

ISSN: 2349-5162 | ESTD Year : 2014 | Monthly Issue JOURNAL OF EMERGING TECHNOLOGIES AND INNOVATIVE RESEARCH (JETIR) An International Scholarly Open Access, Peer-reviewed, Refereed Journal

Assessments, Evaluations & Two-Dimensional Learning Process

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Abstract;

- <u>Assessment and Evaluation:</u> Assessment and Evaluation provides an overview of assessment and evaluation in the context of student learning, including the purposes and benefits of assessment and evaluation, and the different types and methods of assessment and evaluation that are commonly used in educational system. The concept of two-dimensional learning, which involves the integration of disciplinary core ideas with science and engineering practices. It explains the benefits of this approach and how it can be used to promote deeper learning and understanding among students. Additionally, it provides strategies for implementing and assessing two-dimensional learning in the classroom. Assessment and Evaluation can provide us with a foundational understanding of student assessment and evaluation, including its purposes, benefits, and different types and methods. We will also learn about the benefits of using two-dimensional learning to promote deeper learning and understanding among students, as well as practical strategies for implementing and assessing this approach in the classroom.
- <u>Two-Dimensional Learning</u>: Two-Dimensional Learning is an instructional approach that integrates content knowledge with science and engineering practices to promote deeper understanding of concepts and skills. This approach aims to prepare students for the complex and ever-changing world by developing their critical thinking, problem-solving, and communication skills.

Keywords: Learning Skills, Dimensions, Improvement, Strategies, Learners, Consideration.

Introduction:

*Assessment: Assessment is the process of collecting and analyzing data to evaluate a person's or entity's knowledge, skills, abilities, or performance. The purpose of assessment is

to provide information that can be used to make informed decisions, improve learning or performance, and identify areas that may need further attention or improvement.

*Evaluation: Evaluation involves using assessment data to make judgments about student learning, instructional effectiveness, and program effectiveness. It can be used to identify strengths and weaknesses in student performance, to make decisions about instructional strategies, and to guide program improvement.

• Languages of Assessment:



<u>Different Forms of Assessment:</u>



Two-Dimensional Learning:

- Purpose: Two-Dimensional Learning : Two-Dimensional Learning is an approach that combines two dimensions:
 - Content Knowledge and
 - Science and Engineering Practices.

*Its purpose is to promote students' ability to apply their knowledge and skills to real-world problems and situations. This approach aims to help students develop a deeper understanding of concepts and to become more engaged and motivated learners.

The Two Dimensions:

Content Knowledge

Content knowledge is an essential component of Two-Dimensional Learning as it provides the foundation for understanding scientific concepts and practices. In Two-Dimensional Learning, content knowledge refers to the factual information, concepts, and theories that students need to understand in a specific subject area.

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Science and Engineering Practices

Science and engineering practices are essential skills for students to develop. They include skills such as analyzing data, constructing explanations, and designing solutions. Integrating these practices with content knowledge can help students develop a deeper understanding of the concepts they are learning and how they can be applied to real-world problems. <u>Implementing Two-Dimensional Learning:</u>



<u>Challenges and Considerations:</u>



• <u>Conclusion</u>: The topics explore various types of assessments, evaluation methods, and guidance on designing effective assessments that align with learning objectives. The main conclusion of these topics is that assessment and evaluation are crucial tools for promoting student growth and achievement. Two-Dimensional Learning is an approach to education that integrates content knowledge and science and engineering practices. It promotes critical thinking, problem-solving, and communication skills while preparing students for the complex and ever-changing world. The main conclusion of these topics is that the Teachers

can implement Two-Dimensional Learning using instructional strategies such as inquirybased learning and project-based learning.

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