

REVIEWER'S REPORT

Manuscript No. IJAR-54390

Date: 17/10/2025

Title: Effect of Ethno Science-Based Instructional Model on Students' Academic Achievement in Biology

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. Anam Zehra**

Date: 17/10/2025

Reviewer's Comment for Publication.

The paper evaluates the impact of the Ethno Science-Based Instructional Model (ESBIM) on students' academic achievement in Biology using a quasi-experimental non-equivalent control group design. The study presents sound methodology, strong statistical evidence (ANCOVA results, $KR-20 = 0.81$), and practical recommendations for integrating cultural knowledge in science teaching. It is conceptually clear and pedagogically valuable, though theoretical depth and minor APA adjustments are suggested.

Recommendation: Accept after minor revision

Detailed Reviewer's Report

STRENGTHS

1. Employs a robust quasi-experimental design with ANCOVA, enhancing causal interpretation.
2. Reports high reliability ($KR-20 = 0.81$) and expert-validated instruments.
3. Demonstrates significant improvement in experimental group ($F(1,142)=23.87, p < .001$).
4. Addresses gender inclusivity—no significant male-female difference ($F(1,70)=0.21, p = 0.649$).
5. Offers practical curriculum and teacher-training implications rooted in constructivist and meaningful-learning theories.

WEAKNESSES

1. Limited theoretical elaboration linking ESBIM to broader cognitive frameworks.
2. The introduction could reference more recent global studies (2021-2024) on culturally responsive pedagogy.
3. Sample restricted to one Nigerian education zone, limiting generalizability.
4. Tables and citations require uniform APA 7 formatting (italics, DOIs).

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5. Discussion can further connect findings with comparative international research outcomes.