



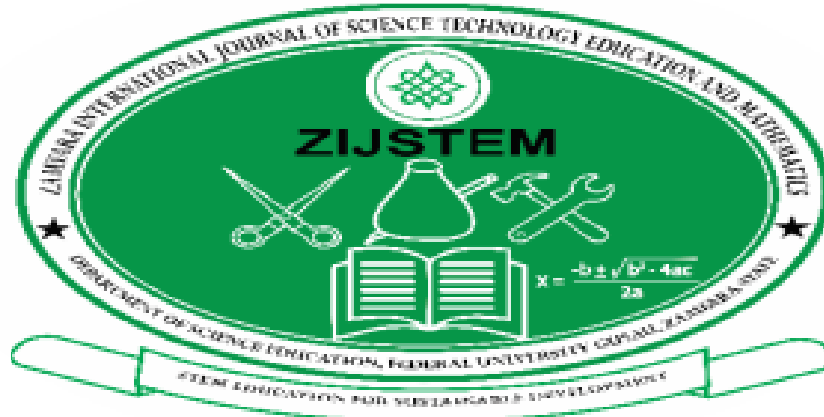
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### EDITORIAL NOTE

Zamfara International Journal of Science Technology Education and Mathematics (ZIJTEM) is the official Journal of the Department of Science Education, Faculty of Education Federal University Gusau Zamfara State, Nigeria. The Journal publishes articles of diverse fields of interest in Sciences, Technology, Education and Mathematics. Papers reporting original research and extended version of already established conference and journal articles are welcomed. Papers for publication are selected through peer review process to ensure originality, relevance and readability. ZIJSTEM is published quarterly which spans throughout the year i.e. March, June, September and December, respectively.

The aim and scope of the journal is to provide an academic medium and an important reference for the advancement and dissemination of information that supports high level learning, teaching and research in the fields of Sciences, Technology, Education and Mathematics.

The articles in this volume are academic and professional discourse written by reputable scholars in their area of specialization.

**Professor Bashir Suleiman**

Editor-in-Chief/ Chairman Editorial Board



### **FORWARD**

On Behalf of the staff and students of the Department of Science Education, Federal University Gusau, Zamfara state, Nigeria, we humbly acknowledge and thank Allah (S.W.T) the most beneficent, the most merciful for without his will, collection and computation of this journal publication would not have been possible. May all praise be ascribed unto Him. The department is sincerely grateful to its accommodating mentor Prof. Tukur Adamu, Vice Chancellor, Federal University, Gusau and his management team for giving the department enabling environment for academic activities. The department's profound gratitude goes to Dr. Umar Sodangi who doubled as the Dean, Faculty of Education, Federal University, Gusau and Associate Editor of Zamfara International Journal of Science, Technology, Education and Mathematics (ZIJSTEM). Furthermore, Special gratitude goes to our contract and visiting Professors, the staff and students of the Department of Science Education, Federal University, Gusau, for their supports and foresight towards actualizing the dream of the department.

The Zamfara International Journal of Science, Technology, Education and Mathematics (ZIJSTEM) is a brain child of Department of Science Education with the aim of bringing science and technology education into global and well recognized journals of science and technology education research. This is first of its kind, among Science Education Departmental Journals in Northwest, Nigeria and by extension one of the highly placed departmental journals in Nigeria, considering its online visibility and originality, based on well-known global best practices.

**Dr. Nuhu Ishaq Lawal**

Associate Editor/Head of Department,  
Science Education, Faculty of Education,  
Federal University, Gusau



### CALL FOR ARTICLES

The Zamfara International Journal of Science, Technology, Education and Mathematics (ZIJSTEM) calls for scholarly articles for review and possible publication in its next edition (Volume 3, Number 2, June, 2026), ZIJSTEM publishes articles that emphasizes on research development and application within the field of Sciences, Technology, Education and Mathematics. All manuscripts are reviewed by editorial review committee. Contributions must be original, not previously or simultaneously published elsewhere, and are critically reviewed before they are published. Papers, which must be written in English language, should have good grammar and proper terminologies.

### PLAGIARISM POLICY

ZIJSTEM is committed to maintain high standards through an in-depth peer review process with sound ethical policies. Any infringements of professional ethical codes, such as plagiarism; including self-plagiarism, fraudulent use of data are seriously frowned at by the journal with zero tolerance.

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11. Each table and figures should be presented within the manuscripts, with a brief and self-explanatory title



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#### **SUBMISSION OF MANUSCRIPTS & ASSESSMENT FEE**

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#### **Dr. Yakubu A. Abdullahi**

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