

THE BOOK OF ABSTRACTS

14 to 16 May

2025

3rd INTERNATIONAL CONFERENCE

“Reshaping Education for
Sustainable Development”

Prepared by:

University of Rwanda in partnership with
Mastercard Foundation through Leaders
in Teaching (LIT) Program



in partnership with



THEME

“Empowering educators to prepare students
for the complex challenges of tomorrow”



+250 788-428-454



www.ur.ac.rw



info@ur.ac.rw

THEMATIC CLUSTERS/ SUB-THEMES

- Addressing future workforce needs
- Community and parental involvement
- Educational policy and reform
- Emerging Technologies in Education
- Global competencies and citizenship
- Holistic education and student well-being
- Inclusive and equitable education
- Innovative teaching practices

© **University of Rwanda-College of Education, 2025**

All rights reserved. No part of this work may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, without prior written permission of the Publisher.

Published by: University of Rwanda-College of Education, P.O. Box 55 Rwamagana, Rwanda



Acknowledgements

The management of the University of Rwanda–College of Education proudly acknowledges the individuals, partners, and institutions whose unwavering support and contributions have been pivotal to the success of this conference. We extend special thanks to the following distinguished contributors:

1. Conference convener: Prof. Wenceslas Nzabairwa

2. Organizing committee

1. Prof. Wenceslas Nzabairwa, Chair
2. Prof. Alphonse Uworwabayeho, Vice Chair
3. Dr Olivier Habimana, Secretary
4. Assoc. Prof. Eugene Ndabaga, Member
5. Assoc. Prof. Irene Ndayambaje, Member
6. Assoc. Prof. Michael Tusiime, Member
7. Mr Jean Pierre Siborurema, Accountant
8. Dr Mathias Nduwingoma, Member
9. Mr. Charles Gafurama, Member
10. Mrs. Gerardine Irankunda, Member
11. Mrs Annet Kaviira, Member
12. Anne Marie Niyonshuti

3. Scientific committee

1. Assoc. Prof. Eugene Ndabaga, University of Rwanda, Chair
2. Prof. Jean Uwamahoro, University of Rwanda, Vice Chair
3. Assoc. Prof. Irene Ndayambaje, University of Rwanda, Secretary
4. Dr Marcellin Rutegwa, University of Rwanda, Member
5. Assoc. Prof. Epimaque Niyibizi, University of Rwanda, Member
6. Assoc. Prof. Jean Leonard Buhigiro, University of Rwanda, Member
7. Assoc. Prof. Emmanuel Ojo, University of the Witwatersrand, Member
8. Prof Nkobi Pansiri, University of Botswana, Member
9. Dr. Veneranda Kayirangwa, University of Rwanda, Member
10. Dr. Dorothy Tukahabwa, University of Rwanda, Member
11. Assoc. Prof. Philothere Ntawiha, University of Rwanda, Member
12. Prof. Baraka Manjale Ngussa, Bugema University, Member
13. Dr Dan Imaniriho, University of Rwanda, Co-opted member
14. Dr Joseph Kubwimana, University of Rwanda, Co-opted member
15. Dr Jeannette Musengimana, University of Rwanda, Co-opted member



4. Public relations and communication committee

1. Assoc. Prof. Michael Tusiime, Chair
2. Dr Delphine Mukingambeho, Vice Chair
3. Dr Barthelemy Bizimana, Secretary
4. Dr Pascasie Nyirahabimana
5. Mr Schadrack Ntirandekura, Member
6. Mr Marc Uwitonze, Member
7. Mr. Leon Ntabomvura, Member
8. Mr. Benjamin Karangwa, Member
9. Ms Aloysie Uwizemariya, Member
10. Mr Fiston Bigabo, Member

5. Conference rapporteurs

1. Dr. Innocente Uwineza – Chief Clerk/Rapporteur
2. Mr. Aimable Rugigana – Deputy Clerk/Rapporteur
3. Mr. Laurien Tuyishimire/Rapporteur
4. Ms. Mariane Uwamariya/Rapporteur
5. Ms. Yvonne Twizerimana/Rapporteur

Brief historical background of the conference

The University of Rwanda–College of Education (UR-CE) is one of the six constituent colleges of the University of Rwanda, established in 2013 through the historic merger of all public higher learning institutions in the country. UR-CE is committed to becoming a regional and international hub of excellence in the preparation of professionally competent teachers, education leaders, and researchers.

In line with this vision, UR-CE is currently implementing the Leaders in Teaching (LIT) Initiative, a strategic project funded by the Mastercard Foundation (MCF). The initiative aims to strengthen teacher education in Rwanda, with a particular focus on building the capacity of academic staff and pre-service teachers. Among its four key objectives is a strong emphasis on enhancing the research capacity of academic staff—offering tailored training, academic exchange programs, and competitive research grants to support inquiry into secondary education challenges and solutions.

As part of its knowledge-sharing and research dissemination strategy, UR-CE initiated a bold step: the creation of an annual International Conference on Reshaping Education for Sustainable Development. This forum provides a space for scholars, policymakers, practitioners, and postgraduate students to reflect critically, exchange ideas, and collaborate on forward-looking solutions for education systems worldwide.



The journey of annual international conferences began with the 1st International Conference, held from 28th to 30th March 2023 in Kigali. It established a strong foundation for interdisciplinary dialogue, focusing on the need to rethink and reimagine education in the face of pressing global and local development challenges. The enthusiasm and quality of engagement generated a shared commitment to making it a recurring scholarly tradition.

Building on this momentum, the 2nd International Conference, held from 13th to 15th May 2024, attracted a larger and more diverse group of participants. With expanded thematic coverage—including quality education, inclusion, and emerging technologies—the event further underscored UR-CE’s growing influence in shaping transformative educational practices in Africa and beyond.

We are now pleased to convene the 3rd International Conference, scheduled for 14th to 16th May 2025 at the Kigali Conference and Exhibition Village (KCEV), under the timely and forward-looking theme: “Empowering educators to prepare students for the complex challenges of tomorrow.”

This year’s conference continues the legacy of rigorous scholarship, collaborative innovation, and global engagement. It reaffirms UR-CE’s dedication to building sustainable education systems and positions the College—and the University of Rwanda at large—as a key driver of educational transformation at national, regional, and international levels.



Welcome message by the Vice Chancellor



Assoc. Prof. Kayihura Muganga Didas

It gives me great pleasure to welcome you all—both familiar faces and new ones—to the 3rd International Conference on “*Reshaping Education for Sustainable Development*.” On behalf of the entire University of Rwanda community, I thank you for being part of this growing and vibrant academic platform.

At the University of Rwanda, we are especially proud of this annual conference. It has become a space where policymakers, scholars, practitioners, and postgraduate students from across the world come together to share ideas, challenge assumptions, and reflect deeply on the future of education. This kind of collaboration and open exchange is precisely what we need to inspire meaningful change in our education systems and societies at large. Your participation is a powerful reminder that education remains at the heart of global transformation—not just as a field of study, but as a shared mission that unites us all. The world continues to evolve rapidly, and it is our duty—as educators, researchers, and thought leaders—to ensure that education leads the way in preparing citizens to thrive amid complexity and uncertainty. Of course, a conference like this doesn’t happen by chance. I want to sincerely acknowledge the invisible hands and hearts behind this remarkable event—the organizers, the reviewers, the coordinators, the logistics teams and all those who worked tirelessly to bring us here. Thank you for making this moment possible.

To those of you who have been with us since the first edition of the conference, we salute your consistency and dedication. And to those attending for the first time: welcome to the family. We hope this is the beginning of a long and enriching journey with us. At the University of Rwanda, we are committed to growing globally while staying deeply rooted in our mission. That is why we strongly encourage our scholars not only to engage in local and regional dialogue but to represent our institution at conferences around the world—and we will continue to support these efforts wherever possible.

Let this conference be more than just a gathering of minds—let it be a space of curiosity, inspiration, and renewed purpose. May it spark new collaborations and ideas that carry forward long after we leave this conference venue. Once again, thank you for being here. Enjoy the conference, and feel at home in Rwanda.



Message from the Host



Prof. Florian Nsanganwimana

It is both a privilege and a heartfelt joy to welcome you to the 3rd International Conference on “*Reshaping Education for Sustainable Development*,” organized by the University of Rwanda – College of Education in collaboration with the LIT Project. As the College of Education, we have dared to challenge ourselves with a bold and ambitious commitment—to nurture a culture of hosting an international conference every year. This is not a small undertaking. It requires tireless effort, resourcefulness, and at times, a great deal of sacrifice.

This year, our journey to bring this conference to life has not been without its hurdles. Logistical challenges emerged, and they undoubtedly slowed down the usual high momentum of our communication and operations. But thanks to the steadfast support of the University leadership and the unwavering dedication of the LIT Project management and overall conference organisation team, we were able to troubleshoot bottlenecks, recalibrate our efforts, and forge a clear path forward. We are aware that these delays may have caused inconveniences to some of our valued presenters, guests, and partners, and for that, we express our sincere apologies. We also extend our deep gratitude for your patience, understanding, and unwavering belief in the vision of this conference.

Today, I am proud to say that our dream of hosting an enriching, continued annual conference is very much alive—and this year, it comes with new features designed to take us even further. These include (but are not limited to) creating a sustainable scholarly network, where ideas are not only exchanged but cultivated into future collaborative projects and opportunities. Let us take these next three days to reflect, to share, to challenge one another, and to build lasting partnerships.

As the College of Education, we remain committed to learning with you and from you—and to making this annual gathering a cornerstone of our academic calendar. Thank you for being here. Welcome once again, and I wish you a fruitful and memorable conference.



Welcome Message from Conference Convenor



Prof Wenceslas Nzabaliirwa

It is with a full heart and deep humility that I welcome you all to the 3rd International Conference on “Reshaping Education for Sustainable Development.”

Serving as the Conference Convenor for three consecutive years has been both an incredible honor and a remarkable challenge. Every edition of this conference has taught me something new—not just about education, but about the power of collaboration, perseverance, and shared vision. It has also reminded me that behind every successful event is a community of dedicated people, often working behind the scenes, day and night, to make the impossible possible.

I am immensely grateful to the various teams and committees who have walked this journey with me. Many have worked around the clock, often under pressure, always with unwavering commitment—not to let me down, but more importantly, not to let the vision of this conference down. I sincerely thank each and every one of you. I wish to also extend heartfelt appreciation to the University of Rwanda, and more specifically, to the UR-College of Education and the LIT Project Team, for consistently nurturing and supporting both the research culture and the spirit of academic conferencing. Your backing has made this continued success not only possible but sustainable.

As we gather once again in this remarkable space of learning, dialogue, and discovery, I am more optimistic than ever. These conferences are not just annual events—they are laying the foundation for a lasting legacy at the University of Rwanda-College of Education and across the broader academic community. They offer us a moment to pause, reflect, and reimagine education—not as a static system, but as a dynamic force capable of driving real, inclusive, and sustainable development.

I am confident that the ideas exchanged here, the networks forged, and the solutions proposed will shape new ways of doing the education business and help us tackle the persistent challenges we face as educators and leaders. Together, let us continue working toward a brighter future—one where education is truly at the heart of social and economic transformation. Welcome once again. Let’s make these three days count!



KEYNOTE SPEAKERS



Professor Pamela Abbott

[Professor Pamela Abbott | The University of Aberdeen](#)

I am a professor in the School of Education at the University of Aberdeen and Director of the Centre for Global Development. I am also a member of the Centre for Civil Society, the Rule of Law, and the New Europe Centre.

My main research interests are gender, wellbeing, quality of life and social quality, and social, economic and political transformations. I have researched the UK, the European Union, the former Soviet Union, East Africa, the Middle East, and North Africa. I am an author (with Claire Wallace and Melissa Taylor) of the best-selling text *An Introduction to Sociology: Feminist Perspectives* (3rd edition 2005), Routledge. My most recent books are *Democratisation Against Democracy: How the EU Fails the Middle East* (with Andrea Teti, Valeria Talbot and Paolo Maggiolini). Palgrave Macmillian, published in January 2020 and (with Andrea Teti and Francesco Cavatorta) *The Arab Uprisings in Egypt, Jordan and Tunisia: Social, Economic and Political Transformations in the Arab World*. Palgrave Macmillian, published in January 2018. I have published more than 50 articles in peer-reviewed journals. My work has been published in English, French, Italian, Swedish, Farsi, Polish, Korean and Chinese.

I directed the recently completed project ‘The Fostering a Social Practice Approach to Adult Literacies for Improving People’s Quality of Life in Western Rwanda project funded under the Scottish Government's Scotland Rwanda Programme’ (£1.6m, 2017-24).

I am currently directing the NIHR Global Health Research Group on Promoting Children's and Adolescents' Mental Wellbeing in sub-Saharan Africa (£2.8m, 2022 -2026).





Prof. Ramashego Shila Mphahlele

Ramashego Shila Mphahlele is an Associate Professor at the UNISA's Institute of Open and Distance Learning. She taught mathematics, science and technology teaching in the Foundation Phase at the Department of Early Childhood Education and Development. She was seconded as a Professional Development Specialist from June 2021 to May 2022 to the UNISA's Centre for Professional Development. Ramashego's research interests include mathematics and science teaching, technology-enhanced cognitive justice, inclusive education, open distance learning, e-learning, and open educational resources. She authored and co-authored several journal articles and book chapters. She also co-edited three books published in 2021 and 2023 respectively. She is currently co-editing a book with Prof Moeketsi Letseka titled Open Educational Resources (OERs) in Open Distance and e-Learning Contexts in Southern Africa. Ramashego was honoured with the following research awards:

- the Research and Development Excellence Award in 2010 from the Tshwane South District of Gauteng Department of Education,
- the Data Champion for the First term 2018 awarded by New Leaders Foundation for using the Data Driven Districts dashboard
- the Women in Research Emerging Researcher Prize for the academic year 2020 issued by the University of South Africa
- Real Impact Award 2023/2024 for Early Career Researcher Recognition Award issued by Emerald Publishers.
- She capacitated many academics, researchers and teachers on the following topics
- Teaching and Learning in the Open Distance and e-Learning
- Creating technology-enhanced teaching, learning and authentic assessments
- Designing and repurposing Open Educational Resources.
- Ethical use of Artificial intelligence in research
- Conducting research for qualifications and research outputs
- Empowering teachers in the digital age
- Beyond numbers: scaling quality teacher development in Sub-Saharan Africa with open and distance learning





Mme ALOGNON Hafide Kayi

Born in July 1973, I am Togolese by nationality. I was a history and geography teacher and then an education inspector, specializing in technical education and vocational training, starting in 2010. Since March 2024, I have been Director of Technical Secondary Education at the Togolese Ministry of Technical Education, Vocational Training, and Apprenticeship, and a vocational training specialist on the construction project of the Technical and Vocational Training Center of Excellence at the Adeticopé industrial platform.

An expert in APC engineering according to the OIF guides and the Developing A Curriculum (DACUM) methodology of the Canadian Association of Vocational Training, I have had the opportunity to participate in several workshops, most of them at the national level.

Née en juillet 1973, je suis togolaise de nationalité. J'ai été enseignante d'histoire-géographie puis inspectrice de l'éducation, option enseignement technique et formation professionnelle à partir de 2010. J'occupe depuis mars 2024 le poste de directrice de l'enseignement secondaire technique au ministère togolais de l'enseignement technique, de la formation professionnelle et de l'apprentissage d'une part, et spécialiste en formation professionnelle sur le projet de construction du centre d'excellence de formation technique et professionnelle de la plateforme industrielle d'Adéticopé.

Experte en ingénierie APC selon les guides de l'OIF et selon la méthodologie Developping A Curriculum (DACUM) de l'Association canadienne de la formation professionnelle, j'ai eu l'opportunité de participer à plusieurs ateliers pour la plupart sur le plan national.



PANEL MODERATORS



Professor Emmanuel Ojo

Professor Emmanuel Ojo, a distinguished scholar and academic leader, currently serves as the Deputy Head of the Wits School of Education at the University of the Witwatersrand in Johannesburg, South Africa. In addition to this role, he holds the position of Chair of the Faculty of Humanities Transformation, Internationalisation, and Partnerships Committee. Professor Ojo's research interests encompass the fields of higher education, economics education, interdisciplinary research, and sustainable development. His exceptional contributions to academia have earned him recognition as a C2-rated researcher by the National Research Foundation (NRF) of South Africa, a testament to his scholarly excellence and impact. Actively engaged in global research endeavours, Professor Ojo plays a pivotal role in leading several collaborative projects. He serves as an African academic partner on the GROW research programme (Graduate Research on Worldwide Challenges), which is funded by the European Commission. Furthermore, he holds the esteemed position of Co-Principal Investigator (Co-PI) for the African Engineering and Technology Network (AFRETEC) funded research project in collaboration with the University of Rwanda. Professor Ojo's dedication to advancing knowledge, fostering international partnerships, and driving transformative research initiatives positions him as a prominent figure in the global academic community.





Assoc. Prof. Eugene Ndabaga

Ndabaga Eugene is an Associate Professor of Educational management, Policy and Planning at the University of Rwanda College of Education. He holds a bachelor's degree in philosophy from the Urbaniana University Rome; MA and Doctorate in Education management, policy and planning from the University of Bath-UK. He is the chief editor of Rwanda journal of education (RJE-AJOL) of University of Rwanda-college of education, external reviewer for Compare journal of education UK and an advisor to BAICE. Ndabaga Eugene has a number of publications on his name and a number of papers presented in conferences and seminars both on local and international levels. He has conducted a series of researches and consultancies both locally and internationally.





Dr David Onen

Dr David Onen is a distinguished Ugandan educationist and scholar whose influence in higher education, research, and policy has spanned more than two decades across East Africa. A proud alumnus of Makerere University, he holds a PhD in Education, along with Master's, Postgraduate Diploma, and Bachelor's degrees—all earned from the same institution. Throughout his illustrious academic career, Dr Onen served as a Senior Lecturer at Makerere University, where he held several prominent leadership roles including Editor-in-Chief of the Makerere Journal of Higher Education, School Dean, Senate Representative, and School Coordinator. He is celebrated for his scholarly rigour and unwavering commitment to mentorship, having successfully supervised over 72 Master's and 18 doctoral candidates to completion, in addition to authoring more than 65 peer reviewed publications. Since 2021, he has been recognised as Uganda's most cited education scientist by the AD Scientific Index. Following his retirement from Makerere University in 2023, Dr Onen has continued to shape academic discourse and institutional development as a Visiting

Professor at SIMAD University in Mogadishu, Somalia. He is an International Affiliate of the American Educational Research Association (AERA) and a longstanding member of the African Network for the Internationalisation of Education (ANIE). Passionate about educational transformation and social impact, he remains actively engaged in consultancy work, curriculum innovation, and grassroots initiatives such as the Dero Kwan Scholarship Scheme, which supports access to education for underserved learners in Uganda's Acoli sub-region. Dr Onen can be contacted via email at donenotoo@gmail.com or david.onen@mak.ac.ug, and by telephone at +256 772 586998 / +256 704 944998.



SOME KEY PANELISTS



Dr Edward KADOZI is the The Director General of Higher Education Council (HEC), Rwanda. He holds a Ph.D in the Political Economics of development from the University of Amsterdam, The Netherlands, and masters' degree in Policy Analysis from Tsinghua University, China, and a Bachelors's degree from the University of Rwanda.





Dr. Olivier HABIMANA is a Senior Lecturer at the University of Rwanda, College of Education (UR-CE), specializing in Computer Application Technology. He is an expert in digital education, ICT integration, and AI in education. He holds a Ph.D. in Computer Application Technology from Huazhong University of Science and Technology, China, and is currently pursuing postdoctoral research in Technology Enhanced Learning. Dr. Habimana is recognized for his expertise in educational technology. As Principal Investigator of the Enhancing STEM Teachers' Digital Competences project (LIT – MasterCard Foundation), he oversees all aspects, ensuring measurable outcomes. He also co-leads the AFRETEC-funded Improving Digital Education project, managing implementation in Rwanda. His work includes AI-driven educational tools and research on effective CPD models for STEM teachers, emphasizing sustainability and stakeholder engagement. He has authored over 20 peer-reviewed publications and serves as Co-Chief Editor of the Rwanda Journal of Education.





Dipl.-Ing. Paul UMUKUNZI

Dipl.-Ing. Paul Umukunzi is the Director General of Rwanda TVET Board since November 2020. Prior to his appointment as Director General, Eng. Paul Umukunzi served as Deputy Principal in charge of Academics and Training in both IPRC Huye and IPRC Karongi. He is a graduate of Technical University of Kaiserslautern, Germany, where he obtained a Masters of Science in Civil Engineering.





Mr. François Ngoboka

Mr. François Ngoboka is the Ag. Chief Skills Officer at the Ministry of Public Service and Labour (MIFOTRA), Rwanda. He also served as Head of Labour Market Interventions at Rwanda Development Board (RDB). Francois NGOBOKA also worked as SOS- Children Village Rwanda. He holds a 2010 - 2011 MA in Development Studies/Employment & Labour @ ISS/Erasmus University of Rotterdam in the Netherlands.





Professor Juliet Perumal

Professor Juliet Perumal is the Head of the Wits School of Education and a C1 NRF-rated researcher, recognised nationally and internationally for her scholarship in educational leadership, social justice education, and critical pedagogies. Her research explores gender equity, transformative leadership, and decolonial approaches to teaching and learning in contexts marked by inequality and marginalisation.

Professor Perumal has cultivated collaborations with scholars and institutions across Africa, Europe, and the United States. These include academic partnerships and visiting appointments at Vrije Universiteit Amsterdam, the University of Nigeria, Nsukka, the University of Central Florida, Stanford University, the University of Michigan, and Harvard Graduate School of Education. Through these engagements, she has contributed to global discourses on women in educational leadership, refugee education, and inclusive curriculum reform.

In her leadership role at the Wits School of Education—one of Africa’s premier teacher education institutions—she oversees strategic academic development, fosters innovation in research, and promotes internationalisation with a focus on equity and impact. She is the Principal Investigator on the AFRETEC Inclusive Digital Transformation in Education - a collaborative partner with the Rwanda College of Education and the University of the Witwatersrand. She is also a committed postgraduate supervisor, mentor, and capacity-builder, working to advance African scholarship in the global academy.





Dr. Mathias Nduwingoma

Dr. Mathias Nduwingoma is currently the Director of the Centre for Open Distance and eLearning (CODEL) at University of Rwanda. He has a Doctorate in Computer Applications from Huazhong University of Science and Technology, Wuhan, China. He is a Senior Lecturer at College of Education in the Department of Mathematics, Sciences and Physical Education where he teaches Computer Science Subject modules. He is an Associate Member of the African Centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS). He is also a pioneer in eLearning at University of Rwanda as he has been leading successively the Centre of African Virtual University (UR AVU) and also CODEL. He is doing research in Computer Applications and also in ICT in Education and owns many scientific published related papers. Since 2007, he has been participating in the Postgraduate Certificate in Learning and Teaching in Higher Education where he teaches the module called eLearning : Resource Development and Student Support.





Dr Harriet Onen Ayiorwoth

Dr Harriet Onen Ayiorwoth holds a Bachelor of Arts with Education degree, and a Master of Science in Human Resource Management in Education, both from Makerere University, Kampala, Uganda. She also holds a PhD in Management and Administration from the Uganda Management Institute, Kampala, specializing in Institutional Management and Leadership. Prior to her PhD, Dr Harriet taught Economics, while holding administrative positions, in various secondary schools in Uganda. She later taught at the Makerere Institute for Social Development, and currently, she is an Associate Consultant in Management at the Uganda Management Institute. Dr Harriet's key research interests are in transdisciplinary knowledge collaboration, which she believes is critical in transforming higher education's teaching and research. She is also passionate about higher education leadership, management, and governance, where she has co-published work.





Prof Baraka Manjale Ngussa

Baraka Manjale Ngussa is an experienced researcher, educator and educational administrator, holding a PhD in Curriculum and Teaching from the University of Eastern Africa, Baraton, Kenya. He has served as Assistant Lecturer, Lecturer, Senior Lecturer and Associate Professor of Curriculum and Teaching at the University of Arusha, Tanzania. Administrative positions held include University Chaplain, Centre Director, Registrar, Director of Research and Graduate Studies and currently Director of Human Resources and Administration. He has taught research- related courses and supervised research for many years. He has been a reviewer and editor for some peer reviewed journals across the globe. He currently is the founder, CEO and Chief Editor for the East African Journal of Education and Social Sciences, which, for the past four years, has published quality papers from various countries. He has been an external examiner for postgraduate candidates for the University of South Africa (SA), University of Zululand (SA), Fort Hare University (SA), University of East Africa Baraton (Kenya) and Midlands State University (Zimbabwe). He has published over 60 literatures including Journal articles, Book Chapters and Books. He has also presented papers in International Conferences in various countries. Baraka is one of six ambassadors of Crossref for Africa. His hobbies include teaching, singing, travelling and preaching. His passion is to mentor young researchers and develop them into renowned scholars.





Assoc. Prof. Jolly Rubagiza

Jolly Rubagiza is Associate Professor and the Director of the Centre for Gender Studies at the College of Arts and Social Sciences, the University of Rwanda (UR). She has a long career as an academic and researcher in Rwanda; during which time she has taught, supervised and mentored many students and won various research grants. She has also published a number of scholarly articles and developed teaching, learning and training materials on various topics including; Gender, Education and Development, Peace Building and Social Cohesion, ICT in Education, Positive Masculinity and others. Jolly is also an active member of several women's organizations in Rwanda, and is currently the Chairperson of the Forum for African Women Educationalist (FAWE) Rwanda Chapter. Previously she served as the Deputy Director General of Rwanda Management Institute (RMI), which is a training, research and capacity building institution for public and private sector employees in Rwanda.





Nokulunga Sithabile Ndlovu

Nokulunga Sithabile Ndlovu is a Senior Lecturer in the School of Education at the University of the Witwatersrand. She has over fifteen years of experience in teaching undergraduate and postgraduate courses focused on facilitation and the development of online learning materials. She has also designed and taught Instructional design and ICT Literacy curricula for both in-service and pre-service teacher education programmes, using fully online and blended learning modalities. Nokulunga's research focuses on the pedagogical integration of digital technologies in teaching and learning, with a particular focus on online learning and the professional development of educators in the field. Lately, her work explores the creation, adaptation, and use of Open Educational Resources (OERs) within the African context.





Dr. Samuel Yaw Ampofo

Dr. Samuel Yaw Ampofo is a Senior Lecturer in Educational Administration and Management at the College of Distance Education, University of Cape Coast, Ghana, with extensive teaching experience across basic, secondary, and tertiary education levels. He holds a PhD in Educational Administration from Kenyatta University in Nairobi, Kenya. His research focuses on various dimensions of school administration and management, encompassing instructional supervision, student affairs, course facilitation in distance education, and human resource management in educational institutions. His scholarly contributions have been published in reputable peer-reviewed journals, including those by Wiley, Emerald, and Springer. In addition to his academic role, Dr. Ampofo has held key administrative positions, including Coordinator for Student Support Services, Assessment, and Quality Assurance and Enhancement at the College of Distance Education, University of Cape Coast. Outside of his professional engagements, he is a devoted Christian and married with two children.





Prof. Ruth N. Wanjau

Prof. Ruth N. Wanjau is an Associate Professor in the Department of Chemistry, Kenyatta University Nairobi, Kenya. She is passionate about mentoring youths and young ladies in STEM. She is the current student coordinator for peer counselors; Former Chairperson of Kiambu County Education Board, BOG Chairperson Githunguri TVC, PI of the KU VC Research Grant on Inclusive education made easy: an interactive learning resource for visually challenged learners in secondary schools in Kenya (2021), Co-PI KU VC research grant on Soil improvement using leaves and leaves extract for the growth of crops project (2014)- PI NACOSTI Women's research grant, (2013/2014), PI TOWA HIV and AIDS activities in KU (2013), Coordinated AAU-EASRN HIV project 2011/2014 among other grants, and a researcher in the KU-Women Economic Empowerment Project funded by Bill and Melinda Gates (ongoing). She is also a Principal Researcher in Scholar Spark Solutions, a consultancy that provides valuable insights and data-driven strategies that help schools and universities enhance their teaching methods, improve student outcomes, and optimize their overall operations. She is a life member of KCS and KAFSAP. Her research interests are but not limited to: Gender and inclusivity, education, development of products for agriculture, health and quality life; climate change; environmental and chemical analysis. She is currently working on incorporating entrepreneurship activities from innovative findings she has drawn from her research experience over the years. She also gives mentorship talks to students in high schools, colleges, churches, communities and universities.





Dr. Eugenia Nkechi Irechukwu

Dr. Eugenia Nkechi Irechukwu is a highly experienced academic and administrator with a PhD in Business Administration (Strategic Management) from JKUAT, Kenya, and degrees in Public Administration from the University of Abuja, Nigeria. She currently serves as the Deputy Vice-Chancellor for Quality Management and Institutional Compliance at Mount Kigali University, and formerly held the role of DVC for Academics and Research Affairs. With over 16 years of experience in teaching, research, and academic leadership, she has held key roles such as Faculty Dean, Academic Registrar, and Director of Gender and Entrepreneurship. Dr. Irechukwu has expanded academic programs, chaired numerous university committees, and significantly contributed to institutional development. She is involved with the Higher Education Council as an expert in audits and curriculum benchmarking, has supervised over 100 postgraduate students, and has published extensively in peer-reviewed journals. Her research spans business strategy, workplace safety, women's empowerment, and governance. She is recognized for her strategic leadership and commitment to academic excellence.



THEME 1: Addressing future workforce needs

1. Understanding and Addressing Primary Teacher Shortage Crisis in Malawi

Author (s) full names: Mtika Peter

Institutions of affiliation: University of Strathclyde

Corresponding author's email: peter.mtika@strath.ac.uk

Abstract

Ensuring a steady supply of qualified primary teacher workforce, who are supported and empowered to fulfil their responsibilities is crucial for achieving sustainable national development goals. Motivated and qualified teachers can help unlock the potential of learners, enabling them to contribute to the achievement of economic growth, poverty reduction and social cohesion. Yet, Malawi faces a chronic and complex problem of teacher shortage resulting in high average teacher-pupil ratios. Much of this challenge is attributed to a lack of teacher supply. However, the reasons for teacher shortage are rather complex. This paper aims to examine the reasons and mechanisms of primary school teacher shortage as well as explore how to make the teaching profession attractive in Malawi. The methodology used is a qualitative multistakeholder research design. Data were drawn from interviews with stakeholders including student teachers (n =12), teacher training college principals (n=2), contract teachers (n=4), permanent teachers (n=2), headteacher (n=1), primary education advisor (n=1), senior government officials (n=2), teacher union representative (n=1), civil society representative (n=1) and international development partners (n=2). The findings untangle underlying dynamics of teacher shortages that are based on conflicting narratives that the teacher shortage crisis is attributed to lack of supply and the counterevidence that there are a large proportion of unemployed qualified teachers in the country. The research contributes new perspectives around the paradox of expansion of teacher training colleges, low absorption of qualified teachers into the teaching service, and policy-practice contradictions surrounding the promotion of quality education for sustainable national development. Making primary teaching an attractive profession in Malawi and other low-and-middle-income countries facing similar teacher shortages remains elusive.

Keywords: Primary education, teacher training, teacher supply, recruitment, retention, teacher shortage



2. Interrogating the School Attachment Supervision and Final Lesson Examining at Teacher Training Colleges (TTC) in Rwanda to address 21st Century global teacher requirements for Sustainable development

Author (s) full names: Eugenia Takavarasha

Institutions of affiliation: TTC Nyamata

Corresponding author's email: eugtakavarasha@gmail.com

Abstract

The study examines student teachers' school attachment/teaching practice supervision and the final lesson examining program at one out of sixteen Teacher Training Colleges (TTCs) in the Eastern province of Rwanda as the processes have been criticised for lagging behind in advancing the attainment of 21st century global teacher requirements of a competent teacher. The study aimed to highlight existing gaps in the program processes in terms of deployment pattern, student teacher teaching practice, tutor supervision and quality assurance processes for purposes of proposing intervention strategies necessary for advancing the re-shaping of teacher education in the country. A mixed methods research was used. Data were collected using questionnaires, interviews and participant observation. The sample was purposive, comprising 62 participants that included 40 final year (Year 3) student teachers, 20 tutors and 2 administration staff. The findings revealed a short teaching practice duration of 3 months and a country-wide student teacher deployment pattern that led to a once-off tutor-student supervision and the final lesson examination that was not fully aligned to the school attachment and lacked external quality assurance processes. The study concludes that reviewing the school attachment and final lesson examining processes helps in advancing the re-shaping of teacher education in Rwanda and beyond. The zoning of the school attachment student deployments starting at career pathway level, a longer teaching practice duration of 12 months and a review of the final lesson to include external assurance processes is recommended to enhance the realisation of a global teacher product in the country.

Keywords: Teacher training colleges, teacher internship, teaching practice, school attachment, final lesson, teaching practice examining.



3. The Perceptions of English Foreign Language Teachers About Their Pre-Service Preparation in Rwanda's Teachers Training Colleges.

Author (s) full names: Dr. Enock Panganayi Mawuye and Emmanuel Tuyisenge

Institutions of affiliation: TTC Nyamata

Corresponding author's email: epmawuye@gmail.com

Abstract

The Rwandan government has been making great strides to improve the teaching and training of English as a medium of instruction. The Rwanda Ministry of Education and the Rwanda Basic Education Board have been working hard during the last two decades to renew the programs of learning English in schools and implement various programs. Despite these efforts, progress of improving the training and teaching of English has been slow. This study attempted to investigate English as a Foreign Language (EFL) teachers' pre-service preparation in Rwanda by exploring the experiences, feelings and concerns of the EFL teachers about the way they have been prepared in the institutions in charge of their preparation. The study was underpinned by Tinkler's theoretical model. The study adopted a qualitative approach to investigate the issue of EFL teacher preparation with a focus on in-depth interviews with 40 in-service teachers in 5 selected Primary schools in Nyamata Sector who have graduated from the EFL teacher education program under this study. Document analysis was carried out to buttress findings from the interviews and we're reported as direct quotations. The findings of the study indicated that most of the EFL teachers considered themselves to be under-prepared. The participants believed that their weak pre-service preparation was due to the irrelevant courses they took, critical courses that were missing in the curricula, the inefficiency and impracticality of the practicum, and the poor feedback and scaffolding they received from their teachers, supervisors, and cooperating teachers. This therefore teachers are under equipped and the training program is disconnected from the realities of the classrooms. An overhaul of the curriculum is recommended, provision of teaching-learning resources and providing online teaching programs.

Keywords: English as a Foreign Language, Practicum, Supervision, Student Teacher, Teacher Education.



4. Assessment of Critical Thinking Skills among Kiswahili Secondary School Students in Nyarugenge District, Rwanda.

Author (s) full names: Laurien Tuyishimire, Wallace Mlaga & Patrice Ntawigira

Institutions of affiliation: University of Rwanda-College of Education

Corresponding author's email: tulaurien@gmail.com

Abstract

Critical thinking is essential for executing other 21st-century skills, which are crucial for both the labor market and the preparation of responsible citizens capable of drawing evidence-based conclusions. However, university graduates often exhibit weak critical thinking skills due to inadequate foundational training in secondary schools. Therefore, this study aims to assess the critical thinking skills of Kiswahili secondary school students in selected schools in Nyarugenge District. To achieve this objective, a mixed-methods approach was employed, collecting data from five secondary schools through interviews, questionnaires, and document analysis. The study was guided by constructivist theory in analyzing the data. The findings revealed that students face significant challenges in analyzing literary works (mean = 1.225, SD = 1.2208), struggling to deconstruct arguments and relate characters to real-life situations. Their evaluation skills are also weak (mean = 1.379, SD = 1.7738), with few students able to justify decisions logically. Additionally, creative writing posed the greatest challenge (mean = 0.313, SD = 0.8808), as many failed to extend a given story. Based on these findings, the study suggests strategies that teachers can use to develop students' critical thinking skills including Kiswahili written literature reading and analysis.

Keywords: Kiswahili, critical thinking skills, Kiswahili written literature Teaching and Assessment.



5. Assessing Graduate Employability Skills: A Case of Community Development Students at Pan Africa Christian (PAC) University. Nairobi Kenya

Author (s) full names: Wanjau-Maseno, M.N, Wanjau, R.N.

Institutions of affiliation: Pan Africa Christian University & Kenyatta University

Corresponding author's email: maelwanjau@gmail.com; mary.maseno@pacuniversity.ac.ke

Abstract

Graduate employability is more than being able to find a job immediately after graduation. Rather it is the individual's ability to make an effective ongoing contribution to society, and lead a satisfying life thereafter. It includes qualities like resilience and resourcefulness, as well as technical knowledge and the ability to continue to learn in a changing environment.” As Kenya continues to grapple with a large number of jobless graduates with an economy that is struggling to create new jobs there was a need to establish how well community development graduates possessed graduate employability skills. The study was conducted among community development alumni who had graduated from the University from the year 2016 to 2024. Proportionate and random sampling were used to select 52 alumni students and data was collected using a structured questionnaire. Research findings showed that less than half (44.4%) of the students’ believed in themselves to have possessed graduate employability skills by the time they graduate. Findings from the study indicated that the majority (87%) of the student alumni did not think that additional courses were important to enhance their employability, nearly all the alumni reported the need to volunteer and render community services during their study as very important. Most reported the need for more guidance on writing the curriculum vitae and cover letters while on campus, a skill they wish they sharpened before graduating since they thought it was easy. In addition, the study revealed the need to have the University train on soft skills as they all reported that the ability to work on personal skills such as critical and creative thinking, communication, time management, emotional and social intelligence were paramount to one sustaining employment. Findings from this study reveal the need for universities to be proactive in enhancing graduate employability skills among their students.

Keywords: Graduate skills, Employability, Soft skills, Personal skills



6. Stakeholder Perspectives on School Attachment in Rwanda: A Multi-Level Examination of Challenges and Best Practices

Author (s) full names: *Dr. Imaniriho Dan, Dr. Bizimana Benjamin, Dr. Mukingambeho Delphine, Assoc. Prof. Nzahabwanayo Sylvestre*

Institutions of affiliation: University of Rwanda-College of Education

Corresponding author's email: irihodan@gmail.com

Abstract

School attachment programs are a crucial component of pre-service teacher education, offering student-teachers hands-on teaching experience in secondary schools. However, the quality and effectiveness of these programs remain a subject of debate. This study explores the challenges faced by stakeholders from the University of Rwanda (UR) and the Adventist University of Central Africa (AUCA) to identify best practices for improving these programs. Using a multi-level approach, the study collected insights from 150 respondents through questionnaires, interviews, and focus group discussions. The sample, selected through purposive sampling techniques, included academic staff, university leaders, and students-teachers from UR and AUCA, as well as leaders & school-based mentors from secondary schools hosting the student-teachers. Thematic analysis was used to analyse the data. Key challenges identified include inadequate orientation at both school and university levels, inconsistent mentorship quality, limited resources, and weak coordination between universities and secondary schools. The identified strategies to address these issues, include strengthening stakeholder collaboration, improving mentor training, enhancing orientation processes, and refining program design. By highlighting successful practices and offering recommendations for improvement, this research aims to contribute to the optimization of school attachment programs in Rwanda, ultimately enhancing the preparation of competent secondary school teachers.

Key words: School attachment, School practice, student-teachers, school mentors, supervisor



7. Navigating employability: Insights into Rwandan university graduates' readiness for the job market

Author (s) full names: Habyarimana H., Nzayisenga M.L, Uwizeyemariya A., Mutambuka D., Nshimiyimana P., Mugabo D.A., Sabiti J., Hakizimana I., Nkubito JD

Institutions of affiliation: University of Rwanda-Centre for Language Enhancement

Corresponding author's email: hilairehabi@gmail.com

Abstract

Despite Rwanda's rapid economic growth and reforms in higher education, a significant skills gap persists. Employers frequently report that graduates lack critical competencies, including both technical knowledge and essential soft skills like communication, problem-solving, teamwork, and adaptability. This article explores the mismatch between university education and job market requirements in Rwanda, assessing graduate readiness for employment. The study uses mixed methods—questionnaires and in-depth interviews—with 301 final-year students (136 from UR, 129 from UTB, 36 from polytechnics), 54 interns (14 from UR, 27 from private universities, 13 from polytechnics), and 18 lecturers (6 from UR, 9 from private universities, 3 from polytechnics). Findings show a clear mismatch: 57% of graduates and 44.4% of final-year students reported that university curricula do not meet workplace needs. While 52.5% of students felt prepared for the workplace, 47.5% did not. Similarly, 38.9% of fresh graduates found classroom knowledge inadequate for job performance. Respondents reported that strong technical skills in project management (88.9%), customer service (75.9%), data analysis (72.2%), and database management (64.8%), soft skills like communication (94.4%), teamwork (96.3%), and a positive attitude (69%) were well recognized, but critical thinking (38.9%), creativity (40.7%), and problem-solving (42.6%) were underdeveloped. Notably, 46.2% of respondents called for more hands-on, practical learning. Lecturers also acknowledged limited time for practical application. The study highlights the urgent need for curriculum reform to integrate practical skills and industry-aligned competencies, supporting Rwanda's shift to a knowledge-based economy.

Keywords: employability, curriculum, soft skills, technical skills, readiness and proficiency.



THEME 2: COMMUNITY AND PARENTAL INVOLVEMENT

1. Perceptions of Parents on the Abolishment of Corporal Punishment in Mzilikazi District Primary Schools of Bulawayo Metropolitan Province

Author: Admire Chafa

E-mail: chafaa@staff.msu.ac.zw

Institution of affiliation: Midlands State University

Faculty of Education

Abstract

The purpose of the study was to assess the perception of parents on the abolishment of corporal punishment in schools. The objectives of the study were to examine parents' perceptions of corporal punishment, explore the underlying factors influencing their views on the ban, and propose strategies to enhance parental acceptance of the prohibition of corporal punishment. The study adopted a case study research design, and semi-structured interviews to collect data. From a population of 32 schools which are divided into six clusters, a sample of one cluster with five schools was randomly selected. School heads and five parents from each school were purposively selected to be part of the study. Qualitative data were analyzed thematically, following a six-step framework for thematic data analysis. Transcripts from the interviews were coded to identify recurring themes. The study concluded that parents held negative attitudes toward the ban on corporal punishment. Their perceptions were influenced by cultural upbringing, personal experiences, societal norms, and religious moral beliefs. For parents to accept the ban, the responsibility lies with the government, schools, and teachers to demonstrate that alternative disciplinary methods exist and can be even more effective. The study recommended that Government authorities needed to consult the parents widely before they introduced a statutory instrument, like the banning of corporal punishment. Most of the participants in the study indicated that they were not consulted over issues that are related to the future of their children, the movers of the ban of corporal punishment needed to tackle the negative perceptions from the root cause of the negative perceptions. The Government should not just assume parents would take the ban from the surface and agree with it and that Education stakeholders need to work in unison to try and offer the parents a better option to instill discipline, besides corporal punishment. The study recommended that a further study be conducted to compare the effectiveness of corporal punishment and any other disciplinary methods in instilling discipline in primary schools.

Keywords: Corporal punishment, perception, discipline, abolishment



2. Familial involution in Rwandan Teachers Training Colleges: Obstacles and prospects

Author: Obert Ganyata

Email: oganyata@gmail.com

Affiliation: Matimba Teacher Training College

Abstract

Holistic development of learners in schools requires more fraternization between the two institutions, school and family, predominantly because children are subjected to two principal educators in their entire life, that is parents/guardians and teachers. Besides a plethora of benefits parental involvement in learners' education brings in Rwandan Teacher Training Colleges (TTCs), this remains objectionable. This is due to the observed reduction in participation of parents in their learners' education, perhaps arising comprehensively from a number of factors. These factors will be unpacked in depth as the research unfolds. Qualitative research approach was adopted, involving the use of interviews, focus group discussions, and administration of questionnaires. The researcher employed simple random sampling to select a total of 200 participants across three clusters: 100 students, 25 parents, and 25 teachers. Data was analyzed using the thematic data analysis method in an endeavor to get a deeper understanding of the phenomenon under study. Results show that parents' age, academic level and poverty contribute much to lack of their involvement in their learners' education. This scenario culminates in witnessing a lot of inappropriate behavior exhibited among learners such as undesirable classroom disruptions and decreased academic performances. Where parents are involved, learners excel in academic performances and the school learning environment becomes tranquilized. It is further suggested to discuss the possible parental and children's connection and networking approaches aiming at holistically streamlining the child in schools.

Key words: Familial involution, holistic development, learners' education.



3. Endorsing quality education through parental involvement in Public Secondary Schools: A Case of Gicumbi district in Rwanda

Authors: Eustina Mudhumu, E-mail: eusie84@gmail.com

Jean Damascene Hakizimana, E-mail: hakidas2016@yahoo.com

Institution of affiliation: TTC De la Salle, Byumba, Gicumbi, Rwanda

Abstract

Parental involvement is a key factor to quality of education in every part of the world. Prompted by poor quality education in most public secondary schools in Rwanda, this study thus argues that, without parental involvement; quality education cannot be attained. Therefore, in this study, we sought to understand *how* parental involvement can be endorsed to ensure quality education in public secondary schools in Rwanda. Framed by Epstein's theory, this qualitative research study was conducted. Data were generated utilising interviews and focus group discussions and a purposive sample of six secondary schools in Gicumbi district were selected. The participants include six head teachers and six parents who were chairpersons of the school general assembly committee in the selected secondary schools. Data were thematically analysed and yielded findings which include illiteracy leading to high inferiority complex among parents, time constraints and family-related factors. In addition, lack of adequate skills on parental mobilisation and relationship building with families and communities by educational leaders viewing parents as inexperienced and unskilled. This study concluded that there is power in collaboration between the school and parents in order to get quality education, since parents have a lot of expertise to offer; provided they are empowered and involved. It was recommended that parents should be offered adult education through seminars and workshops to support their children in both schools and homes.

Key words: Parental Involvement, Quality Education, Public Secondary Education.



4. Impact of Information and Communication Technology on Parental and Community Involvement in Rwandan Mathematics Education

Authors: Sisasenkosi Sibonokuhle Dube, *Email:* sisah20dube@gmail.com

Rose Chibaya, *Email address:* rosechibaya@gmail.com

Abstract

This study investigates the impact of Information and Communication Technology (ICT) on enhancing parental and community involvement in mathematics education at Teacher Training Colleges (TTCs) in Rwanda. Despite advances in ICT integration in Rwandan education, its impact on parental and community engagement in mathematics remains underexplored. The study explores how ICT tools can enhance this involvement, which is crucial for reinforcing classroom learning. A mixed-methods approach was employed. Purposive sampling was used to select 20 TTC tutors, 100 student teachers, 80 parents, and community members. Data was collected using surveys, semi-structured interviews, and focus group discussions. Descriptive statistics and thematic analysis were used to analyze the data. ICT tools like Google Classroom, Zoom, Khan Academy, and communication platforms such as WhatsApp were used for the study. Findings show that these tools facilitate communication, allowing parents to track student progress, access resources, and engage with teachers. This has led to improved student performance and motivation. ICT also supports community-based initiatives, like online study groups, that extend learning beyond school hours. The study suggests that increased ICT use can contribute to better-trained teachers, improved mathematics outcomes, and a stronger educational foundation in Rwanda.

Keywords: Parental involvement; community engagement; mathematics education; digital platforms; teacher training colleges



5. Exploring Parental Background and Its Impact on Literacy Development Among Primary School Pupils: A Case Study of Tabora Region, Tanzania

Author: Mariam John Nyang'anyi

E-mail: nyanganyimariam11@gmail.com

Institution of Affiliation: University of Dodoma

Abstract

This study explores how parents' backgrounds influence the development of literacy skills in primary school children in the Tabora Region. It focuses on how these backgrounds affect parents' engagement in literacy initiatives. Using a qualitative approach, the research included 50 participants, comprising parents of primary school children and teachers. A case study design guided by Family Literacy Theory was used, with participants selected through purposive sampling. Data were gathered through interviews and focus group discussions and analyzed using thematic analysis. The findings highlight that factors such as marital status, socio-economic status, education level and employment status significantly shape how parents engage with and support their children's literacy development. Considering these findings, the study suggests creating community-based support programs that cater to the diverse backgrounds of parents. These programs should focus on providing resources and training for parents with different levels of education and socio-economic conditions. Workshops, literacy resources and individualized support can empower parents to be more involved in their children's literacy journeys. In the context of re-shaping education for sustainable development, it is imperative to advocate for inclusive educational policies that recognize the significant influence of parental background on student engagement. By promoting collaboration between educational institutions and local organizations, we can ensure that all parents regardless of their backgrounds are provided with the necessary resources and knowledge to effectively support their children's literacy development. Such partnerships not only empower parents but also enhance the overall learning environment, thereby fostering students' resilience and capacity to succeed in their educational pursuits.

Keywords: Culture, literacy skills, parental engagement



6. Exploring the Impact of Family-Related Disruptive Behaviors on Students' Academic Performance in Rwandan Secondary Schools

Authors and e-mails: Joseph Kubwimana, E-mail: kujoseph2002@yahoo.fr

Innocent Twagilimana, E-mail: twagilin@gmail.com

Innocent Sibomana, E-mail: sibinnocent75@gmail.com

Mariane Uwamariya, E-mail: m.uwamariya1@ur.ac.rw

Françoise Mujawimana, E-mail: mujawimanafra@gmail.com

Institution of affiliation: University of Rwanda

Abstract

This study investigates the impact of family-related factors on disruptive behaviors among students in Rwandan secondary schools. Using a mixed-methods approach, the research combined qualitative interviews with school leaders, teachers, and students, along with quantitative surveys to assess academic performance and behavioral patterns. The study involved 268 students, 94 teachers, and 30 school leaders. Qualitative data were analyzed thematically, while quantitative data were analyzed using SPSS and inferential statistical techniques. The findings show that 51% of students reported absenteeism due to a lack of parental support, with 36% citing family conflicts as the cause. Additionally, 77% of students acknowledged that their behavior, including aggression and low motivation, was influenced by family-related issues. 98% of school leaders highlight that the underlying causes of student disengagement, physical and verbal violence, and poor concentration issues that adversely affect academic performance are frequently tied to family conflict, separation, and domestic abuse. Regarding academic performance, 63% of students met the minimum passing standards, while 33.6% failed. Gender analysis revealed a significant disparity: 94.83% of female students passed, compared to just 38.82% of male students. The failure rate for male students was 58.55%, while only 0.86% of female students failed. Boarding students outperformed day students, with 92.79% of boarding students meeting the minimum passing standards, compared to 42.04% of day students. These findings emphasize the need to address family-related challenges, disruptive behaviors, and low motivation to improve academic outcomes. The study calls for targeted interventions, particularly for male students and those in day schools, and stresses the importance of gender-sensitive strategies to promote academic success and ensure equal opportunities for both male and female students across diverse educational settings.

Key words: Family-Related Behaviors, Disruptive Behavior, Physical and Verbal Violence, Low motivation, and Academic Performance.



7. Developing Effective Volunteer Programmes: A Case Study of Rukara Model School in Rwanda

Authors, emails and affiliation:

Barnabas Muyengwa: muyengwab@zou.ac.zw, Rukara Model School

Kenneth Mukau: drkenmuk@gmail.com, TTC Mwezi

Eric Iyamuremye: modelrukara@gmail.com, Rukara Model School

Abstract

In educational institutions, effective volunteer programmes are critical for student success, teacher morale, and overall school improvement. Volunteer programmes can play a key role in fostering meaningful partnerships between schools, families, and local communities. However, the creation and sustainability of successful volunteer programmes come with their own set of challenges and opportunities. This study explores the challenges and opportunities involved in building and maintaining volunteer programmes that benefit students, teachers, and schools, with a specific focus on a model school. Using a socio-ecological framework, this qualitative study employed a single case study design, with data collected through semi-structured interviews and observations. A total of three school administrators and seven parents were purposefully selected for interviews and observations. The data were analyzed using Braun and Clarke's thematic analysis, focusing on the sub-theme of effective volunteer programmes. This approach allowed for the identification of key themes related to the stakeholders' experiences and activities of the volunteer programme. The results reveal that several factors influence the effectiveness of volunteer programmes, including the relationships among stakeholders and the value attached to their contributions, particularly in school programmes. The main challenge identified was the dynamics between stakeholders and the differing levels of value placed on their involvement in volunteer activities. The study emphasizes the need for all stakeholders to have a shared understanding of the educational institution's vision and mission in relation to volunteer programmes. Based on the findings, a model for an effective volunteer programme is proposed, particularly suited for educational institutions.

Keywords: Volunteer programme, partnerships, model school, stakeholders, socio-ecological framework, community involvement, parental involvement.



8. Topic: *The role of parents and the community in preparing science students (STEM) for the Fourth Industrial Revolution in Gatsibo District in Rwanda*

Authors, e-mail and institution of affiliation:

Margaret Machingambi, Email: maggiemachingambi@gmail.com,

Great Zimbabwe University; School of Heritage and Education

Emmanuel Sezibera, Email: sezibera1991@gmail.com

TTC Kabarore; Department of Professional Courses

Abstract

This study explored the role of parents and the community in equipping students for the 4IR. Furthermore, the article assessed the challenges faced by parents and the community in supporting digital literacy and technological skill development. This study is based on pragmatism as its theoretical framework. The study adopted a mixed method approach. It adopted an explanatory sequential design where the researchers began with quantitative data to identify patterns and used qualitative data to elaborate on the findings. On the quantitative component, the study used a convenience sampling technique to select the respondents. Fifty respondents were administered with structured questionnaires. The study used SPSS to analyse quantitative data. On the qualitative component, the study used a purposive sampling technique to select participants who were involved in preparing science students for the 4IR and the students themselves. Five educators and five stakeholders were interviewed. Fifteen students participated in focus group discussions (FGD) to contribute to improving their learning, challenges, and support systems. The researchers considered the gender balance. FGD was also conducted with parents and other stakeholders to explore their role in supporting students as they prepare for 4IR. Data collected from interviews and FGD was presented and analysed using thematic analysis with the help of Atlas TI analysis. Based on the data collected, the study revealed that most parents have a limited understanding of 4IR and what it means to prepare future-ready students. The study also revealed that parents and the community focus on developing problem-solving and experimental skills. Parents and the community indicated that the challenge they face is the lack of technological resources. Families from lower-income backgrounds often face greater challenges in providing digital literacy tools for their children. The study further revealed that girls have more support from parents, the community, and the government. The study also explored the idea that policymakers should create more supportive frameworks for parental and community involvement. The study recommends that there should be technology hubs at community centres with internet and devices for the students who have a challenge of technological resources.

Keywords: Community, parents, digital literacy, innovation, technology, skills



9. Head teacher's management practices and their influence on parental engagement in teaching and learning: a comparative exploration of the Kenyan and Canadian perspective

Author: Lilian Akinyo Oyula

E-mail: Lilianakinyi1949@gmail.com

Abstract

Globally, research has demonstrated a positive association between parental engagement and learners' academic achievement. Effective school leadership plays a critical role in fostering parental involvement in school activities, which in turn contributes to improved student performance over time. This study examined the management practices of head teachers and their influence on parental engagement in Kenyan primary schools compared to Canadian elementary schools. The specific objective was to assess how communication strategies impact parental involvement. The study was guided by Epstein's Parental Involvement Theory and adopted a phenomenological research approach. Participants included five parents, three head teachers, and eight teachers purposively selected from each country. Data were collected using interview guides and questionnaires, and analyzed thematically based on the study objectives. Findings revealed that communication strategies employed by school leaders positively influenced parental engagement in teaching and learning. In Canada—particularly in Saskatchewan—each school has a School Community Council (SCC) that collaborates closely with parents and the broader community to promote shared accountability for student achievement and well-being. Additionally, voluntary Parent-Teacher Home Visits and government-funded parental involvement initiatives, such as those in Ontario, further support engagement efforts. Digital tools like class websites and email were commonly used to facilitate communication. In contrast, in Kenya, parental engagement was largely limited to infrastructure development and fee contributions through the Parents Association. Communication was primarily conducted verbally or by phone. The study concluded that a supportive school environment, effective communication flow, strong collaboration, and conflict resolution strategies are key to enhancing parental engagement. It recommended that the Kenyan government review and operationalize national guidelines on parental involvement, provide comprehensive training for school leaders on best practices, and raise awareness among parents about their critical role in the educational process.

Keywords: Parental engagement, school leadership, communication strategies, primary education



10. Community and parental involvement in the education of learners with disabilities in a Rwandan community

Author: Liana Musekiwa

E-mail: lianamusekiwa1@gmail.com

Institution of affiliation: Tutor- TTC Mbuga; email address

Abstract

Communities and parents play pivotal roles in shaping educational settings and preparing students for the complexities of the modern world. Their involvement in education is crucial for enhancing educational outcomes and fostering the social development of learners with disabilities. This study examines the roles of **community and parental involvement** in the education of learners with disabilities in the Mbuga community, Rwanda. A phenomenological approach was adopted, utilizing semi-structured, in-depth interviews and focus group discussions. The collected data was transcribed and analyzed thematically. A sample of 20 students with disabilities, 20 parents and 10 community members was drawn through convenience sampling from the Mbuga community in Rwanda. This study was guided by Epstein's Parental Involvement Model, which outlines multiple dimensions of effective community and parental engagement, including support for academic achievement, participation in school activities, and advocacy for educational equity. The study findings revealed that the community and parents play a critical role in encouraging and supporting learners with disabilities, helping them improve their performance and reach their full potential. Through collaborative efforts among parents, communities, and educational institutions, a holistic approach to addressing the diverse needs of learners with disabilities is promoted. Parental involvement cultivates a supportive home environment conducive to learning that enhances academic performance and social-emotional development. The study recommends consistent and two-way communication between school authorities and parents to enhance learning outcomes.

Keywords: *Community, parental involvement, social improvement, learners with disabilities*



11. Promoting Shared Responsibilities in Developing Children’s Early Literacy and Reading Culture in Rwanda

Manirakiza Evariste, University of Rwanda, College of Arts and Social Sciences, Email: manirakizaeva91@gmail.com

Ngoboka Jean Paul, University of Rwanda, College of Education, Email: jeanngoboka@gmail.com

Rurangangabo Jean Paul Roger, University of Rwanda, College of Arts and Social Sciences; Email: jprurangangabo1@gmail.com

Ndizera Védaste, University of Rwanda, College of Arts and Social Sciences, Email: vedasten2009@gmail.com

Harerimana Kinanira Jean Bosco, University of Rwanda, College of Arts and Social Sciences, Email: harerimanajean8113@gmail.com

Corresponding author’s email: manirakizaeva91@gmail.com

Abstract

This study aimed to investigate the role of stakeholder responsibilities in promoting early literacy and a reading culture in Rwanda. The research was conducted in five districts, each representing one of the four provinces and the City of Kigali. A mixed-methods design was employed, combining the collection of both quantitative and qualitative data. The total population consisted of 437,988 households across the selected districts. A sample of 598 parents was selected using a convenience sampling technique. Additionally, 20 school administrators, 60 teachers, and 20 local authorities were purposefully selected. Data were collected through questionnaires and interviews, and analyzed using descriptive statistics and thematic analysis. The findings revealed that parents support early literacy and a reading culture by reading stories to their children (64.4%; N=385) and encouraging them to read (65.1%; N=389). Results also indicated that parents recognize the role of teachers in promoting literacy, particularly through assigning take-home reading tasks (76.8%; N=459). However, the study also identified several challenges, including language barriers—only 19.1% of parents (N=114) reported being able to read English—as well as widespread illiteracy, poverty, a shortage of books in schools, and overcrowded classrooms. These factors limit the ability of stakeholders to effectively foster a reading culture among children. The study recommends increasing the availability of books in schools, expanding adult literacy programs to empower parents to engage in their children's reading activities, and reducing the student-teacher ratio to create more conducive learning environments.

Key words: Early Literacy, reading culture



12. Contribution of Teacher-Parent Collaboration on Students' Performance in Ordinary Level Secondary Schools in Ngororero District, Rwanda

Authors: ¹Byukusenge Celine & ¹Nyirabagenzi Devotha,

Institution of affiliation: ¹Catholic University of Rwanda

Corresponding address: celinebyukusenge@gmail.com

Abstract

Effective teacher-parent engagement is widely recognized as a key factor in enhancing student learning outcomes. This study investigated the contribution of teacher-parent collaboration to students' academic performance in ordinary-level education in Rwanda. A descriptive research design was employed, incorporating both quantitative and qualitative approaches, and guided by Epstein's Six Types of Parental Involvement Theory. Data were collected through questionnaires administered to 43 parents and 41 students, as well as interviews conducted with 14 teachers and four administrative staff members. Quantitative data were analyzed using descriptive statistics, while qualitative data were analyzed thematically and presented narratively. The findings revealed that GS Kabyiniro demonstrated a higher level of teacher-parent collaboration compared to GS Kanogo, with 72.09% and 59% of parents, respectively, reporting regular communication with teachers. At GS Kabyiniro, all parents actively shared information regarding their children's education and behavior. Other forms of collaboration also showed strong participation, including contributions to teacher incentives and school improvement (97.67%), regular meeting attendance (93.02%), involvement in school decision-making (86.04%), participation in academic events (74.41%), assistance with homework (69.76%), and volunteering (67.44%). Furthermore, the study found that GS Kabyiniro's stronger teacher-parent collaboration corresponded with higher student performance—79% of students achieved a grade A in the national examination administered by NESA, compared to only 38% at GS Kanogo. These results suggest a positive relationship between effective teacher-parent collaboration and improved academic outcomes. Based on these findings, the study recommends that both teachers and parents enhance their collaboration to maximize its benefits for student achievement.

Keywords: *Teacher-Parent Collaboration, Students' Performance, Ordinary Level, Parental engagement*



13. Breaking barriers and closing gaps: The role of community engagement and ethnopsychology in addressing educational inequalities in Zimbabwe

Author: Nowell Chidakwa

Email: nowellc@uj.ac.za / nowellchidakwa@gmail.com

Institution of affiliation: University of Johannesburg, South Africa.

Abstract

Despite numerous policy initiatives and interventions, educational inequities in Zimbabwe persist, leaving many students, especially those from rural and marginalised backgrounds, at a disadvantage. Conventional reform efforts frequently fail to account for the intricate cultural and psychological factors that impact education. This study explores how such an integrated approach can break down barriers and close gaps towards quality education in Zimbabwe. The study utilised a participatory approach to examine educational inequities in Zimbabwe through an ethnopsychology lens. Twenty participants from diverse educational and family backgrounds were engaged in the research. Photovoice was used, which allowed participants to visually document and reflect on their educational experiences, as well as personal interviews which facilitated in-depth personal data collection. Data were thematically analysed, guided by an ethnopsychological conceptual framework that emphasises cultural context processes. The study's findings highlight that although cultural beliefs and practices hinder educational attainment in Zimbabwe, the same community-driven reforms sensitive to local cultural contexts when effectively utilised, are vital in addressing community challenges. Participants emphasised the importance of community involvement in fostering a sense of ownership and accountability, which, in turn, led to more sustainable and impactful educational reforms. The results demonstrate that culturally local values and practices promote community participation in educational decision-making and ensure that reforms are contextually relevant and sustainable through awareness and support programs. The approach continuously engages communities in the reform process, recommending the critical role of integrating ethnopsychological insights and community-driven approaches in creating equitable and effective educational systems in Zimbabwe.

Keywords: community engagement; cultural contexts; educational inequalities; ethnopsychology; Zimbabwe



14. Home Based Early Childhood Development Center as a home-grown solution to ensure optimum early childhood development: A critical analysis of Rwanda experience.

Author: Asterie Nyirahabimana

Email: a.nyirahabimana1@ur.ac.rw; nyirasterie@yahoo.fr

Institution of affiliation: University of Rwanda-College of Education

Abstract

This study examines the impact of home-based early childhood development (ECD) services on children's growth and success, emphasizing the crucial role of parental involvement in shaping positive early childhood outcomes. Home-based ECD centers in Rwanda are informal setups where 10 to 15 neighboring households designate a home to provide ECD services for children aged 3 to 6 years, enabling parents to share caregiving responsibilities while working (Republic of Rwanda, 2020). This study used an interpretative qualitative methodology, collecting data through speech and conference presentation analysis from government officials and NGOs at the National ECD Conference (August 19–21, 2024, Kigali, Rwanda), along with documentation analysis of the 2024 ECD mapping report by Rwanda's National Child Development Agency (NCDA). The study used thematic analysis to examine how caregivers -including parents who take turns- provide ECD services in home-based ECD centers. Findings indicate that home-based ECD centers makeup 68.4% of all ECD centers in Rwanda, totaling 21,342 nationwide. Caregivers, mostly trusted community volunteers, rely on traditional knowledge and personal experience to support children, resulting in ECD services that are neither comprehensive nor high quality. While these centers improve access to ECD services, they often lack the necessary resources to maintain adequate quality. To ensure children thrive and reach their full potential, caregivers should receive training in the Nurturing Care Framework to equip them with the necessary knowledge, skills, and attitudes to enhance holistic early childhood development.

Key words: Early Childhood Development; Home-based ECD; Nurturing Care Framework; Parenting practices



15. Pushouts or Dropouts: A Case of a Demonstration School in Gatsibo District, Rwanda.

Authors: Joseph Dzavo (Kabarore Teacher Training College, Rwanda)

E-mail: joseph.dzavo@gmail.com

Onias Musaniwa (Rwanda Basic Education Board: TTC Kabarore)

E-mail: omusaniwa2@gmail.com

James Maizere (Kabarore Teacher Training College, Rwanda)

E-mail: maijamez@gmail.com

Mukiza Prosper (Rwanda Basic Education Board: GS Bihinga School)

E-mail: mukizaprosp@gmail.com

Corresponding Author: Joseph Dzavo joseph.dzavo@gmail.com

Abstract

Public schools in Rwanda receive substantial funding for infrastructural development and feeding schemes, among other assistance. In this regard, learners pay less than 1\$usd per term toward feeding logistics. In short, they do not incur any fees. Despite this, there are rampant dropouts in primary schools in the Gatsibo District, necessitating researchers to establish the possible causes of these dropouts. Scholars argue that children do not drop out of school voluntarily but are pushed out. In the quest for answers, the study adopted a qualitative approach and employed a single case study design. Out of 50 public schools in Gatsibo District, Rwanda, one was purposively selected for semi-structured interviews with five parents, two administrators, and three teachers. Document analysis focused on admission and class registers. The data generated were analysed thematically, informed by Tinto's (1993) Institutional Departure Theory. The study established that learners faced academic and peer integration challenges at school. Additionally, learners lacked parental support due to economic and cultural factors. The study concluded that learners are not leaving school by choice, but rather being pushed out. The study recommends that the Government of Rwanda intensify staff empowerment programs to better support learners at risk of dropping out. Additionally, it advises the development of community-based initiatives to empower parents in supporting their children's education.

Key words: Dropout, Pushout, Demonstration school, integration, Administration register



THEME 3: EDUCATIONAL POLICY AND REFORM

1. The impact of the implementation of Competence Based Curriculum (CBC) on teacher emotions in Rwandan Teacher Training Colleges (TTCs)

Rose Chibaya rosechibaya@gmail.com, Hopewell Biningu, *Pedagogical Research Advisor -TTC Zaza*; Email address: hbininguu@mail.com.

Email: Rose Chibaya, Email address: rosechibaya@gmail.com

Abstract

This study investigated the impact of competency-based curriculum (CBC) implementation on teacher emotions in Rwandan Teacher Training Colleges (TTCs). The research employed a qualitative methodology within an interpretive paradigm, utilizing a case study design focusing on three purposefully selected TTCs. Data were collected through in-depth interviews, focus group discussions, classroom observations, document analysis, and reflective journaling from 18 purposively selected TTC teachers. The theoretical framework integrated Fullan's Educational Change Theory and Bandura's Self-Efficacy Theory to examine systemic and psychological dimensions of curriculum change. Findings revealed a complex emotional landscape as teachers navigated CBC implementation, with emotions evolving from predominantly negative (anxiety, uncertainty, frustration) toward increasingly positive responses (professional pride, hope, enthusiasm) as implementation progressed. Several contextual factors significantly influenced these emotional responses, including professional background and beliefs, institutional support mechanisms, resource availability, and Rwanda's unique sociocultural context. Effective strategies for supporting teachers' emotional well-being included emotionally attuned professional development, staged implementation with realistic timelines, opportunities for teacher voice and agency, and recognition of progress. The study concluded that addressing the emotional dimension of curriculum change is essential for successful implementation, particularly in TTCs where teachers bear the dual responsibility of adapting to new approaches while preparing future teachers. Recommendations include developing professional development programs that explicitly address emotional aspects of change and creating implementation approaches that acknowledge the emotional journey of educational reform.

Keywords: Competence-based curriculum; Teacher emotions; Educational change; Teacher Training Colleges; Professional development.



2. Re-entry policy impact on readmitted teenage mothers' English proficiency in Rwandan Teacher Training Colleges

Gibbons Thondhlana (TTC Muramba, Rwanda), gibbonsthondhlana910@gmail.com,

Onias Musaniwa (Rwanda Basic Education Board: TTC Kabarore), omusaniwa2@gmail.com,

Protais Bizimana (TTC Muramba, Rwanda), bizimanaprotais7@gmail.com ,

Email: gibbonsthondhlana910@gmail.com

Abstract

This study examined how re-entry policies affect readmitted teenage mothers' English language proficiency at Teacher Training Colleges (TTCs) in Rwanda. Re-entry policies aim to provide students with the opportunity to resume their education after previous interruptions due to pregnancy. This study sought to establish how policies relate to the English language skills of teen mothers who have used them later on. The qualitative research approach and case study research design guided this study. The study was informed by the Ecological Systems theory by Bronfenbrenner. The purposive sampling technique was used to select six TTCs and six readmitted teen mothers. Data were generated through semi-structured interviews and open-ended questionnaires and then analysed thematically. The study established that teenage mothers develop an inferiority complex due to low self-esteem. Furthermore, there was low participation in English proficiency programmes as a result of stigmatisation. The study concluded that re-entered teenage mothers' reported low proficiency in English. At home, teenage mothers might not have as much access to educational materials like books, the internet, or language support programmes. Their capacity to practice and advance their English proficiency may be affected by this lack of resources and assistance. The study recommends the introduction of programmes that engage readmitted teenage mothers in all activities to reduce stigmatisation to build a positive self-concept. In addition, the study recommends the use of pedagogy and language that is encouraging to teen mothers.

Key words: re-entry, policy, readmitted, teenage mother, teacher training college



3. Continuous Professional Development and Pedagogical Beliefs of Mathematics and Science Teachers in Rwandan Secondary Schools

Faustin Nduwayezu a,b* , Jean de Dieu Habiyaemye a,b, Theophile Nsengimana a,b, Pheneas Nkundabakura, a,b, ^aMathematics, Sciences and physical Education, African Center of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS), Kayonza, Rwanda, ^bUniversity of Rwanda-College of Education (UR-CE), Kayonza, Rwanda
*nfaustinhoo@gmail.com

Corresponding author's email: *nfaustinhoo@gmail.com

Abstract

Different reforms within the education system require changes in teachers' beliefs or attitude, knowledge and skills as well as classroom practices. The reforms are made to bolster the quality of education, particularly the teaching and learning. Due to political and curriculum reforms, positive beliefs as well knowledge and skills are needed for the effective implementation of these reforms. In 2023, eight months of Continuous Professional Development (CPD) was organized through the Rwandan Quality Basic Education for Human Capital Development (RQBEHCD) project for improving the secondary school teachers' beliefs towards the effective teaching and learning of mathematics and science. To evaluate the contribution of this CPD on teachers' beliefs, data were collected on a sample of 620 mathematics and science teachers from different schools purposefully selected in seven districts of Rwanda. A pre-test was used to evaluate the status of teachers' pedagogical beliefs before training while a post-test was used to assess the impact of training on these beliefs toward teaching and learning mathematics and science. A comparison of the pre- and post-test results showed an increase in positive beliefs (10% to 18%) in most trained teachers on how they value the importance of learner-centered and inquiry-based learning approaches in science education. Particularly, a greater increase in positive beliefs was observed in females (69% of trained females) compared to males (37% of trained males). In conclusion, more CPDs were recommended in the preparation of teachers to use effective teaching and learning methods and adopt new reforms within the educational system.

Key words: Mathematics, science, pedagogical beliefs, CPD



4. Assessing the influence of Contextual intelligence and pedagogical support of school heads on teacher job commitment

Samuel Yaw Ampofo, sampofo@ucc.edu.gh, Vera Arhin, varhin@ucc.edu.gh, Samuel Oppong
soppong005@stu.ucc.edu.gh

Corresponding author's email: sampofo@ucc.edu.gh,

Abstract

The issue of teacher job commitment has attracted a lot of research interest in recent times. This study explores the impact of school heads' contextual intelligence and pedagogical support on teacher job commitment. Using a quantitative research approach, 368 teachers were selected from a total population of 1,752 through Slovin's formula. The study employed two validated questionnaires, and data analysis was conducted using Partial Least Squares Structural Equation Modelling (PLS-SEM). The measurement model's validity and reliability were assessed through Cronbach's Alpha and Jöreskog's rho (≥ 0.70), with AVE values exceeding 0.50 (Hair et al., 2017). Discriminant validity was confirmed via the HTMT ratio (< 0.85), while model quality was evaluated using the coefficient of determination (R^2), effect size (f^2) predictive relevance (Q^2) and important performance map analysis (IPMA). Bootstrapping with 5,000 samples was applied in PLS-SEM, testing eight direct hypotheses. Findings indicated that headteachers' contextual intelligence significantly predicted teacher job commitment to the profession ($t=2.390$, $p<0.001$), school ($t=3.567$, $p<0.001$), students ($t=2.657$, $p<0.001$), and teaching ($t=6.430$, $p<0.001$). Additionally, pedagogical support significantly influenced teacher commitment to students ($t=2.348$, $p<0.001$) and teaching ($t=5.422$, $p<0.001$) but did not significantly affect commitment to the profession ($t=0.172$, $p=0.864$) or school ($t=0.850$, $p=0.396$). The study recommends integrating targeted training in school leadership programs to enhance headteachers' contextual intelligence. This will enable leaders to navigate school challenges effectively, fostering greater teacher commitment across different dimensions.

Keywords: Headteachers' contextual intelligence, pedagogical support, teacher job commitment, supervisory roles, Ghana.



5. Curriculum changes and their influence on biology learning outcomes in Rwandan Secondary Schools: A comparative study (1962–2024)

Nepomuscene Hategekimana,¹, Nsengimana Venuste³ and Gatarira Pierre Cobes¹

Abstract

Curriculum changes significantly influence educational outcomes, particularly in science subjects such as biology. This study examines the impact of curriculum modifications on biology learning outcomes in Rwandan secondary schools from 1962 to 2024. It traces the evolution of curriculum reforms, including the traditional syllabus-based approach from 1962–1970, revisions during the 1980s and 1990s, the Teacher-Centered Curriculum (TCC) introduced in 1997, and the adoption of the Competency-Based Curriculum (CBC) in 2015. Using a comparative methodology, the study analyzes how these changes shaped teaching methodologies, student engagement, and academic performance in biology. The research was conducted in seven districts of Ruhango, Kamonyi, Gasabo, Nyamasheke, Rulindo, Kirehe, and Gatsibo. The sample size of 175 teachers was employed from 19 public secondary schools. Data collection involved surveys, interviews, and national examination reports, with simple percentages and chi-square analysis employed to evaluate trends in biology pass rates and skill development. Findings indicate the student performance at national level has increased from 89.2% in 2016 to 90.69% in the year of 2021-2022, which notably entails the improvements in biology outcomes, particularly following the introduction of CBC, which emphasized student-centered learning and practical skill development. However, challenges such as inadequate teacher training and limited resources persist, impacting effective curriculum implementation. This study highlights the dynamic interplay between curriculum design and student achievement, underscoring the importance of continuous evaluation and adaptation. It provides critical insights into how curriculum reforms can enhance biology education, emphasizing the need for sustained policy interventions to address challenges and ensure long-term educational effectiveness in Rwanda.

Keywords: Curriculum change (CC), biology learning outcomes, Secondary Public Schools



6. Impediments to Effective Competency-Based Assessment in English subject and Way forward: Case of selected lower secondary schools in Rulindo District

Eustache Hagenimana¹, hageneusta26@yahoo.fr Philothere Ntawiha² ntaphilos@gmail.com ,
Cyprien Tabaro² tabacy@yahoo.uk

Corresponding email: hageneusta26@yahoo.fr

Abstract

In Rwandan schools, students' knowledge, skills and attitudes are assessed through Competence-Based Assessment approach. This requires teachers to apply strategies that enable them to assess students' competencies, prepare them to compete in the outside job-related market and respond to existing problems. Although teachers apply Competence-Based assessment strategies in their classroom, they face a number of challenges, hence the failure to implement CBA effectively as per policy. This study focused on identifying preventives to the effective implementation of Competence-Based Assessment in English in lower secondary schools and measures to be taken for its effectiveness. It was carried out in 9 selected lower secondary schools in Rulindo District. It was qualitative in nature and involved 26 participants: 17 teachers purposively selected based on the fact that they teach English at lower secondary level and 9 Directors of studies. Classroom observation and interviews were used to collect data which later was analysed thematically. Findings revealed that large classes, scarcity of teaching aids, inadequate assessment materials such as quizzes and exams, short teaching period and teachers' resistance to changes are the most encountered challenges. To respond to identified obstacles, reduced classroom size, adequately prepared classroom assessment and increased time for teaching period were suggested by respondents. Finally, the study recommends that teachers and the school community should contribute to implement classroom assessment in compliance with Competence-Based Assessment policy.

Keywords: Impediment, Competence-Based Assessment (CBA), English.



7. Barriers to the inclusion of pregnant learners and adolescent mothers in schools. A case study of Chiringaodzi Circuit in Manicaland province Zimbabwe.

Rose Chibaya, WUA PhD Student, Tutor -TTC Mbuga; Email address: rosechibaya@gmail.com. Cell no.: +250792047420

Hopewell Biningu, Pedagogical Research Advisor -TTC Zaza; Email address: hbininguu@mail.com. Cell no.: +250792047411

Alice Violet Nyamundundu: Pedagogical Research Advisor-TTC GACUBA II alicyamundundu@yahoo.com Cell no: +250792047460

Stanford James: Tutor - TTC Zaza, jamestanf@gmail.com +250792047412

13. Abstract

This qualitative case study investigated barriers to educational inclusion facing pregnant learners and adolescent mothers in Chiringaodzi Circuit, Manicaland Province, Zimbabwe. Grounded in Bronfenbrenner's Ecological Systems Theory and Social Exclusion Theory, the study employed purposive sampling to select 18 participants including pregnant learners, adolescent mothers, teachers, administrators, and community leaders from three secondary schools. Data collection involved semi-structured interviews, focus group discussions, document analysis, and nonparticipant observation. Findings revealed significant implementation gaps between progressive national policies and school-level practices, with institutional barriers including inflexible scheduling and inadequate infrastructure. Sociocultural barriers encompassed severe stigmatization, traditional practices such as "kuroodzwa" (arranged marriages for pregnant girls), and gender norms prioritizing motherhood over education. Economic pressures further compounded these challenges, forcing difficult choices between educational continuation and meeting immediate financial needs. Existing support mechanisms were minimal and largely informal, though promising intervention opportunities were identified including flexible scheduling, community-based childcare, teacher training, and technology-enabled learning. The study demonstrates how barriers operate across multiple ecological levels, requiring coordinated responses addressing institutional practices and sociocultural attitudes. Recommendations include developing specific policy implementation guidelines, introducing flexible learning options, implementing teacher professional development, establishing community-based childcare, and initiating targeted community engagement to address practices impeding educational continuation.

Keywords: pregnant learners, adolescent mothers, educational inclusion, educational barriers, secondary schools



8. From Finland to the World: Interrogating the Global Learning Crisis

Íris Santos, Faculty of Management and Business, Tampere University, Finland

UIDEF, Instituto de Educação, Universidade de Lisboa, Portugal

Iveta Silova, MLF Teachers College, Arizona State University, USA

Correspond author email: iris.santos@tuni.fi

Abstract

The ‘learning crisis’, often framed as an urgent challenge of educational access and quality, masks deeper structural and geopolitical inequities. This article aims to critically examine the narrative of the learning crisis through decolonial and critical perspectives, highlighting how international development agencies, predominantly led by the Global North/Western countries (Europe and the USA), construct and perpetuate this crisis narrative. Drawing on interviews with 23 Finnish education experts working at UNESCO, UNICEF, and the World Bank, the study explores the systemic challenges and power dynamics that shape global education governance. The interviews were analysed using a mixed inductive and deductive content analysis approach (Schreier, 2014). Initial categories were derived from existing literature to address key research questions (e.g., ‘roles of international organisations’, ‘learning crisis narratives’). These categories were refined and expanded based on patterns emerging from the interview data, enabling a comprehensive exploration of the alignment and divergence between expert perspectives and institutional discourses. The findings reveal international organisations’ continuous reliance on narrow, technical and short-term solutions that overlook the specific characteristics of the socio-economic and cultural contexts where they intervene, perpetuating cycles of dependency and inequality in the countries of the Global South (defined by EDUFI as the countries negatively affected by the expansion of globalisation). The article calls for a shift towards contextually grounded, equitable, and decolonial approaches to education reform, emphasizing the need for genuine collaboration and local leadership in addressing global educational disparities.

Keywords: Learning crisis, international organisations, education development, decolonial approaches, Finnish education experts



9. Bridging internationalisation and quality assurance: towards a comprehensive policy framework for sustainable, competitive, and nationally relevant higher education in Rwanda

Yohannes Mehari, Íris dos Santos, and Elias Pekkola

Abstract

Rwanda's higher education sector is advancing in its internationalisation efforts through increasing global and regional partnerships, academic mobility, and research collaboration. However, the sector still faces significant challenges due to the absence of a unified policy framework that integrates internationalisation with effective quality assurance (QA) systems. This disconnection hampers the sector's global competitiveness, weakens institutional standards, and limits the alignment of higher education outputs with the national socio-economic and labour market needs. While internationalisation can be a powerful driver of institutional innovation and excellence, its impact remains constrained when not aligned with robust QA mechanisms that ensure academic quality and relevance to local development priorities. Existing research tends to treat internationalisation and QA separately, and there is limited focus on their intersection. This study proposes a comprehensive framework to align internationalisation efforts with quality assurance (QA) standards in Rwanda's higher education system, aiming to boost both global competitiveness and national relevance in support of SDG 4. It investigates four key questions: current trends and challenges in internationalisation; the impact of QA on its sustainability; policy gaps affecting their integration; and strategic actions to better align internationalisation and QA. Using the Integrated Quality Framework (IQF), the study emphasizes quality as a dynamic process that strategically balances global standards with local development needs. Using a qualitative research approach, the study combines document analysis and semi-structured interviews. National and institutional documents were reviewed, alongside inputs from key stakeholders in the Rwandan higher education sector. These insights were further enriched through a series of quality assurance workshops with universities and colleges, using SWOT analysis to identify gaps and opportunities for integration. Ethical procedures were followed, ensuring informed consent and confidentiality for all participants. Preliminary findings suggest a critical gap between internationalisation practices and QA mechanisms, leading to fragmented policy implementation and misalignment between institutional activities and national development goals. The research highlights the tension between global standards and local responsiveness, proposing that balancing these priorities is key to ensuring sustainable, relevant internationalisation. The research proposes a policy framework that integrates internationalisation and QA, consisting of guiding principles, quality indicators, and implementation strategies.

Keywords:

Higher education, internationalisation, quality assurance, policy framework, global competitiveness, national relevance, sustainability.



THEME 4: EMERGING TECHNOLOGIES IN EDUCATION

1. Emerging technologies in Education for sustainable development in Rwandan schools

Habineza Greimas (habagreimas@gmail.com)

E-mail: habagreimas@gmail.com.

Abstract

This study investigated students' experiences during their transition from lower secondary school to a teacher training college in Rwanda's Eastern Province. It also examined how prior secondary education influenced the adaptive behaviours of first-year college students. A qualitative case study design was employed, with purposive sampling used to select one college out of five for an in-depth understanding of the phenomenon. Participants included ten students, five lecturers, and two student affairs staff members. Data were collected through in-depth interviews and focus group discussions, guided by Nicholson's Transition Model (1990). Findings revealed that first-year students faced challenges in forming new friendships, adapting to unfamiliar academic subjects, and managing financial constraints. The study concluded that student adaptability must be intentionally supported to ensure a smoother transition. It recommends the development of comprehensive support programs within both schools and colleges to assist students in adjusting effectively to new academic environments. In a separate but complementary inquiry, the study explored the integration of emerging technologies in Rwandan schools as a driver for Education for Sustainable Development (ESD). As Rwanda embraces digital transformation, this research assessed the role of digital platforms, mobile learning tools, and interactive content in enhancing pedagogy across both urban and rural settings. A mixed-methods approach was adopted, involving surveys with 150 teachers and students, and interviews with key education stakeholders to examine implementation, accessibility, and overall impact. Findings indicate that while the use of technology in education is on the rise, persistent challenges such as limited infrastructure, inadequate teacher training, and unequal access continue to hinder progress. Nonetheless, the study identified encouraging trends, including enhanced student engagement, improved digital literacy, and better alignment with global sustainability goals. The research concludes with policy and practice recommendations aimed at strengthening Rwanda's digital education strategy to support sustainable and inclusive learning outcomes.

Keywords: Emerging Technologies in Education, Rwandan Schools, Education for Sustainable Development (ESD)



2. The Interaction between Artificial Intelligence versus Human Brain in Acquisition of English Language's Grammatical Skills

Evode Nshimiyimana & Dr. Patrick UjwigaAnguru, University of Rwanda, College of Education

E-mail: nshimiyimanaevode2@gmail.com

Abstract

The increasing integration of Artificial Intelligence (AI) in second language learning (L2) raises a fundamental question: How does the human brain's cognitive system for acquiring grammatical skills interact with and respond to AI-driven language models that mimic aspects of human cognition? This study addresses this research problem by exploring the interplay between AI and human memory (encoding, storing, and retrieving linguistic structures) in the context of L2 grammar acquisition. It investigates the impact of AI-assisted learning on the human brain's functioning compared to traditional learning methods. The research employs a comparative methodology, integrating cognitive linguistic theories with AI-based language learning models. Fifty English language students (50) at the university level were purposively selected from the population of 500 students. Data were collected through experiment that involved L2 learners without AI support, and learners with AI-assisted learning. Grammatical accuracy, retention and processing efficiency were the skills examined. By drawing parallels between human memory mechanisms and AI computational strategies, the research aims to highlight the potentials and threats of AI in enhancing L2 grammar acquisition. The findings will contribute to both theoretical discussions on cognitive language learning and practical applications of AI in language education, ultimately improving instructional methods and adaptive learning technologies.

Key words: Brain, second language learning, Artificial intelligence, human memory acquisition, grammatical skills.



3. Building Digital Pedagogical Competencies: Training STEM Teachers to Use AI, VR, and AR in Classrooms to Improve their Pedagogical Practices

Esther Kibga

The Aga Khan University- Institute of Educational Development

E-mail: esther.kibga@aku.edu

Abstract

Despite growing global interest in digital education, a significant gap remains in teachers' preparedness to effectively integrate emerging technologies, particularly Artificial Intelligence (AI), Virtual Reality (VR), and Augmented Reality (AR) into classroom practice. This study addresses this gap by evaluating a structured 10-day professional development program aimed at building digital pedagogical competencies among secondary school teachers in under-resourced contexts. Using a mixed-methods design, the study involved 24 purposively selected teachers based on their limited prior exposure to AI, VR, and AR tools. Quantitative data were collected through pre-and post-training assessments, revealing a statistically significant improvement in competency scores ($t(149) = 7.83$, $df = 149$, $p < 0.001$, $d = 0.64$), with proficiency increasing from 22% to 78%. Regression analysis showed that training exposure significantly predicted teachers' confidence in using these technologies ($\beta = 0.62$, $p < 0.001$; $R^2 = 0.38$). Qualitative data analyzed thematically using NVivo, highlighted AI's role in supporting personalized learning and VR/AR's potential for enhancing engagement and conceptual understanding. Barriers such as poor infrastructure and limited institutional support were also identified. The study offers timely insights for policymakers, educators, and training institutions on addressing the digital competency gap and advancing effective technology integration in education.

Keywords: Artificial Intelligence, Augmented Reality, Digital Pedagogical Competencies, Pedagogical practice, Virtual Reality



4. English Teachers' Preparedness, Perceptions and Attitudes for ICT Integration in CBC Implementation: A Case Study of Secondary Schools in Rusizi District

Jean Paul Roger, Rurangangabo University of Rwanda, College of Arts and Social Sciences

Hilaire Habyarimana (hilairehabi@gmail.com), University of Rwanda- CASS,

Cecile Nyiramanzi (cecilemanzi80@gmail.com), University of Rwanda-CASS,

Aimable Nzabonimana (nzabonaimable0@gmail.com), University of Rwanda-CASS

Corresponding author's e-mail: jprurangangabo1@gmail.com

Abstract

Despite policy emphasis on ICT integration in CBC, limited research exists on English teachers' preparedness and perceptions, particularly in Rusizi. This study aims at evaluating the English Teachers' Preparedness, Perceptions and Attitudes for ICT Integration in CBC Implementation. Using a mixed-methods approach, the research evaluates teachers' technological skills, their understanding of CBC, and the challenges faced in aligning ICT with the curriculum's objectives. Data were collected through structured questionnaires administered to 120 teachers. Findings show 62.5% used ICT tools daily, 25.0% weekly, 10.8% rarely, and 1.7% never. Regarding ICT access, only 15.8% always had the necessary tools, 54.2% had access sometimes, 26.7% rarely, and 3.3% never. Additionally, 77.5% believe CBC enhances critical thinking and problem-solving, while 22.5% are skeptical. For ICT integration, 73.3% said it improves engagement and understanding in English lessons; 26.7% disagreed. A majority (78.3%) felt motivated to integrate ICT, while 3.3% resisted. Moreover, 76.7% strongly agreed and 16.7% agreed that ICT enhances CBC implementation. This study contributes to sustainable development in education by identifying areas where teacher capacity building and infrastructure investment can enhance access to quality education. It recommends that the Ministry of Education, in collaboration with local governments and partners, invest in equipping schools with adequate ICT infrastructure, particularly in underserved areas. Teacher training colleges and education officers should implement targeted professional development programs focused on ICT integration aligned with CBC objectives. Schools should establish peer-led support systems to encourage knowledge sharing and foster collaborative ICT use. NGOs and private sector partners can support initiatives that provide technical support and maintenance services for educational technology.

Keywords: ICT Integration, Competency-Based Curriculum, Teacher Preparedness, Secondary Education, Rwanda



5. Scaling AI-Powered Innovation in Education: Enhancing Foundational Learning and Teacher Support in Rwanda

Hagenimana Fidele

E-mail: fidele.hagenimana@risingacademies.com

Abstract

Rwanda, like many education systems in the Global South, faces persistent challenges in delivering equitable, high-quality foundational learning due to teacher shortages, limited instructional support, and resource constraints. In response, Rising Academies—working in partnership with Rwanda’s Ministry of Education—is piloting scalable, AI-powered innovations that aim to re-shape education systems for long-term sustainability, aligning with Sustainable Development Goal 4 on inclusive and equitable quality education. To address gaps in instruction, assessment, and teacher preparedness, we developed three AI-powered tools tailored to the Rwandan context: Rori is an adaptive math tutor that works via WhatsApp, delivering low-cost, personalized learning to students using natural language prompts. Zuri is a chatbot that provides on-demand lesson planning, pedagogical guidance, and classroom management strategies to teachers. LearnLens is an OCR-based assessment tool that enables rapid grading and real-time learning analytics, cutting marking time by up to 60%. These tools were co-designed with local educators and tested in schools across Rwanda, enabling widespread deployment even in low-bandwidth environments. Initial impact was evaluated through a mixed-methods design. Rori’s effectiveness was measured in a randomized controlled trial (RCT) involving 3,000 learners, led by researchers at the University of Oxford and J-PAL. Results of the RCT for Rori showed a twofold increase in math outcomes compared to control groups. Pilot schools using Zuri and LearnLens reported improved instructional planning and significant reductions in grading workload. While these tools demonstrate promising gains in foundational learning and instructional efficiency, we recognize challenges such as data privacy, digital literacy gaps, and the need for sustained technical support. Nonetheless, the Rwanda case illustrates how AI—when contextually adapted and supported by strong public-private partnerships—can strengthen education systems and contribute meaningfully to sustainable development. We invite discussion on how such innovations can inform national policy and drive scalable impact across the continent.

Keywords: AI in Education, Personalized Learning, Teacher Support, Foundational Learning, Rwanda



6. Revolutionizing Mathematics Education in Rwandan Teacher Training Colleges Through Emerging Technologies

Sisassenkosi Sibonokuhle Dube

Mater Dei Mbuga Teacher Training College

E-mail: sisah20dube@gmail.com

Abstract

Mathematics education in Rwanda Teacher Training Colleges (TTCs) suffers from the prevalence of traditional teaching methods and limited access to digital learning technologies. Despite global advancements in Emerging Educational Technologies (EETs), the impact of Virtual Reality (VR) simulations and Interactive Whiteboards (IWBs) on mathematics instruction in Rwandan TTCs remains largely unexplored. This study seeks to determine how the use of VR and IWBs influences mathematics teaching and learning in TTCs. Specifically, it seeks to answer the research question: *What is the impact of Virtual Reality and Interactive Whiteboards on mathematics instruction and learning outcomes in Rwandan Teacher Training Colleges?* A quantitative research design was employed. Data was collected through structured surveys administered to 40 mathematics tutors and 160 student teachers from four TTCs selected through cluster random sampling. Descriptive statistics and regression analysis reveal that VR enhances spatial reasoning, conceptual understanding and conceptual visualization, while Interactive Whiteboards foster interactive problem-solving and real-time feedback. These findings provide valuable insights for policymakers and educators, advocating for the structured integration of emerging technologies to revolutionize mathematics education in Rwanda's TTCs.

Keywords: Virtual Reality, Interactive Whiteboards, Emerging Technologies, Mathematics Education, Teacher Training Colleges, Rwanda.



7. Understanding University Lecturers' Beliefs on Online Education as a Tool to Achieving Instructional Equity Among South African Students

Reuben Dlamini (ReubenDlamini@wits.ac.za), University of the Witwatersrand;

Rekai Zenda (rekaizenda@wits.ac.za or zendarekai@yahoo.com), University of the Witwatersrand;
Danbaba Magana Na-Allah(danbaba.naallah@fcetgusau.edu.ng), Federal College of Education (Technical), Gusau, Nigeria

E-mail: rekaizenda@wits.ac.za or zendarekai@yahoo.com

Abstract

The improvement of access to quality education for all students has been the focus of many universities in the past two decades. Online education has gained prominence, particularly during the Covid-19 pandemic period, when institutions of learning were seeking alternative modes of instruction. The disproportionate distribution of resources and opportunities has contributed to the disadvantage of students in universities. The purpose of the study was to explore university lecturers' beliefs on online education as a tool for achieving instructional equity during Covid-19 pandemic in 2021. The qualitative approach with case study design was used to explore the phenomenon. Social justice perspective theory was used as the theoretical framework. Data was collected using a structured interview schedule through Email and WhatsApp interaction platforms. The population included fifteen lecturers. Purposive sampling was used in which four lecturers were interviewed. Findings revealed that online education has the potential to equalise the inequalities that exist in South African universities and enhanced accessibility, effectiveness, interactivity and collaboration during teaching and learning. Conversely, online education was found to pose limitations to learning especially to those with no access to laptops and network services which created frustrations and further gaps in teaching and learning. The affordances and challenges associated with online education have some implications for education policy and instructional planning in the universities.

Keywords: Beliefs, Covid-19, Digital Education, Exploration, Instructional Equity, Lecturers Online Teaching



THEME 5: GLOBAL COMPETENCIES AND CITIZENSHIP

1. Integration of Genocide Studies in Rwandan Secondary Schools: Challenges and Strategies for Enhanced Educational Impact

Delphine Mukingambeho¹ (dmukingambeho@gmail.com), Jean Leonard Buhigiro¹ (leobuhigiro@yahoo.fr), Jean Baptiste Ndagijimana¹ (tyarairyivuze@gmail.com), Nancy Rushohora² (nrushobora@gmail.com)

Institutions of affiliation: ¹ University of Rwanda-College of Education, ² University of Dar-es-salaam-College of Humanities

Corresponding author's e-mail: dmukingambeho@gmail.com

Abstract

This study explored challenges faced by secondary school teachers in the integration of genocide studies into lessons across subjects and strategies for its effective integration. It used qualitative research approach and semi-structured interviews to collect data among twenty-three purposively selected secondary school teachers of the six schools from the Eastern, Northern and Western provinces. Two schools per province were chosen including one Teacher Training College (TTC) and one General Education School, resulting in a total of six schools. TTC schools were purposively selected while General Education Schools were randomly selected. The study revealed key challenges, namely (i) emotional and ethical challenges, (ii) challenges in non-humanities subjects; (iii) content pedagogical knowledge and (iv) practical issues, including lack of resources and time constraints. To address these challenges, teachers suggested, among others, (i) teaching genocide in the local language, Kinyarwanda (ii) increasing resources for study tours to genocide sites, (iii) providing specialized professional development (iv) and institutional policies and support systems. This study contributed to education stakeholders' understanding of the barriers teachers encounter when discussing sensitive historical events and highlighted the need for targeted interventions. The study suggests a holistic approach for systemic changes in how genocide studies are supported within secondary schools' subjects.

Keywords: Integration, Genocide studies, Rwanda, Secondary schools.



2. Exploring the inclusion of global competencies and citizenship for sustainable education in Rwanda.

Tawanda Shonhiwa

TTC Matimba

E-mail: shonhiwatawanda@gmail.com

Abstract

The study examines the importance of global competencies and citizenship in suitable education in Rwanda. Global competencies and citizenship is an important component in preparing students to become global actors in solving sustainability issues affecting Rwanda and beyond. The study is guided by a qualitative approach employing interviews, observation, and document analysis to understand the importance of global competencies and citizenship in a sustainable education curriculum program. Participants to the study were randomly sampled from the students and tutors from the teacher training institution in Nyagatare. Findings revealed numerous factors such as interdisciplinary learning, project-based approaches, digital literacy, and service learning which are pivotal in understanding sustainability issues. The study highlights the need to promote a curriculum that supports the teaching and learning of the concept for understanding sustainable development issues. The researchers recommended that an absolute support system should be rendered to the curriculum implementation in order to foster a perfect acquisition of knowledge, attitude, and skills needed. Extensive training, continuous evaluation, reflective practices, and a supportive extensive networking are the recommended initiatives for the study. These initiatives are crucial in preparing students to become key actors in global sustainable development programs.

Key words: global competencies, citizenship, sustainable development, curriculum, sustainable education



THEME 6: HOLISTIC EDUCATION AND STUDENT WELL-BEING

1. Navigating the journey from lower secondary school to teachers' college: Students' experiences at a teacher training college, Rwanda

Onias Musaniwa (omusaniwa2@gmail.com), James Maizere (maijamez@gmail.com), Joseph Dzavo (Joseph.dzavo@gmail.com) & Emmanuel Sezibera (Sezibera1991@gmail.com)

TTC Kabarore

Corresponding author's e-mail: omusaniwa2@gmail.com.

Abstract

In the Rwandan context, the lower secondary school learning environment is somehow autonomous unlike in teacher-training colleges where the students are exposed to a highly controlled one. Such a scenario has created adjustment challenges for students who enroll for teacher training. This study sought to establish students' experiences during their transition from lower secondary school at a teacher training college in the Eastern Province of Rwanda. The study further assessed the influence of lower secondary school on the adaptive behaviours of first-year college students. This study adopted a qualitative research approach and a case study research design. Purposive sampling was utilised to select participants. One college was purposively sampled out of five to obtain an in-depth understanding of the phenomenon under study. Ten students, five lecturers and two staff members from the student affairs department participated in the study. In-depth interviews and focus group discussions were utilised to generate data. Nicholson's Transition Model (1990) informed the study. The study established that first-year students faced challenges in establishing new friendships, coping with new academic subjects and financially. Therefore, the study concluded that the adaptive behaviours of new students need to be well managed to ensure a smooth transition. The study recommends that schools and colleges come up with comprehensive programmes that facilitate easy adjustment by students in the novel environment.

Keywords: Secondary schools, teachers' college, students, transition, experiences, academic performance



2. Assessing the Deanery's roles in the development of a holistic Teacher at a Teacher Training College in Rwanda

James Maizere Maizere

E-mail: james.maizere@gmail.com

Abstract

The Deanery is a vital department in teacher education. This study aimed to assess the role of the Deanery in nurturing holistic teachers. It utilised a qualitative approach supported by a case study research design. The population included five deanery staff members, two administrative staff members, and 600 student teachers. Three Deanery staff members, one administrative staff member, and ten student teachers were purposively sampled to discuss the roles of the deanery. Data was collected through interviews. The study found that the deanery was accountable for the holistic development of student teachers, overall student welfare, discipline, retention, and communication between students and their parents. Furthermore, it indicated that the Deanery ensured student teachers adhered to the college's rules and regulations concerning class attendance, punctuality, proper attire, and participation in college outdoor activities. The study also disclosed that the student teachers exhibited misbehaviour in the absence of Deanery members to enforce discipline. Student teachers felt that the college's rules and regulations were overly demanding to manage. In light of these findings, the study recommended that the Deanery reassess the rules and regulations to better meet the needs of student teachers.

Keywords: Deanery, student teachers, holistic teachers, regulations, misbehaviour



3. Students' Time Management Strategies and Quality Learning in Higher Education: Case of the Protestant University of Rwanda

Beatrice Mukanyandwi

University of Rwanda-College of Education

E-mail: mukanyandwibeatrice@gmail.com

Abstract

The goal of any educational institution is to prepare capable, productive, and competent students. In Rwanda, students are allowed to enroll in either public or private universities to pursue their tertiary level of education, following the HEC recommendations. It is frequently found that most students in Rwanda prefer pursuing their higher education studies by part-time mode of attendance due to other responsibilities they undertake to survive. This is possible for undergraduate students who only attend private higher learning institutions, as they are allowed to do it during weekends and holidays. Therefore, this study aims to i) investigate the strategies that private university students use for achieving quality learning and ii) identify the influence of those students' time management strategies on quality learning. This qualitative study used a semi-structured interview where an interview guide was targeted to be given to the 1800 weekend and holiday students at the PUR. A sample size of 40 students from different departments at PUR was randomly selected regarding that they are part-time, and they confirmed their willingness to be interviewed in English and accepted for being recorded. The gathered data was transcribed, coded, and thematically analysed. The findings state time management strategies such as setting objectives and staying focused, prioritizing, delegating, etc., as the keys to achieving quality learning. Moreover, the findings showed that there is an influence of students' time management strategies on the quality of their learning. Therefore, the study recommends private university administrators invite experts in time management during the induction sessions for raising an awareness on time management strategies so that new students may get practical skills on how they should manage their existing multitasks and the new one of learning which they have to contribute to its quality. Students are recommended to start practicing strategies offered by this study and strengthen regular class attendance. Finally, the study recommends that further researchers extend their research to many universities and include not only private but also public ones and make a comparison of the quality learning of full and part-time students.

Keywords: Time management, quality learning, time management strategies



4. Title of the manuscript/abstract: Influence of Levels of Academic Self-Efficacy of First-Year Student Teachers of the University of Rwanda-College of Education on their Academic Performance

Damien Nzabihimana, Gabriel Nizeyimana, Jean Baptiste Ndagijimana and Sylvestre Nzahabwanayo

University of Rwanda-College of Education

Corresponding author's e-mail: nzabihimana@yahoo.fr

Abstract

This study investigated the influence of academic self-efficacy on first-year student teachers in the university of Rwanda-College of Education. Disadvantaged students are at risk of developing low academic self-efficacy which in turn is believed to cause low academic performance and unsuccessful life experiences in many aspects of social life. This study had the objective of finding out the extent to which the levels of academic self-efficacy of first-year student teachers in the UR-CE influence their academic performance. A survey design was used on a sample of 304 first-year student teachers. The sample size was calculated using Cochran's formula over a population of 1435, and 304 student teachers were systematically selected to complete an academic self-efficacy form. Two in-depth interviews were conducted with 20 student teachers and five staff members, all purposively selected. The annual marks of sampled students were also analyzed. Data were analyzed using SPSS including descriptive statistics, Pearson correlational analysis and multiple linear regression analysis but thematic analysis was also used on qualitative data. The results showed that students generally have moderate academic self-efficacy levels across perceived control, competence persistence, and self-regulated learning components. Self-regulated learning had the highest mean score, while competence had the lowest. The majority of students (78.29%) had moderate self-efficacy, while a small fraction (0.9%) reported low self-efficacy. The study found that academic self-efficacy positively influences students' academic performance. The highest relationship was observed between persistence and academic performance ($r = 0.406040202$, $p\text{-value } 0.0000 < 0.01$), while the lowest correlation was observed between self-regulated learning and academic performance ($r = 0.29005$, $p\text{-value } 0.000 < 0.01$). This influence was also evidenced by the fact that $F\text{-calculated } (26.35322406)$ was greater than $F\text{-critical } (4.299)$ which was 2.372 and also $P\text{-value of } 0.000$ which was less than 0.05, level of significance. The study recommended the UR-CE to increase programs that enhance students' academic self-efficacy, such as guidance and counseling, improving the learning environment, varying teaching methods and approaches, and motivating students. It also suggested identifying students at risk and engaging them earlier in such programs for better academic self-efficacy and improved academic performance.

Keywords: academic self-efficacy, academic performance, levels of academic self-efficacy



5. Empowering Rwandan teachers to support student social and emotional learning: The effectiveness of a teacher professional education program

Ernest Ngendahayo

Corresponding author's e-mail: ngenst@gmail.com

Abstract

This study investigates the effectiveness of a nine-week Professional Education Program (PEP) designed to equip Rwandan teachers with the knowledge and dispositions necessary to integrate Social and Emotional Education (SEEd) into their instructional practices. Although the benefits of SEEd for students' academic, social, and emotional development are well established, research within the Rwandan context—particularly concerning teacher preparation—remains limited. Using convenience sampling, nine lower secondary teachers from a case study school in Kigali were selected to participate. The PEP consisted of weekly 50-minute professional education sessions facilitated by the researcher over nine weeks. Following the sessions, participants were expected to implement instructional practices explicitly aimed at promoting social and emotional learning in their Senior Two classes. Data was collected through in-depth interviews and open-ended questionnaires administered before, during, and after the PEP, as well as reflective journals and focus group discussions. Qualitative data were analysed thematically using a combination of deductive and inductive coding approaches. Findings indicated that all participants demonstrated substantial improvement in their knowledge and self-efficacy for supporting students' social and emotional learning and wellbeing, along with increased intentionality in integrating SEEd practices into their classrooms. These findings underscore the importance of strengthening teachers' capacities to teach SEEd in a more deliberate manner. The study offers implications for teacher education and ongoing professional development, suggesting that targeted SEEd training for in-service teachers is a critical step toward bridging the gap between research and classroom practice.

Keywords: empowering, support, social and emotional learning, effectiveness, professional education



6. Title of the manuscript/abstract: International Student Mobility in Africa: A Phenomenological Case Study of University of Kigali, Rwanda

Elizabeth A. Owino¹ (oakinyi@uok.ac.rw), Dick Donald Akumu² (dickakumu@gmail.com)

Institutions of affiliation: ¹ University of Kigali, ²Mount Kenya University

Corresponding author's e-mail: oakinyi@uok.ac.rw

Abstract

The study was guided by three main objectives (i) to examine IS's level of preparation before relocating to Rwanda, (ii) to identify institutional strategies designed to facilitate their transition and (iii) to explore the coping strategies IS adopt within the institutional context. The target population comprised 338 IS from Africa. Using purposive sampling, participants were selected from registered African IS. Data was generated through structured interview schedules conducted during focus group discussions (FGDs). A total of ten FGDs were held, each comprising seven randomly selected students. Sessions lasted between one and one and a half hours and continued until thematic saturation was achieved. Discussions were recorded and supplemented with handwritten notes. The collected data was cleaned and coded into three key themes aligned with the study objectives. The study found that the majority of IS were from Gabon (46%), followed by South Sudan (41%), with Chad and Liberia sharing the third position at 16%. The findings indicated that, in addition to tuition and accommodation, students required greater cultural preparation before traveling to Rwanda for their studies. Regarding institutional support, participants reported that language barriers posed significant challenges, particularly in daily interactions with service providers such as landlords and transport agencies. These challenges often led to feelings of being misunderstood and, at times, suspicion of truancy especially when financial support from families was delayed. One of the most impactful institutional strategies cited was the appointment of a dedicated international student representative. Participants described this role as "the best thing that ever happened," emphasizing its positive effect on their overall welfare and support system. Coping mechanisms adopted by the students included participation in religious communities and country-specific peer groups. The overall perception of Rwanda as a secure and orderly country also contributed to the peace of mind of both students and their families. This study recommends that future research compare the experiences of African international students with those from other continents. The findings are significant as they enhance understanding of African student mobility, reveal research gaps concerning African international student experiences, and provide insights that can inform policy on international student mobility across Africa.

Keywords: International students, Lived experiences, Mobility, Orientation, Transition



7. Impact of Counselling Services on Self-Esteem of In-School Adolescents in Ilorin Metropolis, Nigeria

Adebayo David Obafemi

E-mail: adebayo.do@unilorin.edu.ng

Abstract

Self-esteem plays a vital role in shaping the psychological and social development of adolescents. This study investigated the impact of counselling services on the self-esteem of in-school adolescents in Ilorin Metropolis, Nigeria. Descriptive survey of correlational type was employed as the design for this study. Population consisted of all secondary school students, while the target population consisted of secondary school students in two local government areas. A total of 410 adolescents from 16 secondary schools were selected through stratified and simple random sampling techniques from two LGAs in the Ilorin metropolis. Data were collected using a researcher-designed questionnaire and data were analyzed using descriptive and inferential statistics, PPMC, t-test, and Analysis of Variance (ANOVA), all tested at 0.05 level of significance. Findings indicated that 23.6% of the respondents demonstrated high self-esteem, 47.8% had moderate self-esteem, and 28.6% exhibited low self-esteem. Counselling services significantly impacted self-esteem, with a positive correlation between the availability of counselling interventions and improvements in self-worth among adolescents. Gender-sensitive counselling revealed notable variations: female adolescents showed increased self-esteem following body image and emotional resilience counselling, while male adolescents benefited from interventions focusing on emotional expression and self-reliance. Additionally, adolescents in private schools displayed higher self-esteem due to access to structured and individualized counselling programs, whereas public school students benefited more from peer-focused and community-driven interventions. The study emphasized the prevalence of self-esteem challenges linked to academic pressures, peer influences, and family dynamics. Based on the findings, it was recommended that schools adopt gender-specific and age-appropriate counselling interventions, encourage parental participation in counselling programs, and allocate sufficient resources to enhance the effectiveness of school-based counselling services.

Keywords: Counselling Services, Self-Esteem, School Adolescents, Nigeria



8. Teachers Adoption of Integrated Curriculum in Junior Secondary Schools in Kenya: Opportunities and Challenges

Elizabeth J. Katam ¹(katam.elizabeth@ku.ac.ke), Carolyn S. Mudeje Buya² (carolyne.buya@tukenya.ac.ke) and Ann W. Gachoya³ (anngachoya@yahoo.com)

Institutions of affiliation: ¹Kenyatta University, ²Technical University of Kenya, ³Ministry of Education Kenya.

Corresponding author's e-mail: katam.elizabeth@ku.ac.ke

Abstract

The implementation of Competency Based Curriculum (CBC) permits adoption of integration of learning areas at different levels of education. According to UNESCO, curriculum integration is the process of combining learning content and subjects with a view to promoting holistic and comprehensive learning. Dewey emphasizes that the organization of subject matter ought to be related to students' experiences. However, merits of curriculum integrated have continued to be critiqued by scholars. It's paramount to seek teacher's insights as key curriculum implementers with the view of strengthening CBC implementation thus developing holistic learners. Descriptive design was used. The target population were teachers in public Junior Secondary Schools (JSS). A sample of 20 teachers in rural and urban JSS teaching integrated subjects were purposefully sampled. A questionnaire, interview schedule and focused group discussions were utilized. Quantitative data was analyzed using frequencies and percentages which were presented using graphs and tables, while qualitative data was analyzed thematically and presented in narrative form. The findings reveal that among the opportunities identified include promoting learning to learn and collaboration among the teachers which are part of the components emphasized in CBC. The challenges teachers face in implementing integrated subjects include lack of rationalized subject areas to teach which also leads to teachers assessing certain aspects focused more during teaching and learning. One of the recommendations is reorganizing of integrated subjects for effective implementation.

Keywords: Integrated curriculum, competency based curriculum and holistic development.



9. Nurturing Holistic Development in Teacher Training Colleges: Addressing Nighttime Incontinence and Its Impact on Student Wellbeing

Rose Chibaya, WUA PhD Student, Tutor -TTC Mbuga; Email address: rosechibaya@gmail.com.
Cell no.: +250792047420

Sisassenkosi Sibonokhuhle Dube, UZ PhD Student, Tutor- TTC Mbuga; email address: sisah20dube@gmail.com. Cell no. +250792047490

Abstract

This study investigated the impact of nighttime incontinence on the holistic development of teacher training students in Rwanda. The research employed a qualitative phenomenological approach utilizing a multiple-case design across three purposefully selected Teacher Training Colleges (TTCs). Data were collected through in-depth interviews with 14 affected students (8 females, 6 males), reflective journals, key informant interviews with college staff, and institutional document analysis. The theoretical framework integrated Bronfenbrenner's Ecological Systems Theory and Bandura's Self-Efficacy Theory to examine contextual influences and psychological processes. Data were analyzed using Interpretative Phenomenological Analysis following Smith and Osborn's six-stage protocol, with enhanced confidentiality measures ensuring ethical rigor. Findings revealed professional identity dissonance as students struggled to reconcile their condition with their emerging teacher identity. Despite maintaining strong academic performance through compensatory behaviors, participants experienced significant psychosocial costs, including anticipatory anxiety, shame, and strategic social withdrawal. Gender differences emerged in emotional responses, with females exhibiting depression symptoms and males displaying frustration and anger. Teaching practicums presented particular challenges, with students sacrificing valuable professional opportunities to manage their condition. Support utilization was minimal (3/14 students) due to terminology barriers, documentation fears, and cultural stigma. The study concluded that nighttime incontinence fundamentally shapes professional development through complex biopsychosocial mechanisms. Recommendations include implementing anonymous health pathways, environmental modifications, and programs that reframe condition-management resilience as professional assets to create more inclusive teacher training environments.

Keywords: Nighttime incontinence, teacher training, professional identity, Rwanda, stigmatized health conditions, educational inclusion



THEME 7: INCLUSIVE AND EQUITABLE EDUCATION

1. Assessing the application of Universal Design for Learning facilities in teaching at a Teacher Training College in, Rwanda

Onias Musaniwa, Joseph Dzavo, Emmanuel SEZIBERA.

Institutions of affiliation: TTC KABARORE

E-mail: Sezibera1991@gmail.com

Abstract

The ratification of international conventions by Rwanda has seen the country calling for the inclusion of learners with Special Educational Needs (SEN) in mainstream classes. Inclusion of learner with SEN may be possible with the aid of Universal Design for Learning (UDL) facilities. It is the duty of the tutors to maximise the use of UDL facilities by student teachers. The study assessed the utilisation of UDL facilities at the TTC. Based on Interpretivism, the study employed a qualitative research approach and a case study research design to assess the application of UDL facilities in the teaching and learning of student teacher at the TTC. The population of the study consisted of all the six UDL facilities and all the three Special Needs and Inclusive Education tutors at the TTC. Based on theoretical saturation, a representative sample comprising six UDL facilities and two tutors were purposively sampled. Key findings of the study revealed that major UDL facilities at the TTC were for the Blind and they mostly lied idle. The study also found that the TTC did not have a number of major requisite UDL facilities for other SEN categories to equip student teachers with requisite exit skill. The study recommended that the procurement committee of the TTC procure more major UDL facilities representing all the categories of disabilities. The study also recommended that tutors should make maximum utilisation of the available UDL facilities.

Keywords: Special Educational Needs, Universal Design for learning, Universal Design for Learning facilities, International conventions, inclusion, mainstream classes.



2. Impact of poor mental health on high school students' english academic writing performance in selected schools of Rwanda

Emmanuel Dusabimana,

Evode Nshimiyimana, Gabriel Bazimaziki

Corresponding author's e-mail: dusabimeemmy123@gmail.com

Abstract

Quality education, Good health and wellbeing are among the seventeen SDGs (Sustainable Development Goals) stipulated by the United Nations in 2015. However, different researches shows that mental health cases are prevailing especially in the high school students where they are not able to cope with stresses of life and they are camouflaging this suffering condition. This study investigates the impact of these poor mental health factors such as inattention, confusion, disrespect for self and others, on English academic writing performance. This is an educational study rather than medical. The classroom observation, interview and psychological test was done along with a mental health specialist. This was after the participant's consent to keep their information with highest confidentiality. The data were collected from 50 students and 10 teachers selected purposefully from 10 randomised high schools located in Kigali city and 4 provinces of Rwanda. The findings show that one in ten students (10%) is suffering from poor mental health. They frequently lose attention during English lessons, they get confused while complying to the given instructions and they tend to disrespect themselves and others. The study recommends the Ministry of Education that at the school setting, there should be mental health specialists and school counsellors who help students to stabilise their mental wellbeing, organise mental health awareness training and campaigns for education stakeholders including school staff in order to escape psychological disorders like depression, anxiety, and trauma. The more mental health awareness, the lower academic failure and school dropout.

Key words: Poor mental health, English language, writing skills, Rwanda, Sustainable Development Goals



3. Challenges faced by educators and learners with disabilities in resource-starved contexts. Case of Ruvimbo Special School, District, Harare.

Chari Washington, Brenda Katsande, Nyengera Sehlukile and Meschack Niyongabo

TTC Rubengera

Corresponding author's e-mail: chariwashington@gmail.com

Abstract

There are numerous challenges faced by educators and learners with different kinds of impairments when they are operating in resource constraint teaching and learning environments. A mixed method research approach accompanied by a single case study was implemented. Data collection was conducted through interviews with one (1) school administrators, two (2) Special needs teachers, in addition to one focus group made up of five (5) students enrolled at the school. These were purposively sampled in a total population sample. Document analysis and observation methods were additionally used to generate data. The study established that there are limited financial resources, lack of accessible infrastructure, inadequate assistive devices and technologies, lack of specialized teacher training leading to one-size fits all teaching approach. Additionally, socio-economic barriers, unsupportive policy environment and cultural attitudes issues were found to impede effective teaching and learning so as to register notable student progress. The study recommends, addressing these challenges would likely require a multi-faceted approach that includes investment in infrastructure through private-public partner agreement.

Key words: Administrator, Challenges, Disability, Educator, Learner



4. Understanding Displace Learners' Experienced Trauma towards Inclusive Education: A Case of Mahama Refugee Camp

Fidele Ukobizaba, Aloys Iyamuremye, Ezechiel Nsabayeze, Marianne Uwamarira, Celine Byukusenge and Alphonse Uworwabayeho

University of Rwanda-College of Education

Corresponding author's e-mail: Ukobizaba Fidele, ukobifidele@gmail.com

Abstract

Education is a fundamental human right that should be accessible to all learners, regardless of their background or circumstances. However, displaced learners, particularly those in refugee camps, face numerous challenges that hinder their educational progress and profoundly affect their ability to learn. This study aimed to understand the trauma experienced by displaced learners and its impact for learners living in Mahama Refugee Camp, Rwanda. The study adopted a convergent parallel research design, where quantitative and qualitative data were collected simultaneously and analyzed separately. The study participants were obtained from five schools accommodating students from Mahama Refugee Camp. The Mahama Refugee Camp was purposively selected among other camps because it hosts children at schooling age, with diverse nationalities. In terms of selecting participants, a stratified random sampling was used to select 75 Grade 5 learners, 25 parents, and 25 teachers. A survey questionnaire of teachers was used to collect quantitative data, while a focus group discussion of students and semi-structured interviews of parents was used to collect qualitative data. Quantitative data were analyzed descriptively using Excel 2016, while qualitative data were analyzed thematically using Taguette software. The findings showed that 67% of students have social-emotional and psychological problems due to poor living conditions in the camp, poverty of family members, loss of parent(s), and repetitive conflicts between parents. Services such as educational, healthy, and recreational support are provided to students but need to be improved. The study recommends providing career guidance services in schools for a daily follow-up of learners for students' well-being and improved academic performance.

Keywords: Social-emotional problems, refugee camps, trauma, psychological problems, wars, and conflict



5. Title of the manuscript/abstract: Teachers experiences of inclusive education in sub-Saharan Africa

Linnet Imbosa Muhati-Nyakundi

University of Mpumalanga

E-mail: imbosalin@gmail.com

Abstract

Current scholarship suggests that there must be inclusive education in our institutions of learning from early childhood education through to university in most parts of Africa. However, while focus is mostly on learners and their learning environment, few studies in sub-Saharan Africa include teachers' experiences at the foundation phase level based on their inclusive classroom realities. This paper, in part, utilizes a systematic review of empirical literature as its methodology; together with findings from studies in Kenya and South African which focused on learning experiences in low resourced areas to explore teachers' experiences of their inclusive classrooms. The author incorporates social justice which underlies most of the views advanced, while adding the African philosophy of Ubuntu/butu/utu, to deeply reflect on inclusion of teachers' experiences in inclusive education discourses. Ubuntu appeals and upholds the commonality of humanity in Africanness which is considerate, compassionate and communal; "I am because you are, you are because I am". Thus, lived experiences of teachers' realities of exclusivity, in inclusive education, should not be ignored. This paper contributes to epistemological, and policy approaches that account for teachers' experiences towards their agency when implementing inclusive education at the lower levels. The author is of the view that the larger African contexts of the foundation phase teachers' experiences in inclusive classrooms should be given more attention. Additionally, there must be deliberate investments at foundational levels, use of multi-pronged approach through multi-disciplinary teams in handling diverse learning abilities, empowering and upskilling teachers through regular training and incentivization, authenticating alternative ways that work in handling learning outcomes in contexts of learners' access to education, and include teachers in designing policies that support their inclusive teaching and learning initiatives.

Key words: Inclusive Education, Teachers, Foundation phase, Africa, Ubuntu, Social Justice.



6. Improving equity and inclusion in a large-scale Teacher Professional Development initiative in Rwanda: A focus on for Women Teachers and Teachers with Disability

Jo Westbrook, John Simpson, Jolly Rubagiza, Delphine Mukingambeho and Pierre Barayagwiza.

Corresponding author's name: Email: jo.rubagiza@gmail.com

Abstract

A challenging education landscape requires all educators to be empowered with the knowledge, skills and resources for their role. While equity and inclusion are emphasized in key Ministry of Education (MINEDUC) documents such as the Education Sector Strategic Plan (2024-29) and Teacher Management Policy (2024), women teachers (WT) and teachers with disability (TWD) are disempowered from fully accessing and engaging Teacher Professional Development (TPD). This paper shares empirical findings from a process evaluation of a scaled TPD programme, Secondary Teachers English Language Improvement Rwanda (STELIR), for lower secondary English and STEM teachers. STELIR mainly targets rural schools in 14 districts. The research explores adaptations designed to facilitate equitable access for WTs and TWDs. The findings use data from ten case study schools across three districts (Gicumbi, Nyaruguru and Rusizi). Altogether 84 interviews were conducted with WT, TWD, Head Teachers, School-based Mentors, School Subject Leads and other stakeholders. The districts, schools and participants were purposively selected for being involved in the STELIR program, but also seeking to balance the remote/rural/urban/border areas as well as those schools with more WT and TWD. The findings indicate that participants benefited from the programme through improved levels of English and enhanced classroom practices. The adaptations made by STELIR, such as provision for nannies to accompany WT with babies during the face-to-face training, transport facilitation for TWD and their guide, use of braille materials and provision of tablets during the online training phase led to increased participation of WT and TWD. However, the social norms around gender and disability still disempower WTs and TWDs, preventing equitable access to TPD for them. For instance, because women bear the biggest burden of care responsibilities in their families, WT especially those with young children make “great sacrifices” to participate in TPD, whether online, face-to face or school-based CPD. Meanwhile TWD often remain invisible in the wider society and lack representation in the mainstream schools; and face exclusion due to lack of adapted training materials such as the use of braille. Moreover, some adaptations have unintended consequences that further marginalize these two groups. The findings suggest that equitable and inclusive TPD cannot be easily met by a few programmed adaptations. For WTs and TWDs to empower educators, there is a need for ongoing localizations aligned with teachers’ lived realities. This requires the active involvement of education agencies like REB/TDM, local leaders and the community.



7. Leaving no, One Behind: An Assessment of Tutor's Awareness of Learning Difficulties

Edmore Chingwe, Sibonokuhle Ndlovu, Webster Mudzingwa and Jean Nizeyimana

Institutions of affiliation: TTC Bicumbi

Corresponding author's e-mail: chingweedmore@gmail.com,

Abstract

This study sought to assess Teacher Training College Tutors' (TTCTs) awareness of three learning difficulties (dyslexia, dyscalculia, and dysgraphia). The study sample consisted of 20 tutors at one Teacher Training College (TTC) in Rwanda. Awareness of learning difficulties was assessed through a mixed method approach. Data was analyzed using thematic and descriptive statistical techniques. Tutors were found to have an overall average awareness score of 85%. The awareness of dyslexia, dyscalculia and dysgraphia stood at 76%, 84% and 90% respectively. Tutors' awareness of strategies for mediating learning difficulties stood at 91%. Tutors face numerous challenges in the teaching and learning of students with learning difficulties. These challenges include inadequate teaching and learning resources, inadequate training, and a packed timetable. Although tutor awareness of learning difficulties is high there are some elements which tutors appear not to know much about. As such, it is recommended that effective strategies be implemented for addressing dyslexia, dyscalculia, and dysgraphia. Targeted interventions, such as multisensory learning for dyslexia, visual and hands-on numeracy tools for dyscalculia, structured handwriting and keyboard training for dysgraphia are crucial. Additionally, educator training, assistive technologies and individualized learning plans are essential to ensure sustained academic success. Collaboration with relevant stakeholders is vital to overcoming these challenges.

Key words: learning difficulties, dyslexia, dyscalculia, dysgraphia, awareness



8. Impact of Comprehensive Sexuality Education in Fighting against Unwanted Pregnancies in Selected Rwandan Secondary Schools

Magnifique Idahemuka and Innocent Nzabandora
Rwanda Polytechnic – Kitabi College

Corresponding author's e-mail: magnifiqueidahemuka@gmail.com

Abstract

Globally, regionally and locally, efforts have been made to improve the health and well-being of young girls in secondary schools, particularly addressing the issue of unwanted pregnancies, which often lead to school dropouts. This study examined the impact of comprehensive sexuality education as a cross-cutting issue in fighting unwanted pregnancies in secondary schools in Nyanza District, Rwanda. The study employed a mixed-methods research design, integrating both quantitative and qualitative approaches, and was guided by Bandura's Social Cognitive Theory (1990). It involved a sample of 200 students, 40 teachers, 5 head teachers and 5 deans of studies, selected through stratified and simple random sampling from 5 secondary schools of Nyanza District. Data were collected using questionnaires and interview guides. Qualitative data were analysed thematically by identifying patterns, recurring ideas and key insights from participant responses, while quantitative data were analysed using SPSS, applying descriptive statistics (means and standard deviations) and inferential statistics (correlation analysis) to determine relationships between variables. The findings revealed that comprehensive sexuality education significantly reduces unwanted pregnancies. Statistical analysis showed a strong correlation ($r = .864$, $p < .01$), indicating that 76.1% of the variation in unwanted pregnancies could be attributed to sexuality education. This was supported by survey responses, where 83% of students and 90% of teachers acknowledged its effectiveness. Qualitative insights further reinforced these results, highlighting how sexuality education enhances informed decision-making and promotes positive behavioural change among students. The study concluded that effective integration of sexuality education contributes to reducing unwanted pregnancies and recommended enhanced collaboration between school leaders and teachers to ensure the success of these comprehensive sexuality education programs.

Key Words: Comprehensive Sexuality Education, Unwanted Pregnancies & Secondary Schools



9. The Contribution of Community-Based Rehabilitation in Inclusion of Learners with Physical Disability in Nyanza District in Rwanda

Elia Gatete, Magnifique Idahemuka and Evariste Karangwa

Corresponding author's e-mail: gatecles@gmail.com

Abstract

Despite Rwanda's inclusive education policy, the implementation of Community-Based Rehabilitation (CBR) in supporting the inclusion of learners with physical disabilities in secondary schools remains limited, particularly in Nyanza District. The study aimed to assess the level of community-based rehabilitation (CBR) in secondary schools to identify challenges faced by learners with physical disabilities, and to determine CBR's role in their inclusion. The research involved 5 Deans of Studies, 5 Head Teachers, 20 teachers and 150 students from five secondary schools. They were selected using purposive and random sampling techniques. Data collection employed a mixed-methods approach, including questionnaires, interviews, observations and surveys. Quantitative analysis revealed a low level of CBR implementation in the sampled schools, with a mean score of 2.3 on a 5-point Likert scale, indicating limited integration of rehabilitation practices. Major barriers included negative attitudes toward Persons with Disabilities (PWDs), inadequate rehabilitation services, limited empowerment opportunities and inaccessible school environments. Challenges faced by learners included physical inaccessibility (70%), lack of disability awareness (65%) and absence of tailored support (62%). Pearson correlation analysis showed a strong positive relationship between CBR implementation and inclusion ($r = 0.78$, $p < 0.05$). Regression analysis indicated that CBR practices explained 60% of the variance in inclusion ($R^2 = 0.60$) and ANOVA confirmed the relationship's significance ($F(1,28) = 15.72$, $p < 0.01$). The study highlights CBR's critical role in fostering inclusion by enhancing physical accessibility, raising awareness, and building partnerships. It recommends collaborative efforts among stakeholders to strengthen CBR implementation in schools across Nyanza District in Rwanda, ensuring the full inclusion of learners with disabilities.

Key words: rehabilitation, community-based rehabilitation, and inclusion and physical disability



10. Barriers to the inclusion of pregnant learners and adolescent mothers in schools. A case study of Chiringaodzi Circuit in Manicaland province Zimbabwe

Rose Chibaya, Hopewell Biningu, Alice Violet Nyamundundu and Stanford James.

Institutions of affiliation: TTC Mbuga

Corresponding author's e-mail: rosechibaya@gmail.com

14. Abstract

This qualitative case study investigated barriers to educational inclusion facing pregnant learners and adolescent mothers in Chiringaodzi Circuit, Manicaland Province, Zimbabwe. Grounded in Bronfenbrenner's Ecological Systems Theory and Social Exclusion Theory, the study employed purposive sampling to select 18 participants including pregnant learners, adolescent mothers, teachers, administrators, and community leaders from three secondary schools. Data collection involved semi structured interviews, focus group discussions, document analysis, and non-participant observation. Findings revealed significant implementation gaps between progressive national policies and school-level practices, with institutional barriers including inflexible scheduling and inadequate infrastructure. Sociocultural barriers encompassed severe stigmatization, traditional practices such as "kuroodzwa" (arranged marriages for pregnant girls), and gender norms prioritizing motherhood over education. Economic pressures further compounded these challenges, forcing difficult choices between educational continuation and meeting immediate financial needs. Existing support mechanisms were minimal and largely informal, though promising intervention opportunities were identified including flexible scheduling, community-based childcare, teacher training, and technology-enabled learning. The study demonstrates how barriers operate across multiple ecological levels, requiring coordinated responses addressing institutional practices and sociocultural attitudes. Recommendations include developing specific policy implementation guidelines, introducing flexible learning options, implementing teacher professional development, establishing community-based childcare, and initiating targeted community engagement to address practices impeding educational continuation.

Keywords: pregnant learners, adolescent mothers, educational inclusion, educational barriers



10. Theory and practice towards the inclusion of students with diverse needs in regular primary classes in Gatsibo District in Rwanda

Margaret Machingambi and Emmanuel Sezibera

Institutions of affiliation: Great Zimbabwe University

Corresponding author's e-mail: maggiemachingambi@gmail.com

15. Abstract

The study examined the challenges of implementing inclusive education in regular primary classes. Furthermore, the paper described educators' practices in the inclusion of students with diverse needs in regular primary classes. The study also proposed effective strategies for supporting students with diverse needs in inclusive classes. The study adopted the Universal Design for Learning (UDL) as the theoretical framework. The study adopted a mixed-methods approach. The study employed an exploratory sequential design. The researchers began with qualitative data collection and analysis, followed by quantitative research. The study used the pragmatic paradigm. In the qualitative phase, the study adopted multiple case studies. The general population size was 167 participants. Purposive sampling was adopted. Fifteen participants were selected from twelve primary school educators from five public schools. Interviews were conducted with educators and school administrators. The researchers also used observations and document analysis to collect data. The study employed Thematic Analysis with the help of Atlas TI. In the quantitative phase, the surveys and questionnaires were developed based on qualitative findings. The researchers used a convenience sampling technique to select the respondents. Questionnaires were administered to fifty respondents. Descriptive statistics and inferential statistics were used to analyse data. The results indicated that 70% of educators lack training and professional development. The results revealed that the use of inclusive teaching strategies positively impacts the quality of education for students with diverse needs. A moderate positive correlation ($r = 0.61$, $p < 0.01$) was found between the use of inclusive strategies and student engagement levels. The study further revealed that some educators are failing to implement inclusive education policies effectively. An independent samples t-test comparing educators who had received formal training on inclusive education versus those who had not showed a significant difference in policy implementation effectiveness. $t(118) = 2.89$, $p = 0.005$, indicating that trained teachers were significantly more likely to implement inclusive practices aligned with policy. The study recommends that there is need for staff development and continuous professional programs to promote inclusivity. Schools should provide assistive technology to support learning. Educators should be knowledgeable about assessment methods to accommodate different learning needs.

Keywords: policies, strategies, diverse needs, inclusivity



THEME 8: INNOVATIVE TEACHING PRACTICES

1. Integration of Interactive Computer Simulations in Teaching and Learning Chemical Reaction: Students' Performance and Concept Retention

Jane Batamuliza

Email: batamuriza98@gmail.com

Abstract

Focusing on improving both students' performance and concept retention not only leads to their academic success but also equips them with critical skills for personal development, problem-solving, and lifelong learning. This study aims to examine the effects of interactive computer simulations on enhancing students' performance and concept retention in learning chemical reactions. This study employed a quantitative research approach with a quasi-experimental design. Purposive sampling was used to select four schools, with a sample population of 320 senior two students. Pre-test, post-test, and post-retention test were administered to measure students' performance and retention of concepts. The experimental group was taught using simulated-based activities, while the control group was taught using traditional methods. Data analysis was conducted using MS Excel and SPSS, with both descriptive and inferential statistics. The results revealed that the Experimental group outperformed the control group in both post-test and post-retention test, with higher means achievement scores. An independent sample t-test shows a statistical significant difference between the experimental and control groups in terms of mean scores. These findings suggest that interactive computer simulations significantly enhance students' performance and improve their retention of concepts in the study of chemical reactions. The study concludes that integrating simulated activities into classroom instruction effectively supplement traditional teaching methods. The research recommends the incorporation of these simulations to further support the teaching and learning of categories of chemical reactions.

Keywords: Interactive computer simulations, Students' performance, Concept retention, Chemical reactions.



2. Modernizing organic chemistry education through multimedia-supported flipped classrooms: Scrutinizing students' engagement and motivation

Ezechiel Nsabayezi^{1*}, Olivier Habimana², Wenceslas Nzabairwa³ and Francois Niyongabo Niyonzima⁴

Corresponding author's email: ezechielnsabayezi19@gmail.com

School of Education, College of Education, University of Rwanda (URCE), Kayonza, P.O Box 55
Rwamagana, Rwanda

Abstract

This study investigates the impact of a multimedia-supported flipped classroom approach (MSFCA) on student engagement and motivation in learning organic chemistry in Rwandan secondary schools. The study involved 73 senior five students (fifth year of upper secondary school) and two chemistry teachers, employing an explanatory sequential research design. Quantitative data were gathered using a Likert scale questionnaire and analyzed using the Statistical Package for the Social Sciences (SPSS), while qualitative data from structured interviews were thematically analyzed. The findings revealed high levels of student engagement and motivation in learning through MSFCA, as evidenced by their positive survey responses. Additionally, qualitative insights highlighted students' eagerness for organic chemistry when taught using this innovative method. However, rural students reported lower motivation levels compared to their urban counterparts primarily due to challenges with ICT infrastructure, such as limited internet access and insufficient computers. The statistically significant disparity in mean scores (rural: 49.58, urban: 68.47, $t = 9.75$, $P < 0.001$, $df = 72$) underscores how limited resources in rural areas hinder effective engagement in multimedia-supported flipped classrooms. On the other hand, while students have embraced this innovative approach, challenges such as initial adaptation difficulties and technical issues remain, highlighting the need for ongoing support and resources. Based on these findings, the study recommends integrating MSFCA more broadly to enhance student interest and motivation in organic chemistry. It also emphasizes the need to improve ICT resources, including reliable internet connectivity and adequate computer availability, particularly in rural schools.

Keywords: Organic chemistry, MSFCA, students' engagement, students' motivation



3. Effects of interactive simulations on the mastery of prudential measures and monetary policies and their impacts on real estate loans and agricultural loans

Bahati Sebasore

Faculty of Economic, Business and Management, University of Rwanda, Rwanda

Email: bsebsore@gmail.com

Abstract

This research analyzes the impact of interactive simulations on the learning of concepts related to monetary policy and prudential measures, as well as their implications for agricultural and mortgage lending. The primary objective was to estimate the extent to which these teaching tools facilitate the practical assimilation of the concepts and theories of prudential measures and monetary policy. A mixed-methods approach was used to assess students' level of assimilation. Ordinal logistic regression was used to assess variations in students' understanding (low, medium, or high), combined with the odds ratio to estimate the intensity of the effect of independent variables on the probabilities that a student belongs to a given level of understanding. The results show a significant relationship between interactive simulations and the understanding of the conceptual and theoretical aspects, as well as the practical application of prudential measures and monetary policy on the mortgage and agricultural loan portfolio. This strengthened students' confidence in decision-making. Distinctively, economic crisis scenarios produced the most significant learning effects. Therefore, the results demonstrate the pedagogical importance of interactive simulations in economics education and propose their systematic integration into academic programs. It is also proposed to adapt the scenarios to the economic circumstances specific to each region or country. Future researchers can analyze the effect of these simulations on the behavior of professional decision-makers and non-professionals in the financial sector. These interactive simulations appear as an important lever for applied learning, contributing to a good preparation of students for contemporary economic issues.

Keywords: Interactive economic simulations, Monetary policies, Mortgage loans, Agricultural loans, Monetary theories.



4. An Evaluation of The Scaffolding Reading Experience Framework as a Strategy for Improving Reading Comprehension at Nyamata Teachers Training College.

Authors: Dr Enock Panganayi Mawuye & Rodrigue Karamage

Affiliation: NYAMATA Teacher Training College

Corresponding author's email: epmawuye@gmail.com

Abstract

The below chronological reading proficiency level as well as comprehending have been a major flaw for Second year Teacher Training College learners in Language Education at Nyamata TTC. Grades in comprehension pose a constant threat to students' literacy competences and ultimately to other subjects across the curriculum as they are taught in English. In a bid to improve the levels of comprehension, this study was carried to evaluate the Scaffolding Reading Experience Framework to explore its suitability to remedy the shortcomings encountered during the teaching-learning process. The Socio-cultural theory underpinned this study. A qualitative case study was carried out through interviews, observations and document analysis. Direct quotations of the responses were captured and presented as well as notes made from observations from classroom interactions and pedagogical records and students exercise books. There were 40 out of 60 Language Education second years students who were chosen to participate in the study. Findings reveal that Scaffolding is being done haphazardly and sparingly or not even implemented at all. Scaffolding enhances retention and engagement when systematically done. It was found out that it leads to confusion and frustration and does not include motivational factors that also affect comprehension and that it makes students to over depend on teachers for support. Teachers need continuous professional development in Scaffolding to systematically implement it. Supervision needs to be enhanced to ensure it is implemented effectively.

Key words: English as a Foreign Language, Framework, Reading Comprehension, Strategy, Scaffolding Reading Experience.



5. The impact of First Language on English Language Syntax for Kinyarwanda English Second Language First Year Students at Matimba Teacher Training College

Enock Panganayi Mawuye & Frederic Mbonigaba;

Affiliation: Nyamata Teacher Training College

Corresponding author: epmawuye@gmail.com

Abstract

This study investigated the Impact of the First Language Transfer on English Language Syntax for Kinyarwanda ESL First year Language option students at Matimba TTC. The exploration of how the first language impacts on second language learning in teacher training colleges is vital for enhancing educational practices. Despite many programs meant to improve grammatical accuracy, errors continue to be noted in students' work and it attempts to find out if the first language had an effect on second language learning. The research population was 50 out of 100 First year Language Education students. The study was premised on Goshen's model. The writing samples and interview were the main two instruments to collect the data for the qualitative case study. The study used constructive Analysis (CA), Error Analysis (EA), and coding to analyse the writing samples and the interview. The study focused on the syntax transfer between Kinyarwanda L1 and English L2, so Adjective/noun order, Subject/verb order, Number/numbered order, multi-adjectives order, prefixes and others were the main syntax examples or challenges of the data collection and analysis. It was found out that L1 played a crucial role in influencing learners' errors. In different words, the lack of English Proficiency and literal translation were the main causes of the negative or interlingual transfer. Results showed that all the errors made by the participants were interlingual. It was recommended that a section of these grammatical errors be established in the English Language TTC curriculum so that these errors do not keep recurring as well as the establishment of English Language laboratories.

Key words: English Second Language, Kinyarwanda Language, Language Transfer, Syntax.



6. Use of cost-effective Bioethanol to Enhance the Teaching and Learning of Chemistry through Hands-On Laboratory Activities

Ruterana Johnson^{1,2}, Claude Karegeya², Jean Felix Mukerabigwi³, Dan Imaniriho⁴

¹*African Center of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS)* ; ²*University of Rwanda, College of Education, Kayonza, Rwanda*

Corresponding Author: johnsonruterana100@gmail.com

Abstract

This study investigates the use of cost-effective bioethanol, produced from locally sourced plant materials, as a tool to enhance the teaching and learning of chemistry through hands-on laboratory activities. The use of bioethanol through hands-on laboratory activities provides students with practical experience, real-world context and engages students to understand key chemical concepts which require ethanol as reagent. A quasi-experimental design was employed involving two groups of secondary school students: one engaged in traditional instruction, control and the other in laboratory-based lessons using bioethanol in laboratory experiments, experimental. Results showed that the experimental group demonstrated a significant improvement in both conceptual understanding and retention, with effect size, Cohen's d value is $d=0.18$, indicating that the sample mean, 0.18785 is lower than population mean whereas the mean score of students with post-test between experimental was significantly higher than control group. The measured Cohen's d value is $d=1.44$, showing a large effect due to the use of low-cost bioethanol as a tool that has enhanced teaching and learning chemistry with high student's performance as suggested by Cohen's d value greater than 0.8. It also reveals the mean difference of -0.79 for the control group and a mean difference of -9.05 for experimental group between pre-test and post-test score, indicating that mean scores in practical lesson improved both conceptual understanding and retention in experimental group after using low-cost bioethanol than in control group where not used. And also, a 25% increase in post-test scores compared to a 10% increase in the control group. Additionally, student surveys indicated higher engagement levels, with 85% of participants expressing increased interest in chemistry and a stronger appreciation for its real-life applications. The findings suggest that integrating cost-effective, locally producible bioethanol into laboratory instruction is an effective strategy to improve science education, especially in low budgeted schools. The study recommends that other basic chemicals required for enhancing teaching and learning chemistry can be locally produced to reduce the cost of chemistry education.



7. Development and Use of a Cost-effective Centrifuge for Laboratory Separation Techniques

J. Pierre Nahimana, Claude Karegeya, Wellars Utetiwabo, Joseph Kubwimana, Elisé Dushimimana, Jean Baptiste Nkurunziza, EmmanuelGakuba and Ruth Ntihabose

University of Rwanda, College of Education, Kayonza, Rwanda

Corresponding author contact: najeangepierre@gmail.com

Abstract

This study focuses on the development of an affordable, efficient, and portable centrifuge designed to support laboratory applications in resource-limited settings. The device, created using cost-effective materials and open-source electronics, offers functionality comparable to conventional models while remaining affordable. A quasi-experimental pre-test–post-test design, including a control group and an experimental group, was employed to assess the effectiveness of the cost-effective materials on students' learning outcomes. “The research compared traditional methods used to teach chemistry concepts related to mixtures and separation techniques at the ordinary level in six selected schools of Musanze district, with the adapted experiential learning approach using the cost-effective materials. The cost-effective materials were tested with the experimental group, while the control group didn’t conduct the experiment. Results showed that the cost-effective centrifuge (CEC) effectively separated solid-liquid suspension mixtures, with a 90% separation efficiency, and was well-received by both students and laboratory technicians. The centrifuge, costing about \$15 and weighing 343g, is portable and Usable in education, health, and agriculture. The successful development of affordable laboratory equipment is an effective and innovative tool for enhancing chemistry learning and scientific research.

Keywords: Cost-effective centrifuge, Separation technique, Suspension mixtures, Science laboratory equipment.



8. Brain activating methods: A Neurocognitive Approach to Teaching and Learning English as second language among young learners in Rwanda

Evode Nshimiyimana, Patrick Ujwiga Anguru and Jean Paul Ngoboka

Corresponding author contact: nshimiyimanaevode2@gmail.com

Abstract

Teaching and learning a second language among adult learners remains a debated topic in second-language education. The aim of this study is to investigate a Neurocognitive approach of “Brain activation” that leads to successful learning of a second language as English language in Rwanda among adult learners. Brain activation methods refer to the tasks that stimulate cognitive function and enhance mental ability. It involves activities such as puzzles, reading, learning new skills, physical exercise, meditation, and engaging in social interactions. The study took a short-term-longitudinal approach to investigate the behavioural changes in terms of English language speaking among learners aged between 12 and 19 years old who study English as a second language in secondary school in Rwanda. The study adopted a classroom experiment of six weeks to collect both quantitative and qualitative data from a sample of 40 students on how brain activation methods work in teaching and learning a second language and improving learners' speaking abilities. During the classroom experiment, a test-retest procedure was used to assess the effectiveness of brain activation methods. The results indicate the effectiveness of brain activation methods. The mean pre-test scores ranged from 1 to 3 ($SD = 0.405-0.802$), while post-test scores ranged from 3 to 5 ($SD = 0.267-0.813$), demonstrating a significant improvement following the intervention. The study recommends language teachers to involve brain activation methods in the English language teaching process. It also recommends educational stakeholders to provide spaces for language practice for successful learning and speaking among adult learners.

Keywords: Brain activation, treatment, Neurocognitive, English language, learning and speaking, Neuroplasticity, neurons, speaking.



9. Quality of Mathematics Assessment Items based on the Bloom's Taxonomy in Upper Secondary Schools of Kamonyi District, Rwanda

Christine Nikobahoze

Email: nikchristine2018@gmail.com

Abstract

This study examined the quality of mathematics assessment items used in upper secondary schools in Kamonyi District, focusing on their alignment with cognitive demand based on Bloom's Taxonomy. The study used the qualitative research design, purposively sampling six (6) mathematics assessment papers from three (3) out of thirty (30) schools that have mathematics as a core subject in the district. The study conducted the Content analysis using the table of specifications to categorize the cognitive levels assessed. Findings revealed that five out of the six mathematics assessment papers predominantly assessed lower-order thinking skills (LOTS) such as remembering, understanding and applying with no item assessed higher-order thinking skills (HOT) like analyzing, evaluating and creating. In contrast, only one mathematics assessment paper out of the six papers balanced both lower-order thinking and higher-order thinking skills. The study underscores the need for improved mathematics assessment practices to enhance students' critical thinking and problem-solving skills. Recommendations are provided to ensure mathematics assessments effectively support students' learning and achievement.

Keywords: Mathematics assessment items, Bloom's Taxonomy, Table of Specifications, Upper secondary schools



10. Empowering Chemistry Teachers through Improvised Materials: A Training Approach for enhancing Student Outcomes.

Celestin Ngendabanga, Jean Baptiste Nkurunziza and Leon Rugema Mugabo

Corresponding author contact: ngecelestin2@gmail.com

Abstract

The use of improvised chemicals in chemistry education offers a practical solution to the challenge of limited laboratory resources in Rwandan secondary schools. The study assesses the enhancement of lower secondary school chemistry learners' outcomes as a result of teachers' training and implementation of improvised materials. Adopting an action research design, eight chemistry teachers from eight schools were purposefully selected and trained over five sessions of two days each during 5 consecutive weekends, followed by a six-month implementation period. After training, data were collected through interviews, classroom observations, and document analysis. The findings revealed that using alternative resources significantly enhanced students' outcomes such as engagement, comprehension, motivation, and hands-on skills. Additionally, teachers displayed increased confidence and creativity in conducting experiments. The study recommends integrating improvisation training into continuous professional development programs for teachers and emphasizes the potential of improvised materials in developing science process skills, especially in resource-limited environments.

Key Words: Teachers Professional development, motivation, Improvisation, Teaching and Learning Chemistry.



11. STEM pre-service teachers experience teaching practice. A case study at a model school in Rwanda

Christopher Mutseekwa, Barnabas Muyengwa and Cefas N. Zimuto

Corresponding author contact: chrismutseekwa@gmail.com

Abstract

Model schools offer aspiring educators placements in quality educational environments in which they are observed and guided by experienced mentors. They provide opportunities for university students to observe, study, reflect on, and practice education theory while integrating themselves into classroom environments alive with children. However, research that investigates the pedagogical challenges and the internees' professional integration during their stint in a model school environment is limited. Framed within a symbolic interactionist perspective, this study explores the internees' teaching practice experiences offered at a model school affiliated with the University of Rwanda-College of Education (UR-CE). The study examines how effectively one group of student teachers (N=21), under the Teacher Enhancement Programme (TEP), integrated theory and practice during a four-week practicum in professional ethics; teaching, pedagogy, and reflective practice; learners' development; extra-curricular activities; classroom management; and teacher pedagogical documents. Qualitative and quantitative data are gathered through the Student Teacher Internship Exit Questionnaire (STIEQ), observation, and Focus Group Discussions (FDGs). Descriptive statistics and emergent themes are used to analyse the data. Despite the TEP expecting an all-around acquisition of competences, the findings from the STIEQ reveal minimal internees' confidence in competences such as STEM integration (Mean=68.6) and reflective practice (Mean=66.6). This result contrasts the internees' confidence on aspects such as the need to respect and listen to the learners' voice (Mean=92.6), which received a relatively high mean score. Other findings reveal that despite the internees' satisfaction with the assistance they received from mentors (Mean=93.3), observation data showed that the mentors had limited instructional expertise in some aspects of STEM learning. Further findings indicate that the limitation of time hampered internees' internalization of learned practices. The study therefore recommends (i) extended internship periods for the pre-service teachers to allow adequate time for skills development on inquiry-based teaching, integrated STEM education, and reflexive practice and (ii) school-based capacity development for the mentors to enhance their competences for assisting the pre-service teachers in the development of pedagogic content knowledge, provision of constructive feedback, implementing integrative teaching, and the facilitation of active learning.

Keywords: Teaching practice, Teaching practice, Mentorship, Professional integration, STEM integration, Teaching practice, Theory-practice gap



12. Barriers in Fostering Creative Thinking among Secondary School Kiswahili Learners in Kigali

Emmanuel Niyirora

Email: emmaniyirora@gmail.com

Abstract

Creative thinking skills are essential in the 21st century, particularly in enhancing students' problem-solving abilities, innovation and adaptability. This paper investigates barriers in fostering creative thinking skills among secondary school Kiswahili learners in Kigali City. Amabile's (1996) Creativity Componential Theory guided the study. A mixed research design was employed, integrating quantitative and qualitative approaches to collect primary and secondary data. Simple random and purposive sampling techniques were used to select 270 respondents, including 240 students, 20 teachers, 5 head teachers and 5 Deans of Studies from selected secondary schools in Kigali City. Data collection tools included interview guides, document analysis guides and questionnaires. While the study was primarily descriptive, inferential statistics were used to identify and test relationships among variables for broader generalization. Quantitative data were analyzed using SPSS version 23 through Pearson correlation, regression analysis and ANOVA. Qualitative data were thematically analyzed and presented descriptively. Findings revealed significant barriers to creative thinking, including heavy syllabi ($M=3.89$), lack of engaging resources ($p<0.05$), poor instructional design ($p<0.01$), teachers' heavy workload ($p<0.05$), and insufficient time allocation for Kiswahili ($p<0.01$). Regression analysis further indicated that curriculum structure is a strong predictor of creative thinking development ($\beta=0.72$, $p<0.05$). To overcome these barriers, the study identified curriculum reforms, improved instructional design, increased teacher training and enhanced resource availability as key strategies. In conclusion, the study underscores the urgent need for curriculum adjustments and innovative teaching methods to foster creative thinking in Kiswahili learning. The findings provide critical insights for policymakers, educators and curriculum developers in enhancing creative thinking among secondary school students.

Keywords: Creative Thinking, Barriers, Kiswahili Learning, Secondary Schools & Creativity Componential Theory



13. Teachers and Students' Perception on Effectiveness of Virtual Biology Experiments developed by Rwanda Quality Basic Education for Teaching and Learning Genetics

Faustin Nduwayezu, Jean de Dieu Habiwaremye, Theophile Nsengimana, Pheneas Nkundabakura and Marcellin Rutegwa

Corresponding author contact: nfaustinhoo@gmail.com

Abstract

The teaching and learning of genetics present challenges due to the abstract nature of genetic concepts, complexity of genetic phenomena and the time-consuming experiments required to achieve the desired outcomes. As a solution, the Rwanda Quality Basic Education for Human Capital Development (RQBEHCD) project developed virtual biology laboratory tools tailored to the Rwandan curriculum. These tools aim to enhance the teaching and learning of genetics, among other biology concepts, in Rwandan lower secondary schools. After their validation and implementation in various schools, a survey-based approach was used to assess teachers' and students' perceptions of the tools' effectiveness in improving the students' understanding and engagement in Genetics. To this end, a Likert scale questionnaire was administered to 40 teachers and 123 students selected from 16 districts of Rwanda. The results show that 95% of teachers and 97.8% of students found the virtual labs to be interactive, engaging, effective in developing critical and analytical thinking skills, while also offering flexibility in learning. However, some challenges such as limited computer availability and technical difficulties in using the software were noted. The study suggests solutions like strengthening ICT infrastructure through partnerships with other schools and providing technical training. Based on these findings, the study recommends the broader adoption of virtual labs in Rwandan secondary schools and suggests developing mobile-compatible versions to enhance accessibility and improve science education delivery.

Key words: Virtual Biology Laboratory, Genetics, dominance, codominance



14. Exploring the Complexities of Second Language Acquisition in Rwandan Public Schools

Murape Tinashe , Cefas Zimuto Nyasha and Christopher Mutseekwa

Corresponding author contact: tinashemurape@yahoo.com

Abstract

This study examined second language acquisition processes among learners from various linguistic environments in Rwandan schools. Its primary focus was to evaluate the impact of social and environmental contexts on language proficiency, including acquisition, processing, and usage. The Social Interactionist Theory served as the theoretical framework, and a mixed-methods approach was used for data collection and analysis. Qualitative analysis identified key themes, patterns, and insights from interviews and observations, providing a deeper understanding of learners' experiences and interactions in the target language. A case study design was employed, concentrating on specific instances to gain in-depth insights and facilitate valid generalizations based on existing literature and theories. Cross-case analysis enabled the identification of consistent themes and trends, further validating broader conclusions. Data was collected from two public schools- one general public school and one model school in the West Province of Rwanda. Various instruments, including questionnaires, interviews, and observations, were employed. The study also incorporated a community-based model of interaction to explore how social and cultural dynamics shape language learning in Rwanda. Respondents were selected through a combination of systematic random and purposive sampling. Findings revealed that exposure to diverse linguistic input and opportunities for real-world language use significantly influenced learners' second language proficiency. Learners from the model school demonstrated greater improvement, highlighting the impact of integrating cultural practices and community engagement in language learning. The research suggests the establishment of second language acquisition-friendly environments in government schools to achieve Sustainable Development Goal 4 of access to quality education for all.



15. Switching from Knowledge Based Curriculum (KBC) to Competency Based Curriculum (CBC) in Rwanda: Is there any change in English writing skills textbooks?

Jean de Dieu Amini Ngabonziza and Béatrice Yanzigiye

Corresponding author contact: aminigabonziza@yahoo.fr

Abstract

This study aims at comparing Knowledge-Based Curriculum (KBC) textbooks with Competency - Based Curriculum (CBC) textbooks used in upper primary schools in Rwanda. The study foregrounds two main changes in the Rwandan educational system, including the change of Medium of Instruction (MoI) from French to English in 2008 and the switch from a KBC in 2015. Textbooks in Rwanda play an important role in teaching and learning, considering gaps in English language knowledge in Rwanda and their use by both teachers and learners. We used quantitative content analysis on three English textbooks for upper primary used before 2015 and the current three textbooks published and approved by Rwanda Education Board (REB) for teaching English (P1 –P6). The findings revealed that the P4 English textbooks have shifted from KBC writing approaches to CBC approaches of teaching writing, comparing cognitive activities by focusing more on higher order-thinking skills. However, the interpretations of the findings showed a gap in both KBC and CBC textbooks, which is not yet addressed. Both textbooks still use a monolingual writing pedagogy and ignore the multilingual context that is a reality in Rwanda, where national language, Kinyarwanda, is widely spoken alongside other official languages such as Kiswahili, French and English. This study recommends practical pedagogical changes to be made in multilingual integrated approaches for training multilingual competent learners required not only in Rwanda but also in 21st Century world. This will require the inclusion of authentic Rwandan linguistic landscape materials written in a combination of English, Kinyarwanda, Kiswahili and French. In addition, translingual examples from both web and printed writing sources should be incorporated in the textbooks.

Key words: KBC, CBC, MoI, Writing approach, TEFL, TESL, monolingual and multilingual context.



16. Integration of Computer-Based Simulations in Chemistry and Physics Instruction among Rwandan Secondary Schools

Pascalie Nyirahabimana¹, Jeannette Musengimana¹, Josiane Mukagihana¹, Dany Kamuhanda¹, Gerard Tuyizere^{3,4}, Ezechiel Nsabayezi², Aloys Iyamuremye³

¹ Department of Science Education, School of Mathematics and Science Education, College of Education, University of Rwanda, ²School of Education, University of Rwanda, ³African Centre of Excellence for Innovative Teaching and Learning Mathematics and Science (ACEITLMS), ⁴Rwanda Polytechnic, Ngoma College

Corresponding author contact: pnirahabimana@gmail.com

Abstract

The integration of technology in education has significantly transformed the teaching and learning of physics and chemistry. However, teachers in Rwanda face challenges in teaching chemistry and physics due to limited resources and reliance on traditional pedagogical methods, which often fail to engage students effectively. This study investigates the integration of computer-based simulations (CBS) within the existing pedagogical approaches in teaching chemistry and physics in Rwandan ordinary-level secondary schools. It further evaluates the effectiveness of CBS in enhancing student understanding and engagement in these subjects. The study employed a mixed-methods approach, collecting data from 160 chemistry and physics teachers across ten districts in Rwanda. Data collection methods included surveys, lesson plan analysis, classroom observations, and teacher interviews. The findings revealed that only 30% of surveyed teachers regularly used simulations in their instruction. In terms of lesson preparation, 76.67% of Physics teachers and 63% of chemistry teachers scored below 50%, indicating significant challenges in integrating the CBS into lesson planning. Classroom observations showed that 68.75% of teachers reported using the 5Es instructional model, while 26.8% implemented the Predict-Observe-Explain (POE) approach. These findings highlight the potential of CBS in improving science education while also revealing gaps in implementation. The study concludes that competency-based syllabus (CBS)-supported active learning methods are still not being used effectively. Therefore, targeted teacher training programs are essential to equip educators with the necessary digital and pedagogical skills to effectively integrate CBS into their teaching practices.

Key words: Computer-based simulation, chemistry teaching, physics teaching, pedagogical approaches



17. Bridging the Theory-Practice Divide: The Role of Academia-Practitioner Collaboration in Higher Education

Harriet Ayiorwoth, Uganda Management Institute, Kampala

David Onen, Makerere University

Corresponding author contact: harrietonen2@gmail.com

Abstract

The cyclical theory-practice gap in higher education has raised questions about the practical utility of academic pedagogy and scholarship. Growing interdependence among scholars and practitioners is the solution by encouraging cross-learning that enhances pedagogic effectiveness and scholarship utility. This study explored how increased collaboration closes the theory-practice gap, with a focus on knowledge-sharing practices at Uganda Management Institute. It specifically explored the means employed to share knowledge and the mutual gains obtained. Using a qualitative research method, data were collected from in-depth interviews of 14 academic staff and 12 practitioners across different organizations and thematically analysed. The findings indicated the use of real-life case studies and experiential learning as main approaches to link theory and practice, and improved professional practice as the main mutual gain. The study emphasizes the necessity for facilitating academia-practitioner collaboration by policy support from institutions towards innovative teaching practices. Through fostering a spirit of cooperation, institutions of learning can align their programmes more meaningfully with society and prepare graduates better for life as professionals. The findings resonate with current higher education reform debates, showing how cooperation in sharing knowledge can reform teaching and research to make it more practically effective.

Keywords: Academic-Practitioner Collaboration, Knowledge-Sharing, Theory-Practice Divide, Higher Education Pedagogy, Innovative Teaching Strategies



18. The Role of Computer-Based Simulations and Predict-Observe-Explain Technique on Teachers' Pedagogical Knowledge in Rwanda's Lower Secondary Schools

Pascalie Nyirahabimana^{1*}, Jeannette Musengimana¹, Josiane Mukagihana¹, Dany Kamuhanda¹, Gerard Tuyizere^{3,4}, Ezechiel Nsabayezu², Aloys Iyamuremye³

University of Rwanda-College of Education

Corresponding author contact: panyirahabimana@gmail.com

Abstract

Chemistry and Physics teaching in Rwanda's lower secondary schools is hampered by limited resources and use of conventional instructional approaches that impede students' engagement and understanding of scientific concepts. This study investigates how the integration of Computer-Based Simulations (CBS) and the Predict-Observe-Explain (POE) technique affect teachers' pedagogical practices and students' learning outcomes. The study employed a mixed-research approach guided by the pragmatism paradigm. The study involved 40 Chemistry and Physics teachers purposively selected from public schools across ten districts in four provinces and the City of Kigali. Quantitative data were collected through survey, lesson plan, and classroom observation while qualitative data were gathered by using semi-structured interviews. In this regard, the quantitative data were analyzed descriptively while qualitative data analyzed by using thematic analysis. The findings showed that only 77.5% of the teachers regularly integrated CBS into their lessons while 22.5% relied on traditional methods. Additionally, 74% of teachers scored above 50% in effectively incorporating CBS with the POE approach. Classroom observations showed that 28.7% of teachers attempted student-centered strategies, but only 71.3% successfully implemented the full POE framework. The interview findings further highlighted positive shifts in teachers' teaching practices, with many reporting increased students' participation and engagement when CBS and POE were applied. However, challenges such as teachers' limited training in CBS implementation persist. The study recommends targeted professional development programs to equip teachers with technological-enhanced pedagogies, with the implications for curriculum designers and policymakers in fostering active learning strategies.

Keywords: Computer-Based Simulations, Predict-Observe-Explain, Pedagogical Knowledge, Chemistry Teaching, Physics Teaching, Rwanda



19. Challenges and strategies for improving genetics teaching and learning in upper secondary schools: a case study of Gakenke District

Moïse Ishimwe ² & Gatarira Pierre Cobes¹

¹University of Rwanda -College of Education, ²African Centre of Excellence for Innovative Teaching and learning Mathematics and Sciences (ACEITLMS)

Corresponding author contact: ishimo1983@gmail.com

Abstract

Genetics is known to be one of the most difficult topics in secondary school biology, presenting challenges for both teachers and students. This study explores the challenges faced in teaching and learning genetics in upper secondary schools in Gakenke District, Rwanda, and suggests strategies to improve the teaching and learning methods. A mixed-methods approach was used for data collection from 52 respondents, including 40 senior six students selected through quota sampling, 3 lab attendants, and 9 biology teachers selected through total population sampling. Data were gathered using questionnaires and interviews. The quantitative data were analyzed using Microsoft Excel, while qualitative data from interviews were analyzed narratively. The study found that major challenges in teaching genetics included lack of proper teaching materials, which led to a reliance on lecture-based instruction. Overall, the findings highlight that both students and teachers experience considerable challenges with key concepts in genetics. Topics such as inheritance laws, mutations, and genetic crosses consistently emerged as area of concern, indicating a broader need for enhanced instructional strategies and support. To address these challenges, this study proposes possible strategies. These include the use of practical activities such as experiments and models to make lessons more engaging and attractive. Providing well equipped laboratories and using visual tools like charts and animations can help simplify complex concepts. In addition, teacher training and workshops can strengthen teaching skills and confidence in teaching genetics, while group work and peer learning among students can promote better student understanding.

Keywords: Genetics challenges, Secondary school biology, Teaching strategies.



20. Impact of Computer-Based Simulations with the Predict-Observe-Explain Method on O-Level Students' Conceptual Understanding in Chemistry and Physics in Rwanda

Pascasie Nyirahabimana, Jeannette Musengimana, Josiane Mukagihana, Dany Kamuhanda, Gerard Tuyizere, Ezechiel Nsabayezu and Aloys Iyamuremye

Corresponding author contact: pnirahabimana@gmail.com

Abstract

Students often struggle to apply scientific principles due to weak conceptual understanding. This study investigates the impact of Computer-Based Simulations (CBS) with the Predict-Observe-Explain (POE) method, in enhancing O-Level students' conceptual understanding of Physics and Chemistry in Rwandan schools. A quasi-experimental pre-test–post-test design was employed with 156 purposively selected students, grouped into treatment (CBS combined with POE) and control (traditional instruction) groups. Each group covered eight Physics and Chemistry topics over eight weeks. The treatment group demonstrated a significantly higher post-test performance ($p < .001$) compared to the control group, with a substantial effect size (Cohen's $d = 0.694$), indicating a significant improvement in conceptual understanding. Notably, the study revealed that collaborative learning fostered by CBS supported by POE method, including structured peer discussions and facilitated teacher feedback during simulation activities, played a crucial role in deepening student comprehension. These findings suggest that CBS combined with interactive pedagogical strategies like POE offers a compelling approach to making Physics and Chemistry education more engaging and effective, ultimately leading to improved student mastery of scientific concepts.

Key words: Computer-based simulation, chemistry learning, physics learning, Predict-Observe-Explain method, student conceptual understanding



21. Impact of the 7E Model Approach on Secondary School Students' Academic Achievement in Algebra: A Study in Kamonyi District, Rwanda

Sylvain Habimana, B. Bizimana and J.F. Maniraho,

University of Rwanda-College of Education

Abstract

This article reports the results of an investigation on the impact of the 7E model approach on day secondary school students' academic achievement in algebra in the Kamonyi district in Rwanda. It employed a quasi-experimental design with the participation of experimental and control groups. The experimental group was taught the multiplier for proportional change topics from unit 4 in senior two using 7E model strategies. In contrast, the control group was taught the same topics using conventional teaching methods. A total sample of 679 students (356 experimental, 323 control) was sufficient for meaningful comparisons. Data were collected through a mathematics achievement test used as a pre-test before treatment and a post-test administered at the end of unit 4 as a summative assessment to measure students' achievement before and after the intervention in the two groups, each with four intact classes. Using SPSS version 27 through ANCOVA, the results [$p < .05$, experimental group adjusted mean=78.5, control group adjusted mean=72.3, effect size , and the regression slopes or interaction p -value $p > .05$) with the learning gains of 54.6% in the 7E model strategies and 15% in the conventional teaching method] showed that learners taught through the 7E model strategies achieved better than others through conventional teaching methods. Therefore, the 7E model approach significantly improved students' academic achievement in algebra. In addition, using purposive and convenience sampling techniques allowed the researchers to observe and discover that the interaction between students and teachers increased positively when computer-interactive materials were included in the planned lesson's 7E model strategies. Other researchers are welcome to investigate the effect of a similar approach on the retention of academic concepts from the Algebra content taught, students' interest to learn Mathematics, and teacher perceptions and attitudes towards using the 7E model approach in teaching.

Keywords: Academic achievement, algebra, control group, 7E model approach, experimental group, secondary school.



22. The Role of Technological Proficiency in Shaping ICT integration in Rwanda's Preservice Teacher Education

Jean Baptiste Mushimiyimana, Wenceslas Nzabwirwa, Irene Ndayambaje, Alexandra Lazareva

Abstract

The integration of Information and Communication Technology (ICT) in education is increasingly recognized as a pivotal strategy for modernizing teaching and learning processes globally. Despite the rapid development of ICT in many African nations, its integration within educational systems in sub-Saharan Africa remains nascent. In Rwanda, the national digital transformation agenda has underscored the importance of incorporating ICT into pre-service teacher education. However, the effectiveness of ICT adoption in teacher education is contingent upon the technological proficiency of pre-service educators. This study examines the extent to which the technological proficiency of teacher educators influences ICT integration in classroom practices. Employing a mixed-methods approach—combining quantitative surveys and qualitative interviews across various Teacher Training Colleges (TTCs); the study assesses the current level of ICT knowledge among 362 tutors, explores its impact on their pedagogical practices, and identifies challenges that impede effective ICT integration such as the instability of network, limited skills for tutors as well as limited access to ICT resources due to high number of students. Preliminary findings indicate that while a majority of tutors possess fundamental digital literacy, inconsistencies in practical application persist, undermining the overall efficacy of ICT adoption. Moreover, the study reveals that targeted training, improved access to digital resources, and robust institutional support are critical to enhancing technological proficiency and fostering positive attitudes toward ICT. The paper concludes with evidence-based recommendations aiming at strengthening ICT integration in Rwanda's pre-service teacher education, including the expansion of digital training programs and the enhancement of infrastructural support.

Keywords: ICT adoption, technological proficiency, pre-service teachers, digital literacy, teacher education



23. Barriers to Adopting Innovative Teaching Methods in Private Secondary Schools in Gulu City: Implications for Curriculum Implementation

David Onen; Harriet Ayiorwoth

Abstract

The Lower Secondary School Curriculum (LSSC) was implemented as part of the ongoing reforms to make education in Uganda more meaningful and learner-centered. Questions have been raised, however, regarding how these actions are translated into the everyday life of the classrooms. It is against this background that the current study sought to establish the extent to which the LSSC has promoted the uptake of innovative pedagogical practices and the challenges to successful adoption in private secondary schools in Gulu City. A descriptive cross-sectional survey design was utilized in a strictly quantitative method. The study interviewed 96 teachers in ten private secondary schools in Gulu who filled out fixed-response questionnaires regarding challenges they faced and with what frequency a range of learner-centered pedagogies was used. The findings indicate that in instruction, PBL, Debates, and Group Discussions (mean = 2.69–2.63) were commonly practised, and more resource-intensive techniques like the Flipped Classroom (mean = 0.73) and Contextual Learning (mean = 0.82) to a significantly lesser extent. The most significant hindrances to the application of innovative teaching practices were the lack of institutional support (mean = 3.71), restrictions on the application of technology (mean = 3.73), and financial constraints (mean = 3.95). Lack of adequate teacher training (mean = 3.49) was also rated as a significant hindrance to the successful application of the strategies. The study revealed that despite the LSSC providing a benchmark for teaching innovation, its application was hampered by scarce resources and poor professional development. The study recommended further teacher training courses, more resources to be allocated, and more institutional support in a bid to enable the rapid application of learner-centered teaching approaches and the success of the curriculum in Gulu private secondary schools.

Keywords: Innovative teaching, learner-centred pedagogy, teacher capacity, private secondary schools, pedagogical barriers, Gulu City, Uganda.



24. Analysis of Students' Performance in Mathematics Across Specific Topic Areas in Selected Lower Secondary Schools in Burera, Kamonyi, and Kicukiro Districts, Rwanda.

Masengesho Egide

Abstract

This study conducted a topic-based analysis of students' performance in mathematics across specific topic areas in selected lower secondary schools in Rwanda, specifically in Burera, Kamonyi, and Kicukiro districts. The study examined third-term examination scripts of Senior One (S1) and Senior Two (S2) students at GS Rushara (Burera district), GS Sheli (Kamonyi district), and GS Nyarugugu (Kicukiro district), involving a total of 267 students and 8 teachers. A quantitative approach was used, employing ANOVA to compare the students' performance across five key mathematics topics: Algebra, Metric Measurement, Proportional Reasoning, Geometry, and Statistics and Probability. The findings indicated positive progress as students advanced from Senior One to Senior Two in the areas of Proportional Reasoning, Geometry, and Statistics and Probability, with statistically significant differences ($F > 32$, $p < .000$). Algebra ($F = 3.847$, $p = .050$) and Metric Measurements ($F = 1.41$, $p = .234$) showed marginal progress, suggesting that these areas remain challenging across both grade levels. Teachers' responses also reflected this, with Algebra and Proportional Reasoning identified as significant challenges for students, while Statistics and Probability was perceived as a strength. The findings highlight the need for practical teaching methods, mother tongue use at foundational levels, and technology integration in lower secondary schools of Burera, Kamonyi, and Kicukiro. Establishing mathematics laboratories, enhancing teacher training, and engaging parents and communities are essential for improving performance and supporting sustainable education.

Keywords: lower secondary schools, Mathematics performance, quantitative research, topic-based analysis.



25. Investigating the potential benefits of integrating geometric models in teaching polynomial operations case of GS Nyamata Catholique in Bugesera District, Rwanda

Placide Bizimana, Dr. Jean Francois Maniraho

Corresponding author contact: biziplacides@gmail.com

Abstract

This study investigated the impact of geometric models integration on algebraic polynomial operations. It used the experimental design. The pre-post-tests were administered and the findings revealed that Geometric models approach increased clarity in algebraic polynomials and reduced the rote memorization. The study recommends that teachers should use Geometric models approach in teaching polynomials in order to increase the understanding and performance of students and to eradicate the rote memorization of concepts without understanding them. Schools should also facilitate teachers in integrating the geometric models by funding the purchase of the geometric tools that are needed.

Keywords: Polynomial operations, Geometry, Geometric Models, Conventional approach.



26. Unveiling Instructional Supervisory Support for Teachers in Pre-Primary Teaching Practicum: Emerging Perspectives of Pre-Service Teachers

Habibu Dadi Ali

Corresponding author contact: habibudady10@gmail.com

Abstract

This study explored instructional supervisory support needed by pre-service teachers during their teaching practicum in pre-primary classes using a constructivist perspective. Conducted in Kigoma Municipality, Tanzania, it employed a qualitative descriptive phenomenological design with 30 purposively selected student teachers. The teachers who fitted for selection were only those who were doing their teaching practicum in primary classes. Data were collected using a self-developed open-ended questionnaire, which was validated through expert evaluation and pilot study. The collected data were analysed thematically, ensuring inter-coder reliability (Cohen's Kappa=0.6) indicating substantial agreement. The results revealed that pre-service teachers require greater support in instructional planning (scheme of work and lesson plan) focusing on holistic development, using play-based, interactive and inclusive approaches child friendly assessment methods, development of interactive teaching aids, and adapting lessons for diverse learners by designing activities that accommodate children with special needs. The findings also suggest that pre-service teachers need more exposure to best practices in early childhood education. This means that student teachers need more support on how to support young children to learn, more chance to observe and practice high quality teaching approaches used by experienced teachers and would need more guidance on developmentally appropriate practices such as play-based learning and engaging learning environment suited to young learners. The study recommends that teacher training programs and curriculum reforms address these gaps to enhance the quality of early childhood education.

Keywords: Instructional Supervisory Support, Pre-Primary Teaching, Practicum, Pre-Service Teachers



27. Evaluating the use of Competence-Based assessment methods in geography subject in Rwandan Secondary Schools

Muhire Innocent¹, Twizerimana Yvonne¹, Manirakiza Vincent¹, Kamanzi Francis², Ingabire Marie Yvonne¹, Urwibutso A.

¹Department of Humanities and Language Education, School of Education, College of Education, University of Rwanda, Rwanda.

²Department of Foundations, Management and Curriculum Studies, School of Education, College of Education, University of Rwanda, Rwanda.

Correspond author email address: innocentmuhire@gmail.com

Abstract

The Competence Based Assessment (CBA) was introduced as a crucial platform for assessing students' knowledge and skills in this era of implementing Competence Based Curriculum (CBC) approach. In Rwanda, the practical implementation of this reform started with 2015 to align with international trends and help students to develop all learning competences allowing them to cope with real life context, may yet presenting challenges. The study examined the use of Competence-Based Assessment methods in Geography subject in secondary schools of Rwanda. It employed mixed methods with combination of quantitative and qualitative approaches, and concurrent research design. The research population was 661 persons from six schools in Gakenke and Gasabo districts. 101 respondents including 86 students, 7 teachers, 6 school head teachers and 2 NESA Staff, were purposively selected, surveyed and interviewed. Data was collected through structured questionnaires, classroom observations and semi-structured interviews, and analyzed through descriptive statistics and thematically. Findings revealed that while different assessment methods were employed, the integration of principles of Competence Based Assessment remains a significant challenge. Teachers continued to rely mainly on traditional methods like recall-based methods and struggled to adopt experiential techniques. Hence, the study detected significant limitations in fieldwork, project work and practical activities, essential for developing hands-on skills. The study suggested application of assessments methods that allow students to apply their knowledge in real situation, and it recommends teachers training programs to deepen understanding of CBA methods, establishment of a strong monitoring and evaluation to continuously assess CBA methods implementation and organization of regular professional sessions to improve assessment methods documents aligned with CBA frameworks.

Key words: Competence Based Assessment (CBA), secondary schools, geography, evaluation



28. Teachers and students' perceptions on the use of Competence-Based Assessment in geography in secondary schools in Rwanda

Muhire Innocent, Ingabire Marie Yvonne, Manirakiza Vincent, Kamanzi Francis, Twizerimana Yvonne, Urwibutso Amina

Correspond author email address:innocentmuhire@gmail.com

Abstract

The 2015 shift in Rwanda from a knowledge-based curriculum to a Competency-Based Curriculum (CBC) marked a transition from the traditional focus on knowledge acquisition to an emphasis on learners' ability to apply skills and demonstrate competencies in real-world tasks. This study examined teachers' and students' perceptions on the implementation of Competency-Based Assessment (CBA) in geography in Rwandan secondary schools. Conducted across six schools having geography among core subjects in advanced level, the research adopted a mixed-methods approach using a concurrent design. A total of 93 participants including 7 teachers and 86 students from both rural and urban settings, and from public, government-aided, and private institutions, as well as day and boarding schools were involved through surveys and semi-structured interviews. However, gender imbalance was noticed among respondents with 0% of female teachers and 46.5% female students versus 100% male teachers and 53.5% male students. Data were collected using questionnaires and interviews and analyzed both thematically and through descriptive statistics. The findings revealed that although CBA is widely regarded as an appropriate approach for assessing students' knowledge, skills, attitudes, and values; its practical implementation remains limited. Traditional assessment methods that emphasize recall and comprehension continue to dominate across the surveyed schools. Furthermore, most of students in S₄, S₅ and S₆ claimed not at all comfort with modern way of assessments, expected to measure all of their learning competences. Specifically, 6.1% of students claim to misunderstood assessments' instructions and students in S₄ and S₅ showed preference in short answers than essay type questions. Consequently, students' abilities in higher-order thinking, application, and problem-solving remain underdeveloped. These contrasts the Assessment for Learning (AFL) paradigm that emphasis teaching and learning feedback to improve next steps of learning or other orientations. The study identified several key barriers to effective CBA implementation, including the lack of laboratories and essential equipment, limited financial resources for organizing fieldwork, etc. The study concluded that the journey of reaching perspectives of CBA was still long, and suggested organization of CBA professional development programs for geography teachers and availability of relevant teaching and learning aids at schools, to develop all students' learning skills. It recommended stronger collaboration among education stakeholders to provide schools with the necessary resources and support for the successful implementation of CBA in geography education.

Key words: Competence-Based-Assessment, Teachers- Students- Perception, Geography.



29. Perceptions of Teachers on Integrating Digital Content in STEM Education: A Study in Selected Rwandan Secondary Schools

Olivier Habimana, Jean Francois Maniraho, Nsabayezu Ezechiel, Irene Ndayambaje, Evariste, Dany Kamuhanda, Uwera Marie Claire, Gerard Nizeyimana, and Albert Ngiruwonsanga

Corresponding author: habolivier13@gmail.com

University of Rwanda, College of Education

Abstract

This study investigates teachers' perceptions regarding the adoption of digital content in teaching and learning STEM subjects across 10 ICT-equipped secondary schools in Rwanda's Bugesera and Kicukiro districts. Using a convergent parallel mixed-methods approach, data were collected through structured questionnaires (based on the TPACK framework), interviews, and lesson observations. Stratified random sampling ensured gender-balanced participation of STEM teachers. Findings indicate that 93.1% of teachers expressed confidence in using digital tools for instruction, and 95.4% felt capable of searching and accessing digital information. However, confidence declined in areas such as troubleshooting technical issues (76.7%) and teaching via online platforms (67.4%). Regarding digital resource management, 79% felt confident organizing digital resources, 72.1% were comfortable using cloud storage, and 69.8% could adapt content to local needs. Despite this readiness, integration is hindered by four major challenges: (1) inadequate infrastructure and outdated or insufficient devices; (2) limited access to professional development and digital training; (3) curriculum rigidity and lack of pedagogical guidance for digital integration; and (4) financial and policy-related constraints. The study highlights that while teachers are motivated and digitally competent in many areas, improving infrastructure, enhanced training about digital content, curricular support, and policy backing is essential for sustainable digital content integration in STEM education.

Keywords: Perception, Digital content, STEM education, Secondary schools, Rwanda





in partnership with



mastercard
foundation

UNIVERSITY OF RWANDA

COLLEGE OF EDUCATION



+250 788-428-454



www.ur.ac.rw



info@ur.ac.rw