NOVEL PRACTICES IN EDUCATION



Edited

By

FALODE, Oluwole Caleb PhD.

Novel Education Research Group

ALL RIGHTS RESERVED

This book should not be reproduced in part or full or stored in a retrieval system or transmitted in any form or by any means; electronic, mechanical, photocopying, recording or otherwise without the consent of the copyright owner.

First Published in 2020 by Novel Education Research Group Nigeria

ISBN

Disclaimer

The views and styles expressed in the chapters of this book are those of the individual authors and are not necessarily shared by the reviewers, content editors, language editor, book editor or the Novel Education Research Group.

Dedication

To all educational researchers, and to everyone who believes that in no distant future there will be solutions to educational problems of Nigeria.

Foreword

At the start of year 2020, the novel Covid-19 pandemic was relatively unknown in Nigeria and the impact was not massively felt until March and April when the entire nation was lockdown to prevent the spread of the pandemic. All over the world, schools and educational institutions were shut and Nigerian schools were not left behind. During the lockdown which lasted for a few months, activities of educational researchers were paused and in order to academically stay connected and research refreshed, I championed and launched a WhatsApp group and added willing educational researchers and intending ones I could reach out to irrespective of institution, state of origin, ethnical, political, tribal or religious affiliation and we started online research discussions and presentations relevant to our sector. Within few weeks, the group of ten participants had increased to more than hundred participants and in order to keep new comers updated with previous interactions, the group was migrated to Telegram platform. Members of the group were excited and the registration process aimed at transforming the group to an Association was commenced. At a point, we decided to embark on a project that will make the 'unusual' year a memorable one, we decided to train ourselves on how to develop a chapter afresh or how members can convert their educational research presentations in the group to a chapter of a book, thus, the birth of this book, entitled 'Novel Issues in Education and Educational Research'.

The book contains thirty-eight chapters from different contributors who are educationists and educational researchers from five out of the six geo-political zones of Nigeria. The chapters present innovative ideas on general education, counselling education, health education, communication education, science and technology education and distance education with emphasis on how teaching and learning at all levels of schooling can be improved, particularly in Nigeria. The chapters were grouped and arranged into four Parts: Part I (Strategies for Effective Education); Part II (Innovations in STEM Education); Part III (Tools for E-Learning and Distance Education); and Part IV (Insight into Evaluation and Research in Education).

There is no iota of doubt that the book is extremely rich and will serve as a dependable reference materials to lecturers, teachers, students, researchers, school administrators, policy makers and other relevant stakeholders.

Convener,

Novel Education Research Group, Nigeria December, 2020.

Dr. Falode, Oluwole Caleb

Department of Educational Technology, Federal University of Technology Minna, Nigeria.

Contact: facominsight2@gmail.com/ oluwole.falode@futminna.edu.ng

LIST OF CHAPTERS

PART I: Strategies for Effective Education

- Lesson Planning: Essential Requirement for Effective Teaching and Learning. Insaf Ahmad Muhammad, Kano University of Science and Technology Wudil Kano State & Murjanatu Sani Getso, Federal College of Education, Kano.
- 2. Addressing Children Needs in Early Childhood Education through Childhood Development Programme in Nigeria. **Adalikwu Mfon- Ette Theresa & Samson Tyoden Milcah,** FCT College of Education Zuba, Abuja.
- 3. Dyslexia in Children: Learning Implications and Recommendations. **Ogunje, Blessing Fausat,** Police Children School, Minna, Niger State, Nigeria.
- 4. Counseling Needs of Adolescents: Implications for Learning. Rev. Fr. Dr. Bahago B. Samaila & Fadipe B. Michael, Veritas University, Abuja, Nigeria.
- 5. Practical Approaches of Managing School Stakeholders for Effective Students' Learning Outcomes. **Judith Osuoha & Moses Chukwueze**, FCT College of Education, Zuba Abuja
- Current Trends in Drug Education and Control. Mohammed Hamisu, Bauchi State Command, National Drug Law Enforcement Agency & Barrister Mohammed Tanko Fatima Esq., Niger State Judiciary, Minna, Niger State.
- 7. Prerequisites for Effective Communication in the Classroom. **Abdulkareem**, **Abdulrasheed Yunusa.** National Board for Arabic and Islamic Studies, Kaduna, Nigeria.
- 8. The Roles of Learning Theories in the Design, Production and Selection of Educational Media. **Dr. Aniah Anthony**, Federal University of Technology Minna, Nigeria & **Florence Adawa Paiko**, Niger State Secondary Education Board, Minna.
- 9. A Brief Overview of the Concept of Instructional Materials and Learning Technologies. **Dr. Bala A. Shehu,** Niger State College of Education, Minna.
- Teaching Methods and Use of Instructional Materials. Prof. Olufemi Victor Adeoluwa.
 Ekiti State University, Ado-Ekiti.
- 11. Assistive Technology: Importance, Barriers and Strategies for Adoption in Education. Dr. Isiaku, Wada Bahir, Aminu Kano College of Legal and Islamic Studies, Kano & Ibrahim Abubakar Bello, Kano University of Science and Technology Wudil Kano State.

- 12. Innovative Teaching Methods for Delivery Science and Technology Instructions. **Moses, Daniel,** Vocational Training Centre, Kuje Zonal Office, FCT Abuja & **Ufot, Elizabeth Gabriel,** Federal College of Education (Technical) Umunze, Anambra State, Nigeria.
- 13. Strategies for Effective Utilization of Peer Tutoring in the Classroom. **Ali Fati** & **Ohadugha Rosemary Ogechi**, Federal University of Technology, Minna, Nigeria.
- 14. Enhancing Teaching and Learning through Social Media Platforms. Mohammed Ibrahim Abba, Federal University of Kashere, Gombe State, Nigeria & Dr. Ibrahim Ismaila Kuta, Federal University of Technology Minna, Nigeria.
- 15. Application of Information and Communication Technology in the Classroom for Effective Teaching and Learning. **Dr. Falode, Oluwole Caleb & Prof. Gambari, Amosa Isiaka,** Federal University of Technology, Minna, Nigeria.
- 16. Using Hardware and Software in Education. **Dr. Omodara, Oladele Dennis,** University of Education, Science and Technology, Ikere Ekiti, Ekiti State, Nigeria
- 17. The Need and Steps for the Procurement and Maintenance of Information and Communication Technology Tools in Nigerian Schools. **Hassan Suleiman**, Niger State School of Health Technology, Minna & **Maimuna Salihu Yaa**, Fati Lami Institute for Legal and Administrative Studies, Minna.

PART II: Innovations in STEM Education

- 18. Science Teaching and Learning for the 21st-Century Utilizing Integrated STEM Education. **Dr. Yaki, Akawo Angwal & Prof. V. I. Ezenwa,** Federal University of Technology Minna.
- 19. The Place of Science Education Curriculum in Entrepreneurship in Nigeria. Olalere Joshua, Federal College of Education, Kontagora, Niger State, Nigeria & Adekojo Victoria (Mrs.), Federal University of Technology, Minna, Nigeria.
- 20. The Role of Teachers in Effective Classroom Utilization of Realistic Mathematics Education Approach. Abubakar, Mohammed Ndanusa, Niger State Teacher Professional Development Institute, Minna, Nigeria & Dr. Hassan, Ahmed Ahmed, Federal University of Technology, Minna, Nigeria.
- 21. STEM Education in Secondary Schools: Understanding the Shift in Pedagogical Approach. **Busari Opeyemi Olanrewaju,** Federal University of Technology Minna, Nigeria.

- 22. Chemistry Education: A Potent Tool for Sustainable Development. **Yerima, Habiba** & **Sani, Hamidu Mohammed,** Niger State College of Education, Minna.
- 23. Analogy and Concept Mapping: Key Innovative Instructional Strategies for Improving Students' Conceptual Understanding of Science Concepts. **Sani Hamidu Mohammed** & **Yerima Habiba,** Niger State College of Education, Minna.
- 24. Van Hiele's Model of Developing Geometry Thought: A Link to Effective Geometry Teaching and Learning in Schools. **Dr. Hassan Usman,** Niger State College of Education, Minna, Nigeria.
- 25. Need for Awareness of Nanoscience and Nanotechnology Activities by Science Teachers' and Students' in Secondary Schools. **Ahmad Muhammad Abbas,** Federal University, Oye-Ekiti, Ekiti, Nigeria.

PART III: Tools for E-Learning & Distance Education

- 26. The Place of Open Educational Resources in Nigerian University System: Policy, Financing and Sustainability. **Bello, Ahmed,** Federal University of Kashere, Gombe State, Nigeria & **Prof. Nsofor, Caroline Chinna,** Federal University of Technology, Minna, Nigeria.
- 27. Maximizing Virtual Classroom for Effective Teaching. **Awoyemi, Idowu David & Ilufoye, Timothy Olawale,** Federal University of Technology, Minna, Nigeria
- 28. Understanding the Concept of Mobile Learning. Emmanuel, Joy Ojonogecha & Emmanuel, Fred Adejoh, Plus International School, Nigeria.
- 29. Role of Information and Communication Technologies in Open and Distance Learning.
 Dr. Tukura, Charles Saidu & Ilufoye, Timothy Olawale, Federal University of Technology, Minna, Nigeria.
- 30. Open and Distance Learning Focus Area, Challenges and Solutions: Nigeria Perspectives.

 Oladele, Moses Abiodun, Federal Ministry of Education, Abuja, Nigeria & Oladele,
 Olajire (Mrs.), Bowen University, Iwo, Osun State, Nigeria.
- 31. Role of Cloud-Based Technology in Teaching and Learning. **Ajiboye, Adelayo Mayowa,** Federal University of Technology Minna, Nigeria & **Ayodele, Dele Akinbowale,** National Examinations Council.

- 32. Introducing the Concept of Learning Management System. **Jime, Ahmed Alkali** University of Maiduguri & **Dr. Falode, Oluwole Caleb,** Federal University of Technology, Minna, Nigeria.
- 33. Open Source and Proprietary Learning Management System: Challenges and Opportunities for Nigerian Tertiary Institutions. **Dr. Adamu, Zubairu Evuti,** Federal University of Technology Minna, Niger State, Nigeria & **Santali, Rhoda,** Federal Scholarship Board, North Central Zonal Office, Minna
- 34. An Overview of WizIQ and MOODLE Learning Platforms. **Dr. Falode, Modupe Esther** & **Dr. Alabi, Thomas Omotayo,** Federal University of Technology, Minna, Nigeria.

PART IV: Insight into Evaluation and Research in Education

- 35. Importance of Evaluation and Role of Feedback in Effective Teaching and Learning.

 Usman Zaliha Ndatsu, Niger State College of Education, Minna & Usman Halima

 Ndatsu, Niger State Primary Education Board, Minna.
- 36. Identifying Research Variables in Educational Research. **Hussaini Usman,** Niger State Teacher Professional Development Institute, Minna, Niger State & **Abdullahi Buhari Alhaji,** Niger State Science and Technical Schools Board.
- 37. Understanding Descriptive and Inferential Statistics in Educational Research. **Shahid Sani Anka** Abdu Gusau Polytechnic, Talata Mafara, Zamfara State & **Abubakar Ibrahim Bello,** Kano University of Science and Technology (KUST), Wudil.
- 38. Using Parametric and Non-Parametric Statistics in Educational Research. **Abubakar Mohammed Ndanusa**, Niger State Teacher Professional Development Institute Minna & **Umar Suleiman Tagagi**, Niger State Universal Basic Education Board Minna.