cultural experiences in learning. During the learning process, students bring their own life experiences into the classroom. The subject content that can be adapted with students' cultural experiences will make the content more easily accepted, meaningful, relevant to students and helps students make connections between the content learned in the classroom and what they acquire from their environments. In Science learning, utilizing cultural experience will enables science teachers to identify the environmental knowledge that students bring with them into the classroom. Incorporating cultural experiences related to Science content also helps students to understand scientific concepts and ideas holistically while enhancing their inquiry and communication skills. Science learning becomes more effective when cultural experiences, such as objects and artefacts found in students' environments and familiar to them, are used in teaching and learning process.

Teaching science in the context of students' environment can be implemented through:

1. Identify students' cultural experience.

   Teachers need to identify who their students are, their cultures, and the languages they use to ensure that the teaching is relevant to the students. This can be done through informal discussions with students or informal visits to their families' homes. Identified cultural experiences can then be integrated into the teacher's lesson plans. Sharing cultural experiences between students will encourages active student engagement in the learning process.

2. Alignment the content with cultural experience.

   The teachers need to align the science content with students' cultural experiences. They need to present science content in the contexts that allow students to relate the material to their cultural experiences. Therefore, science content becomes easier to understand when teachers use examples from students' environments and convey the knowledge in a language familiar to them.

3. Use students’ language literacy in talking science.

   Science learning and students’ language literacy must occur simultaneously and are closely interconnected. Since language is used in talking science, students’ language literacy is necessary for discussing science. In science learning, language literacy develops through the use of various formats, such as oral discussions, writing, drawing, tables, and graphs, as students present ideas in science. Simultaneous science learning and language literacy help students to improve their scientific writing skills, encourage discussions, and facilitate the sharing of cultural experiences among students.

For conclusion, science teaching in the context of students' environments can be implemented by a) incorporating cultural experiences, cultural artefacts, culturally relevant examples, analogies from students’ lives, and various cultural perspectives during the teaching process; and b) using students’ daily conversational language to enhance their understanding of lessons and encouraging students to use their conversational language for effective communication. This approach can be used as an alternative approach in teaching science, especially to students who learn at rural school with a lack of facilities to support online and advance learning.