

Manuscript No.: IJAR-59157

Title: Universal Design for Learning in Inclusive Science Education for Students with Disabilities.

Recommendation:

Accept as it is

Accept after minor revision.....

Accept after major revision

Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity	✓			
Significance	✓			

Reviewer Name: Dr. Mithilesh kumar shukla

Reviewer's Comment for Publication:

The paper reviews the application of Universal Design for Learning (UDL) in inclusive science education for students with disabilities. UDL aims to proactively reduce barriers in science classrooms by designing flexible curricula, instruction, and assessments that accommodate diverse learners. Key elements include multimodal representation, inquiry-based learning, accessible technologies, and varied communication methods. The review highlights positive outcomes like increased access, engagement, motivation, and scientific achievement, while acknowledging challenges such as teacher preparedness, resource availability, and implementation complexity. It emphasizes the need for ongoing professional development and collaboration between science and special educators. The paper also identifies research gaps in secondary education, laboratory learning, and under-resourced settings. A conceptual framework is proposed to guide effective UDL implementation, fostering equitable and meaningful science learning for students with disabilities.

Recommendation: Accept after minor revision, .

Detailed Reviewer's Report

STRENGTHS:

- 1- The study Covers studies from 2018 to 2026, providing an up-to-date synthesis of UDL in inclusive science education.
- 2- It addresses multiple disability types, including visual, hearing, intellectual, and learning disabilities.
- 3- It Highlights UDL as a proactive framework that designs learning around barriers rather than learner deficits.
- 4- The study emphasizes varied modes of engagement, representation, and expression for inclusive learning.
- 5- The study Connects UDL principles with authentic science practices like inquiry and model-based learning.
- 6- It proposes a clear, actionable framework integrating learner variability, pedagogy, technology, and assessment.

WEAKNESSES:

- 1- Lack of Empirical Data and Limited Focus on Implementation.
- 2- The paper acknowledges resource limitations but offers limited solutions for low-resource
- 3- The review identifies a gap but does not extensively address how UDL can be effectively applied in secondary science classrooms.