

REVIEWER'S REPORT

Manuscript No.: **IJAR-54930**

Title: Patterns and Predictors of Digital Microlearning Tool Use in Biology: A Quantitative Study of Higher Secondary Students

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. Touseef Malik**

Reviewer's Comment for Publication:

A well-organized, timely, and methodologically robust manuscript examining the use of microlearning tools among higher secondary Biology students. The study aligns closely with NEP-2020 and contemporary digital pedagogy initiatives, offering clear empirical insights into key predictors such as perceived usefulness, digital self-efficacy, motivation, and resource availability. The application of validated instruments, appropriate statistical methods (t-tests, correlations, regression), and well-presented tables (e.g., descriptive statistics on page 6, regression results on page 11) adds considerable rigour to the research. The manuscript is coherent and well-written overall; however, minor enhancements, such as reducing repetitive theoretical descriptions, sharpening the conceptual framework, and ensuring uniform formatting across tables and visual elements, would further improve academic readability.

Recommendation: Accept after minor revision

Detailed Reviewer's Report

STRENGTHS

1. The study presents a clear and relevant research focus by examining microlearning adoption in Biology, a domain well-aligned with current digital education initiatives.
2. It offers a strong conceptual framework, integrating TAM, Self-Efficacy Theory, and the Resource Availability Model (pp. 2–3), providing solid theoretical grounding.
3. The methodology is well-articulated, employing stratified random sampling and a validated Digital Microlearning Usage Scale (CVI = 0.89; $\alpha = 0.87$), which strengthens the study's reliability.
4. The manuscript makes effective use of statistical analyses—descriptive statistics, t-tests, correlations, and multiple regression (Table 5 on page 11 indicates 48% variance explained).

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5. Findings are clearly presented, with tables and figures (e.g., bar charts on pp. 6–10) that enhance visual interpretation and improve comprehension.
6. The study provides strong practical educational implications aligned with NEP-2020, emphasizing curriculum integration, teacher training, and the need for strengthened digital infrastructure.

WEAKNESSES

1. Several concepts in the Introduction and Review sections, such as definitions of microlearning and digital motivation, are repeated and would benefit from condensation.
2. Formatting inconsistencies appear across the tables on pp. 6–11, including spacing issues, alignment problems, and uneven bold formatting.
3. Interpretation sections are unnecessarily lengthy and should be more concise to avoid redundancy after the statistical results are presented.
4. Figures and tables lack uniform numbering; for example, charts on pages 6, 10, and 12 are not consistently labeled.
5. While the discussion is well-written, it would be strengthened by including more comparative references to Indian school-level digital research to deepen contextual relevance.