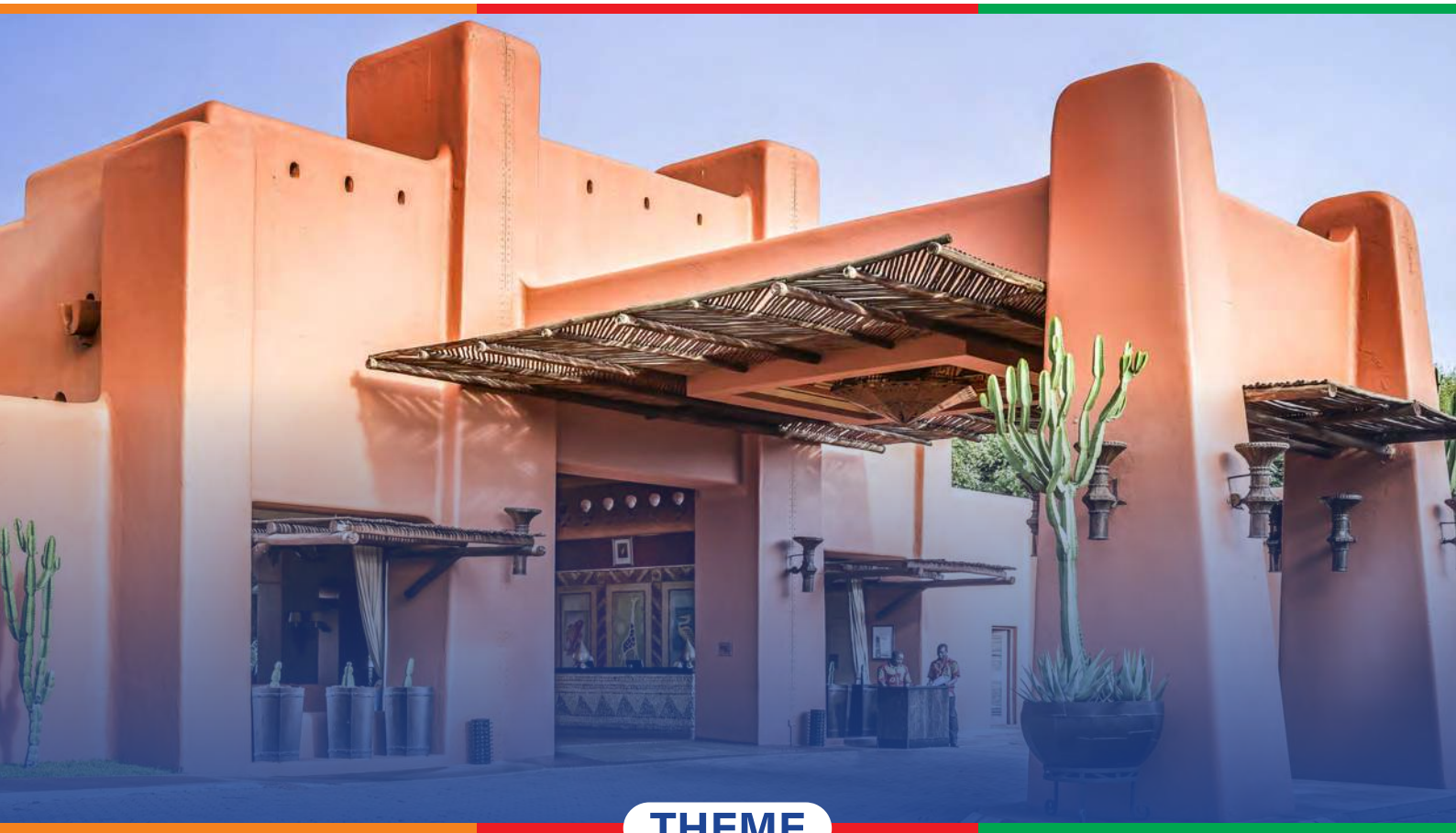
IAEA INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT

The 50th ANNUAL CONFERENCE OF THE INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT (IAEA)

21st September to 26th September 2025

PROGRAMME AND ABSTRACTS



THEME

CONFERENCE THEME:
"ASSESSMENT AGILITY: NAVIGATING RAPID EDUCATIONAL TRANSFORMATIONS."
Avani Victoria Falls, Resort, Livingstone, Zambia

Hosted by the Examinations Council of Zambia

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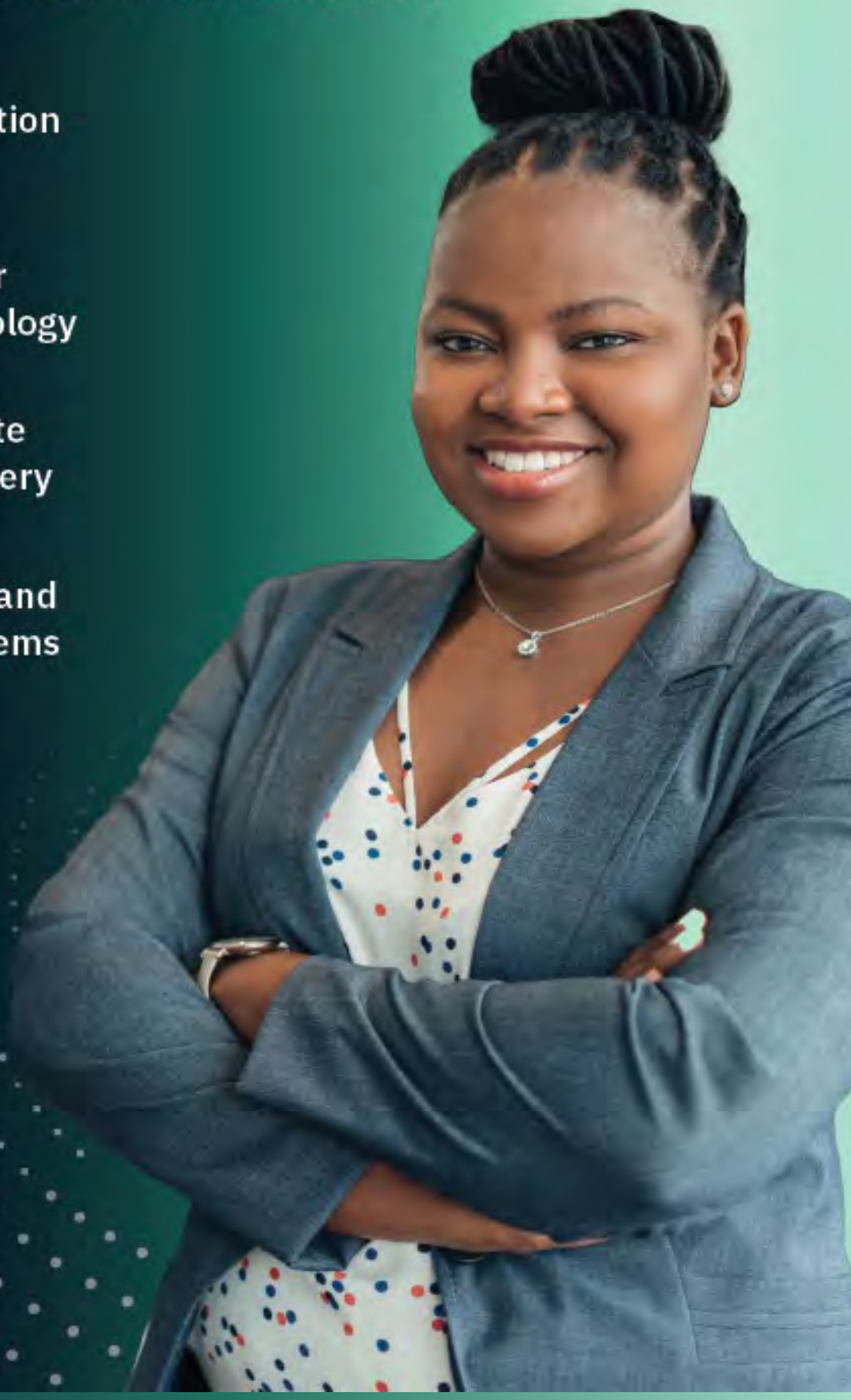

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THE EXAMINATIONS COUNCIL OF ZAMBIA

The Examinations Council of Zambia (ECZ) is a statutory body established by an Act of Parliament No. 15 of 1983 (amended in 1994), Chapter 137 of the Laws of Zambia, repealed and replaced by the Examinations Council of Zambia Act No. 3 of 2023. The Council's overall mandate is to prepare and administer examinations at the Primary, Junior Secondary, and Senior Secondary levels and award certificates to candidates who pass the examinations. The ECZ also conducts examinations for Early Childhood Education and Primary and Secondary Diplomas at the Teacher Education Level.
The functions of the Council are to:

a. prepare and administer examinations at a basic school, high school and school for continuing education;
b. monitor and supervise examinations at a basic school, high school and school for continuing education;
c. promote the integrity of the system of examinations at a basic school, high school and school for continuing education;
d. formulate examinations syllabi and assessment schemes;
e. formulate and enforce examination guidelines;
f. accredit examination centres;
g. appoint examination officers; Cap. 137 Cap. 1 Act No. 23 of 2011 Continuation of Examinations Council of Zambia Act No. 4 of 2013 Act No. 6 of 2012 Act No. 13 of 2008 Act No. 13 of 2011 Functions of Council Examinations Council of Zambia [No. 3 of 2023 55
h. register candidates for examinations;
i. award certificates to candidates who pass examinations;
j. cause the training of examination officers;
k. formulate a code of ethics and conduct for examination officers;
l. collaborate with Government departments and institutions in the administration of examinations in the Republic;
m. invite a person or body in, or outside, the Republic to assist the Council in the administration of examinations;
n. collaborate with the Zambia Qualifications Authority for the verification of examination qualifications conferred by the Council;
o. promote the international recognition of qualifications conferred by the Council;
p. provide advice to a State institution on the development and use of any system of examining when requested to do so; and
q. carry out research in examinations.

VISION Statement

An Educational Assessment Body of Excellence

MISSION Statement

To efficiently and innovatively conduct educational assessments and award certificates of comparable international standards

AKNOWLEDGEMENT

On behalf of the Examinations Council of Zambia (ECZ), I wish to extend our profound appreciation to all who contributed to the successful hosting of the 50th Annual Conference of the International Association for Educational Assessment (IAEA).

We are grateful for the support and guidance of the Honorable Minister of Education, Mr. Douglas M. Syakalima, MP; the Permanent Secretaries, Ms. Noriana M. Muneku and Dr. Kelvin Mambwe; the ECZ Council Chairperson, Professor Frank Tailoka; all Council Members and Committees of Council; as well as the Management and staff of the Examinations Council of Zambia.

Special commendations also go to:

1. The President and Members of the IAEA Board of Trustees
2. Members of the 50th IAEA Local Organising Committee
3. Members of the various Sub-Committees of the IAEA
4. Partners and Sponsors
5. Keynote Speakers and Authors of Papers and Posters
6. All Conference Delegates

I sincerely thank you all for your support and wish you continued success in your academic and professional pursuits.

Dr. Michael M. Chilala
Executive Director
Examinations Council of Zambia

TABLE OF CONTENTS

CONFERENCE THEME AND SUB THEMES

The theme and sub themes of the 50th Annual conference of the IAEA being hosted in Zambia by the Examinations Council of Zambia are:

Theme: "Assessment Agility: Navigating Rapid Educational Transformations."
Sub-themes:

1. Curriculum-Aligned Assessment Practices
2. Assessment for Learning vs Assessment of Learning
3. High-Stakes Testing
4. Equity and Fairness
5. Technology Integration
6. Assessment Literacy

Conference Fees:

The fees for the 50th IAEA Annual Conference in Livingstone, Zambia are as follows:

a) IAEA Member: USD 700.00

b) Non-IAEA Member: USD 750.00

c) Local Participant: USD 375.00

d) Excursion: USD 100.00

PARTICIPATING COUNTRIES

Afghanistan	Australia	Azerbaijan	Barbados	Botswana
Cameroon	Eswatini	Ethiopia	Germany	Ghana
India	Kazakhstan	Kenya	Lesotho	Malawi
Malaysia	Mexico	Namibia	Netherlands	Nigeria
Pakistan	South Africa	Tanzania	The Netherlands	Uganda
United Kingdom	USA	Zambia	Zimbabwe	

The International Association for Education Assessment (IAEA)

The International Association for Educational Assessment (IAEA) grew out of an International planning conference held in Princeton, New Jersey, U.S.A. on April 19-21, 1974. Some 35 individuals representing 18 countries met on that occasion to consider the desirability and feasibility of establishing an organisation to foster intercommunication among agencies throughout the world which are concerned with the application of assessment techniques for the improvement of educational processes and to provide a framework within which such agencies could undertake cooperative projects. It was decided that the Association, if established, would fill an important need and that an effort should be made to bring it into being.

On May 27, 1975 an organising meeting was held in Geneva, Switzerland, with logistic assistance from the International Bureau of Education, and the participants then decided to set up the Association. The Association believes that international cooperation in educational research and assessment is essential if education throughout the world is to be improved and if its benefits are to be extended to increasing numbers of people. It encourages the establishment of closer ties among individuals, agencies, and institutions who influence and serve educational systems and processes, to the end that nations may learn from each other, may help each other, and may do so with no diminution of their cultural autonomy.

Constitutions and Bylaws were adopted and officers and executive committee members were elected and in 1976 the IAEA held its first conference. Since then IAEA has grown and developed and now has about 160 members ranging from Individuals, Primary and Affiliate Organisations. An Executive Committee whose officers and members are elected by the Primary Organisation members governs IAEA, ensuring a wide geographic range is represented on the committee.

The Purpose of the International Association for Educational Assessment

The broad purpose of IAEA is to assist educational agencies in the development and appropriate application of educational assessment techniques to improve the quality of education. IAEA believes that this is best achieved through international cooperation and seeks to facilitate the development of closer ties among relevant agencies and individuals around the world.

The IAEA Board of Trustees (BoT)

The BoT is as follows:

POSITION	NAME	COUNTRY	ORGANIZATION
President	 Dr Mafu Rakometsi	South Africa	Umalusi
Vice President	 Dr Naveed Yousuf	Pakistan	Aga Khan University
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Full Institutional Member	 Dr Michael Chilala	Zambia	Examinations Council of Zambia
Full Institutional Member	Vacant		
Individual Member	Vacant		

KEY NOTE SPEAKERS

Seven local and international keynote speakers will deliver keynote addresses at the 50th Annual conference of the IAEA. These are:

Professor Innocent Mutale Mulenga

Title of the Key Note Address

Beyond the Test: Cultivating Assessment Agility and Curriculum Alignment in an Era of Rapid Educational Change

Professor Innocent Mutale Mulenga is an Associate Professor of Curriculum Studies and Assistant Dean for Research in the School of Education at the University of Zambia. Prof. Mulenga is the founding scholar of Curriculum Studies for Masters and Doctoral programmes at the University of Zambia (UNZA). He is in fact the first UNZA PhD graduate in Curriculum Studies, he also holds a Master of Education in Curriculum Studies and a Bachelor of Education both from the Catholic University of Eastern Africa in Nairobi, Kenya. His scholarly focus is in curriculum innovation, development and evaluation, teacher education and policy, educational assessment, pedagogy and vocational learning. Prof. Mulenga has widely provided consultancy services to UNICEF, UNESCO at both regional and international levels, British Council, USAID, European Union, Global Ethics, FAWE, World Bank, Commonwealth of Learning and Child Fund Zambia. Among his recent consultancy services with UNESCO, in 2024 he drafted a National Teacher Policy for the Ministry of Federal Education in Nigeria and also trained the Ministry of Education in Ethiopia on the same. He is currently leading the drafting of the Comprehensive Teacher Policy for Zambia. Prof. Mulenga has provided technical services to the Ministry of Education in Zambia on several educational issues.

Among his over 60 publications include key works on competency-based curriculum reforms in Zambia, authentic and sustainable educational assessment and curriculum alignment to climate change education across Southern Africa. Prof. Mulenga's academic and scholarly work offer deep insight into how educational systems can evolve to meet the ever-changing educational land scape so as to align perfectly with global discourses on equitable, future-oriented school systems.

Prof. Vukosi Marivate

Title of the Key Note Address

Assessment in the age of Language Models and Generative Artificial Intelligence

Professor Vukosi Marivate is a Professor of Computer Science and holds the ABSA UP Chair of Data Science at the University of Pretoria. He specialises in developing Machine Learning (ML) and Artificial Intelligence (AI) methods to extract insights from data, with a particular focus on the intersection of ML/AI and Natural Language Processing (NLP). His research is dedicated to improving the methods, tools and availability of data for local or low-resource languages. As the leader of the Data Science for Social Impact research group in the Computer Science department, Vukosi is interested in using data science to solve social challenges. He has worked on projects related to science, energy, public safety, and utilities, among others. Prof Marivate is a co-founder of Lelapa AI, an African startup focused on AI for Africans by Africans. Vukosi is a co-founder of the Masakhane Research Foundation, which aims to develop NLP technologies for African languages. Vukosi is also a co-founder of the Deep Learning Indaba, the leading grassroots Machine Learning and Artificial Intelligence conference on the African continent that aims to empower and support African researchers and practitioners in the field.

Professor Sarah Howie

Title of the Key Note Address

Measuring What Matters Most: Pioneering Assessment Agility for Africa's Educational Future

Professor Sarah Howie is the Director of the Centre for Capacity Development in Africa, Director of the Unit for International Credentialling, and Professor in the Faculty of Education at Stellenbosch University. She is a leading figure in educational assessment and quality assurance across Africa, and a member of the Academy of Science of South Africa.

With a career spanning more than three decades, Professor Howie was the founding Director of the Centre for Evaluation and Assessment, University of Pretoria (2001–2016), where she also served as Professor until 2017. She has led over 80 research projects, including those commissioned by UNESCO, UNICEF, and the World Bank, and has supervised numerous postgraduate students including in the field of large-scale assessments (including SEACMEQ).

She played a central role in international studies leading TIMSS, PIRLS, and SITES, nationally and is currently contributing to the development of the Continental Assessment Framework for Africa in reading. She is a member of the IEA's Publications Committee and several international editorial boards, and currently serves as Associate Editor of Studies in Educational Evaluation.

Her leadership appointments nationally include Chair of the Matriculation Board's Exemption Committee, Chair of the Coronation Foundation Board, was formerly the Deputy Chair of the South African Qualifications Authority (2015–2020). Her awards include the NSTF's Most Innovative Research Award (2003) and finalist recognition in the Women in Science and Woman of the Year awards.

Her work aims to shape and support assessment policy and practice for educational transformation across the continent.

Professor Kazhila Chinsembu, PhD

Title of the Key Note Address

Beyond the Test: *Cultivating Assessment Agility and Curriculum Alignment in an Era of Rapid Educational Change*

Professor Kazhila Chinsembu is the current Director-General of the Higher Education Authority (HEA) in Zambia, appointed in April 2024. A distinguished academic with over 29 years of experience in higher education, he has served at the University of Zambia (UNZA) and the University of Namibia (UNAM), where he became a full Professor of Molecular Biology and Drug Discovery in 2020. Professor Chinsembu holds a BSc. Ed (merit) in Biology and Chemistry from UNZA, an MSc (distinction) in Tropical Molecular Biology from the Free University of Brussels, and a PhD in Science Education from UNAM.

He is internationally recognized for his pioneering work in Afrocentric drug discovery, particularly in the use of indigenous medicinal plants to treat diseases such as HIV/AIDS, COVID-19, malaria, cancer, and tuberculosis. His research integrates indigenous knowledge systems with modern science, promoting locally driven healthcare innovation. Professor Chinsembu is a published author (h-index = 22) with numerous peer-reviewed articles and academic books, and has received multiple awards for research excellence and teaching.

As Director-General of HEA, Professor Chinsembu is committed to enhancing the quality, relevance, and regulatory oversight of higher education in Zambia, ensuring institutions align with national development goals and global academic standards.

Professor Cally Ardington

Title of the Key Note Address

Measuring What Matters—or Just What's Measurable? Balancing Purpose, Precision, and Pragmatism in Foundational Learning Assessment

Professor Cally Ardington is the Director of DataFirst, an open research data service at the University of Cape Town (UCT) dedicated to expanding access to and use of African microdata. She is also a Professor in the Southern African Labour and Development Research Unit (SALDRU) and Co-Scientific Director of J-PAL Africa. She holds a PhD in Economics from UCT, where she has built a career at the intersection of research, policy engagement, and data innovation.

Her research spans development and labour economics, with a particular focus on education and health. She has extensive experience in survey design, data curation, and the quantitative evaluation of education interventions, especially in early literacy and numeracy. Her longstanding collaboration with the South African Department of Basic Education contributed to establishing early grade reading benchmarks in all eleven official languages.

As Principal Investigator of the African Foundational Learning Data Hub, she leads efforts to advance an African-led research agenda on foundational learning through improved data access and capacity-building. Under her leadership, DataFirst works with African governments and organisations to curate high-quality open datasets and strengthen the technical skills of researchers and policymakers. Her work continues to contribute to education policy and practice, and to strengthen the use of high-quality data for improving learning outcomes across Africa.

Dr. Mary J. Pitoniak

Title of the Key Note Address

Experiences and prospects for integrating ICT in assessment systems for Southern African countries

Dr. Mary J. Pitoniak received an M.S. and Ph.D. in Educational Psychology and Psychometric Measures from the University of Massachusetts Amherst. Mary worked at ETS for 23 years, including as an Executive Director overseeing testing programs' compliance with the ETS Standards for Quality and Fairness. Her research interests include standard setting, testing accommodations for students with disabilities and English language learners, and computer-based testing. Dr. Pitoniak co-authored the standard setting chapter in the 4th edition of Educational Measurement, and co-authored the chapter on designing computerized adaptive tests in the Handbook of Test Development. She is the co-editor of the forthcoming fifth edition of Educational Measurement. Dr. Pitoniak has also consulted with education officials in other countries about issues related to assessment. She served as the lead psychometrician for capacity-building efforts with the National Council for Educational Research and Training in New Delhi, India. She has also advised, conducted, and provided training in standard setting in Chile, Malaysia, and South Africa. She also co-conducted an audit of college entrance examinations in Azerbaijan. Building on this expertise, after her recent departure from ETS, Dr. Pitoniak has launched an international educational assessment consulting enterprise.

Professor Dorothy Cynthia Nampota

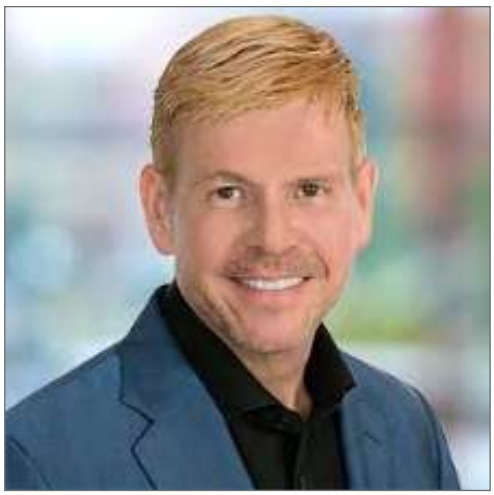
Title of the Key Note Address

Experiences and prospects for integrating ICT in assessment systems for Southern African countries

Prof. Dorothy Cynthia Nampota is a Professor of Science Education with over 30 years' experience in teaching, research, consultancy and leadership. She holds a Bachelor of Education (University of Malawi, 1991), Master of Arts (University of London, King's College, 1997), PhD (University of Bath, 2005) and University Certificate in Research Management, Teaching, Learning and Higher Education Management (University of Kassel, 2006). Her career, since 1992, has been with the University of Malawi where she served in a number of positions notably Director of Centre for Educational Research and Training (2010 – 2014), Head of Curriculum and Teaching Studies Department (2005-2009) and Deputy Dean of Faculty of Education (2005-2006).

Professor Nampota is currently the Executive Director of the Malawi National Examinations Board (MANEB), a position she has held since 2020. She is a member of various local and international boards and societies. She was Chairperson for ActionAid Malawi Board of Directors for four years and served as Vice Chairperson on the Board of Directors for National Commission for Science and Technology (2014-2017) and Malawi National Examinations Board (2010-2012). She also served as President of the Malawi chapter of the Southern African Association for Research in Mathematics, Science and Technology Education. Currently she is the founding chairperson of Goshen International University Council. Dorothy Nampota has professionally engaged with a number of higher education institutions. In Malawi she served as a member of Senate for St Jones DMI University and has spearheaded capacity building in teaching and learning for the Malawi University of Business and Applied Sciences (MUBAS), Malawi University of Science, and Technology (MUST). At the international level, she served as an external examiner for Universities of Swaziland, Johannesburg, Kwazulu Natal, North West and Pretoria in the Republic of South Africa and University of Life Sciences in Norway. Professor Nampota has undertaken numerous research studies in education. Her major research projects in this regard include the JICA funded curriculum improvement project; UNICEF funded Child Friendly Education Project; NUFU funded Broadening access into a more Socially Responsible Science and Technology Education project; AAU funded Implementing the Third Mission of Universities in Africa project; NEPAD-AUDA Science Education project and NORAD funded Female Education in Mathematics and Science in Africa (FEMSA). She has supervised many Masters and PhD students and published widely in journals and books.

PRE-CONFERENCE WORKSHOP FACILITATORS



Kevin E. Baird

Title: Artificial Intelligence in Assessment

Kevin E. Baird is a global leader in accelerated human performance and workforce development. Kevin's current work focuses on the development of portable international credentials for workforce mobility, and the application of conversation-based tools for predictive skill analytics using Large Language Models. Kevin serves as a design partner for some of the world's fastest-growing economies. Collaborating with global leaders worldwide, he creates platforms to enhance human performance and workforce readiness.

Mr. Baird designed the International Pathway for College & Career Readiness, focused on global skills pathways for labour mobility and migration. He also teaches graduate-level courses in trauma readiness and response, and is co-author of Whole: What Teachers Need to Help Students Thrive (Wiley, 2020) and Trust Me: Discovering Trust in a Culture of Distrust (2023).

Mr. Baird is a contributor to research supported by the U.S. National Science Foundation and neurobiological studies of student engagement with Dr. Paul Zak of Claremont Graduate University. His skills acceleration research spans every continent except Antarctica.

Kevin's work in early literacy includes collaborations with Dr. Kay Stahl at the NYU Literacy Clinic to integrate foundational literacy skills into digital platforms; work with Dr. Karin Hess to develop cognitively complex, language-rich classrooms; and global leadership with NABU and the United Nations on mother-tongue literacy programs. He is currently advancing low-bandwidth streaming and AI-powered multilingual content delivery to expand educational access globally.

Kevin holds degrees in Sociology, Anthropology, and Business with academic theses focused on medical sociology, language acquisition, and global business development. He is also one of the world's first Accredited Learning Environment Planners. Mr. Baird is a recipient of the Beinecke National Scholarship, the Wingspread Fellowship and a member of the Phi Beta Kappa Secretary's Circle.

Renske E. Kuijpers

Title: Estimating Learner Abilities Using Plausible Values

Renske is a Research Fellow in the Psychometrics team within the Measurement and Methodology program at the Australian Council for Educational Research (ACER) since January 2024. Renske holds a PhD in psychometrics and has years of experience as a psychometrician, researcher and trainer. She has been involved in statistical and psychometric research and education at various universities in the Netherlands since 2008.

Her expertise is in traditional and modern measurement theories, psychometrics, statistics, educational measurement, and high stakes assessment. At ACER, Renske is mainly involved in medical examinations for various colleges like the Royal Australasian College of Surgeons and the Royal Australian and New Zealand College of Radiologists, where she is responsible for the psychometric analyses and reporting. Before joining ACER, Renske was a psychometric researcher at the national institute for educational testing and assessment in the Netherlands, where she worked on various national and international high stakes projects like the national central exams at the end of secondary school, the Dutch National Assessment of Educational Progress and the Nigerian National Assessment of Learning Achievement in Basic Education.

Dr. Arnold J. Brouwer

Title: Competency Based Assessment (Strategic Assessment in a Dynamic Curriculum – From Competency Based Evaluation to Data Informed Education Practice)

Dr. Arnold J. Brouwer (1973) is international assessment expert in educational measurement and psychological testing. He is an all-round researcher, innovator and consultant of methods and techniques for analysing, optimising and auditing fair, reliable, secure and valid assessments.

He is director/owner of the Dutch Research Centre for Examination and Certification. Besides he is guest lecturer and guest researcher at the Department of Cognition, Data and Education within the Faculty Behavioural, Management and Social Sciences at the University of Twente in the Netherlands.
He obtained his PhD on the Systems-oriented Talent Management (STM) model, which he elaborated into an evidence-based method for visualising the interaction between human talent and the business purpose from both a psychological and managerial perspective.

He has carried out external audits, conducted training and provided capacity-building in countries including Azerbaijan, Curaçao, Jamaica, Kazakhstan, Mexico, South Africa, Uganda, Zambia and the Netherlands.

https://www.linkedin.com/in/arnold-brouwer-a515043/

CONFERENCE PROGRAMME

DAY 1: SUNDAY 21ST SEPTEMBER 2025		
TIME	**ACTIVITY**	**FACILITATOR**
08:00–17:00	**Arrival and Registration**	**Local Organising Committee (LOC)**
PRE-CONFERENCE WORKSHOPS		
09:00–13:00	**Artificial Intelligence in Assessment**	**Kevin E. Baird, Dr. Amanda Jewell | Prometric**
11:00–11:30	***COFFEE BREAK***	
11:30–13:00	**Artificial Intelligence in Assessment**	**Kevin E. Baird, Dr. Amanda Jewell | Prometric**
Board of Trustees (BoT) and Chief Executive Officers (CEOs) Meetings		
09:00–17:00	**IAEA Board of Trustees (BoT) Meeting**	**BoT**
11:00–13:00	**CEOs Meeting**	**BoT**
13:00–14:00	***LUNCH***	
PRE-CONFERENCE WORKSHOPS (PARALLEL)		
14:00–15:30	**Estimating Learner Abilities Using Plausible Values**	**Renske Kuijpers |ACER Australia**
14:00–15:30	**Competency Based Assessment**	**Dr. Arnold Brouwer |RCEC**
15:30–16:00	***COFFEE BREAK***	
16:00–17:30	**Estimating Learner Abilities Using Plausible Values**	**Renske Kuijpers |ACER Australia**
16:00–17:30	**Competency Based Assessment**	**Dr. Arnold Brouwer |RCEC**
18:30–20:30	**COCKTAIL RECEPTION at KINGFISHER BOMA**	
END OF DAY 1		

DAY 2: MONDAY 22ND SEPTEMBER 2025		
OPENING CEREMONY		
TIME	**ACTIVITY**	**FACILITATOR**
08:00–08:30	**Arrival and Registration**	**Local Organising Committee (LOC)**
08:15–08:30	**Entertainment**	Director of Programmes
08:15–08:30	**Arrival of Guest of Honour- Minister of Education, Hon. Douglas M. Syakalima, MP.**	Director of Programmes
08:30–08:35	**National Anthem**	Director of Programmes
	Opening Prayer	Director of Programmes
08:35–08:50	**Remarks**	IAEA President - Dr. Mafu Rakometsi
08:50–09:20	**Remarks**	ECZ CEO - Dr. Michael M. Chilala|ECZ Board Chairperson - Professor Frank Tailoka|PS Administration - Ms Noriana M. Muneku
09:20–09:45	**Official Opening Address**	Minister of Education, Hon. Douglas M. Syakalima, MP.
09:45–10:00	**Entertainment**	Director of Programmes

KEYNOTE ADDRESS				
10:00–11:00	**Beyond the Test: Cultivating Assessment Agility and Curriculum Alignment in an Era of Rapid Educational Change**	**Professor Innocent Mutale Mulenga**	**University of Zambia**	**Chairperson: Dr. Marie-Louise Botha**
11:00–11:30	***COFFEE BREAK***			

PARALLEL SESSIONS				
TIME	**ROOM 1**	**ROOM 2**	**ROOM 3**	**ROOM 4**
11:30–11:48	**126.** Exploring Educator Perceptions on Integrating Balanced and Inclusive Education within Competency-Based Reform in Eswatini – **Sibusiso Masuku, Patrick Nhlengetfwa | Examinations Council of Eswatini | Eswatini**	**306.** Tendencies of students' choice of speciality... in Azerbaijan – **Elmir Shirinov | State Examination Center, Azerbaijan | Azerbaijan**	**612.** Navigating Rapid Educational Transformation through Assessment Agility and Evaluation – **Motsereganyi Wago Kamankala | Mogoditshane Junior Secondary**	**512.** Ethical Issues in AI-Driven Test Item Development: Challenges and Solutions – **Dr. Jonah Kenei | Kenya National Examination Council | Kenya**

TIME	ROOM 1	ROOM 2	ROOM 3	ROOM 4
			School | Botswana	
11:48–12:06	**113.** Teachers Adoption of Dynamic Integrated Curriculum: Opportunities and Challenges. A Case of Junior Secondary Schools, Kenya. – **Elizabeth J. Katam, Ann W. Gachoya | Kenyatta University; Ministry of Education Kenya | Kenya**	**202.** Teachers' and Students' Perceptions to Enhancing Teaching and Learning in Secondary School through Formative Assessment – **Ashenafi Tesfaye Bogale | Ethiopian Educational Assessment and Examinations Service | Ethiopia**	**403.** Promoting inclusiveness in Assessments: The Case of Candidates with Special Educational Needs at the Examinations Council of Zambia **– Beulah Mofya | Examinations Council of Zambia | Zambia**	**531.** From Disruption to Continuity: Building Resilient Digital Assessment Systems in the Caribbean – **Natasha Porte | Barbados Integrated Management System | Barbados**
12:06–12:24	**119.** Analyzing the Alignment of the Hospitality Skills Training with Industry Needs in the Copperbelt Province, Zambia – **Margaret Pansho, Rabecca Kayumba, Florence Phiri-Kapayi, Selina Banda, Jack Kaale, Audrey Muyuni, Ireen Moonga Ngandu | Copperbelt University; Chalimbana University; Mulungushi University | Zambia**	**313.** Evaluating the Use of Authentic Assessment Methods Beyond High-Stakes Testing for Comprehensive Evaluation – **Samuel Ego | Kenya National Examinations Council | Kenya**	**412.** Developing Responsive Assessment Strategies to Promote Inclusive Education – **Jabulani Pato, Lindiwe Sibandze, Siphiwe Sibiya | Examinations Council of Eswatini | Eswatini**	**535.** Enhancing Exam Integrity through Aadhaar: Addressing Malpractices & Impersonation in SSC Exams – **S. GopalaKrishnan, Satish TJ, Ashish Kumar Srivastava | Staff Selection Commission | India**
12:24–12:42	**129.** Grounding Innovation in Local Context: Embedding the South African Competency Framework – **Zimbili Langa | Independent Examinations Board (IEB) | South Africa**	**207.** Evaluating the Effectiveness of E-Portfolio-Based Assessment in National Skills Qualification (NSQ) Centres in Nigeria – **Dr. Mohammed Aminu Mohammed, Mr. Pius Osaigbovo Stephen, Dr. Irene Ovekhairi Iluobe | NABTEB, Nigeria | Nigeria**	**620.** Validation of West African Senior School Certificate Examination for School Candidates' 2022 Literature-in-English Objective Test Items: Insights from Item Response Theory – **Kwaku Dankwa, ASARE Eric | The West African Examinations Council | Ghana**	**505.** The Effect of Virtual Reality Meditation on Science Education Students Academic Achievement – **Cecilia Obi Nja, Bernadette Cornelius-Ukpepi | University of Calabar | Nigeria**
12:42–13:00	**122.** An Evaluation of Teacher Competencies in Developing Learning Assessment Items in Civic Education in Selected Secondary Schools of Kalomo District, Zambia – **Nachintu Malambo, Innocent Mutale Mulenga | University of Zambia | Zambia**	**310.** Assessment of Scientific Skills using Project-Based Learning – **A Pilot Study from Aga Khan University Examination Board – Munira Muhammad Rangwala, Naveed Yousuf, Raabia Hirani | Aga Khan University Examination Board | Pakistan**	**604.** Exploring the Principals' Perspectives on the Enablers and Barriers of Teachers' Implementation of the National Assessment Feedback – **Bonnqe Taolane | Examinations Council of Lesotho | Lesotho**	**525.** The Relationship between Teachers' AI-Readiness and their Use of CBA-Aligned Assessment Methods – **Leonard Otieno Adhiambo | Kenya National Examinations Council | Kenya**
13:00–14:00	***LUNCH***			
14:00–14:18	**104.** Adaptive Assessment Frameworks in a Dynamic Curriculum: Re-imagining Teacher Evaluation in Zambia's Phased CBC Implementation – **Bwembya Ireen, Harrison Daka, Beatrice Botha Chomba, Langson Chibuye, Lazarous Kalirani, Kenneth Likando, Njekwa Mamunye | Ministry of Education, University of Zambia, Examinations Council of Zambia | Zambia**	**302.** High-Stakes Testing in South Africa **– Betty Mokoka | Department of Basic Education – South Africa | South Africa**	**407.** A Differential Item Functioning Estimate of NABTEB Mathematics Objective Test Items Based on Gender Among Technical College Students in Nigeria **– Dr. Mohammed Aminu Mohammed, Mr. Pius Osaigbovo Stephen, Dr. Irene Ovekhairi Iluobe, Mrs. Irene Etarefe**	**511.** Exploring Advanced Subsidiary Teachers' Experiences and Perceptions on the Integration of Smart Boards in Teaching in Namibian Secondary Schools – **Dr. Jafet S. Uugwanga | Ministry of Education, Namibia (NIED) | Namibia**

			Ipogah | NABTEB, Nigeria | Nigeria	
14:18–14:36	**108.** Agile Assessment Strategies for Competency-Based Civic Education Curriculum: Lessons from Zambia's Public Universities **– Dingase E. Mtonga | Mulungushi University, Kabwe | Zambia**	**314.** Evaluating the Implementation of School-Based Assessment in Grade 12 Mathematics: A Case to Enhance Systemic Change in South Africa – **SB Mthembu, M Phoshoko, ME Letsoalo | University of South Africa; University of Limpopo; Department of Basic Education | South Africa**	**603.** Investigating Candidates' Performance in English Language Papers in West African Senior School Certificate Examination for School Candidates 2022-2024 in Lagos State, Nigeria for Decision-making and Accountability **– Angela N. Obi, Olayemi I. Babalola, Oriyomi O. Olubanwo | WAEC International Office | Nigeria**	**513.** Bridging Global Standards with Local Innovation: Piloting a Digital Language Proficiency Platform – **Dr. Konul Hajiyeva | State Examination Center of Azerbaijan | Azerbaijan**
14:36–14:54	**111.** Preparing Students for the Future of Work: An Analysis of the World of Work (WoW) and Skill India Programmes – **Dr. Meena Yadav, Prof. Indrani Bhaduri, Prof. Dinesh Prasad Saklani, Dr. Zahra Kazmi | PARAKH, NCERT, India | India**	**210.** The Early Grade Reading Assessment (EGRA) Examined Against Two Prevailing Frameworks for Assessment Quality – **Hetal Thukral, Aimee Reeves | Independent Researchers | United States**	**406.** Maximising the Inclusiveness of Assessments in an African Country **– Dr Heidi Bolton, Ms Nothando Ntshayintshayi, Mr Tshepho Mokwele | South African Qualifications Authority (SAQA) | South Africa**	**534.** Extent of Technological Resource Utilization in Preparation for WAEC Computer-Based Exams in Nigerian Secondary Schools – **Rosemary Ojo-Odide, Ezinna Stella Ohia-Chima | WAEC, Nigeria | Nigeria**
14:54–15:12	**130.** Beyond the Score: A Holistic Account of South Africa's Systemic Evaluation as a Catalyst for Transformative Education Reform **– Nonhlanhla Shozi | Department of Basic Education, South Africa | South Africa**	**205.** Assessment Practices in Early Childhood Education: Balancing Innovative Play-Based Learning, Formative and Summative Approaches to School Readiness in Zambia – **Collins Kaluba, Robinson Mambwe, Bibian Kalinde, Manoah Sichula | University of Zambia | Zambia**	**408.** Assessing Gender Stereotypes in Vocational Education and Training in Uganda – **Dr. Wilfred Nahamya | UVTAB, Uganda | Uganda**	**528.** A Human-AI Collaboration Model for Post-Examination Analysis – **Matsie Agnes Mohale | Umalusi | South Africa**
15:12–15:30		**213.** An Investigation into the Effectiveness of Assessment for Learning versus Assessment of Learning in Promoting Student Development and Academic Development – **Linda Munyenga | Examinations Council of Zambia | Zambia**	**621.** Building Assessment into the Heart of Teaching: The Role of ASER Tests in Zambia's Catch Up Program – **Osir Omondi, Anjali Shandilya, Anna Murru, Daniele Ressler | VVOB | Zambia**	**519.** The Validity of Virtual Labs for Assessing Science Practical Skills – **Emma Walland, Alison Rodrigues | Cambridge University Press & Assessment, UK | United Kingdom**
15:30–16:00	***COFFEE BREAK***			
16:00–16:18		**218.** Assessment for Learning vs Assessment of Learning: An Assessment of its Implementation in Four Selected Special Schools in Zambia – **Ruth Chifinda, Muyunda Mayamba Charity | Examinations Council of Zambia | Zambia**	**608.** Assessing the Readiness of Candidates in Accelerated and Standard Programmes for the Eswatini General Certificate of Secondary Education – **Gifted Maziya, Xolile Kunene, Sibusiso Masuku | Examinations Council of Eswatini | Eswatini**	**536.** An Innovative Approach to Evaluating Student Success – **Samuel Berestizhevsky, Tanya Kolosova | YieldWise Inc. | United States**

16:18–16:36		**304.** Managing Exam-Related Stress Through Neurologically-Informed School Climate Training – **Chipwaila Chunga, Theresa Lubozha, Peter Mumba | Healthy Learners | Zambia**	**615.** Strengthening Assessment Literacy in Emerging Education Systems: Insights from LaNA and the IEA Analyzer – **Oliver Neuschmidt | IEA Hamburg | Germany**	**518.** Optimizing Technology Tools in STEM Education: Leveraging Technological Advancements for Assessments in Zambia – **Emily Kamizi, Selina Banda, Pelekelo Kabundula, Daniel L. Mpolomoka, Moono Muvombo, Abigail Nachilima, Thelma Chanda Chansa | Unicaf University; Copperbelt University; Nkrumah University; Chreso University | Zambia**
16:36–16:54		**312.** Stress Management among Candidates Sitting the School Certificate Examination in Zambia – **Sakala Bathseba Sophia Charles | Examinations Council of Zambia | Zambia**	**418.** The Decline in Male Students' Academic Performance at Junior Secondary Level: A Case of Selected Schools in Kabwe Urban (2019-2023) – **Mwenzi Mponda, Audrey Muyuni | Mulungushi University | Zambia**	**509.** Reliability of Artificial Intelligence in Evaluating Cognitive Levels of Life Sciences Items – **Dr Mbalenhle Happiness Ngema | Umalusi | South Africa**
16:54–17:12				**514.** Revolutionizing Candidate Registration Support: Leveraging AI for an Optimized Public Examination Administration Process – **Dr. Louisa Muparuri | Zimbabwe School Examination Council | Zimbabwe**
POSTER PRESENTATION - EXHIBITION AREA				
09:00–17:30	**307.** Creation of Accessible Examination Platform for the Differently-abled (ACCESS) Students – **Hilary Jnr Chilala, Ireen Moonga, Audrey Muyuni, Musole Siachisa, Annie Penda | Mulungushi University, Kwame Nkrumah University | Zambia**	**315.** Test Equating for Maintaining Standards Using Comparative Judgement **– Kevin Mason | Pearson UK | United Kingdom**	**503.** The Impact of Formative Assessment on Students' Self-Regulation Skills in Mastering Subject Knowledge **– Alzhanova Bakyt Konysbaikyzy | Nazarbayev Intellectual School of Physics and Mathematics of Aktobe | Kazakhstan**	**510.** Modernizing Examination Data: Namibia's OpenEMIS Exams Success Story – **Dr. Elizabeth Ndjendja, Karl Turnbull | DNEA (MEIYSAC), Namibia; Community Systems Foundation | Namibia**
END OF DAY 2				

DAY 3: TUESDAY, 23RD SEPTEMBER 2025

TIME	ACTIVITY	FACILITATOR
08:00–09:00	**Arrival and Registration**	**Local Organising Committee (LOC)**
KEYNOTE ADDRESS		

09:00–10:00	**Assessment in the age of Language Models and Generative AI**	**Professor Vukosi Marivate**	**University of Pretoria**	**Chairperson: Mr Elmir Shirinov**
10:00–11:00	**Measuring What Matters Most: Pioneering Assessment Agility for Africa's Educational Future**	**Professor Sarah Howie**	**Stellenbosch University**	**Chairperson: Ms Lorena Garelli**

11:00–11:30	*COFFEE BREAK*			
PARALLEL SESSIONS				
Time	**ROOM1**	**ROOM2**	**ROOM3**	**ROOM4**
11:30–11:48	**117.** Advancing Educational Assessment Reform: Usability of Flexible and Adaptive Assessment Models in Zambia – **Kapesha C. Ngulube, Gift Kaira | Mulungushi University | Zambia**	**219.** Students' Learning Assessment Data; Implications for Education Policy Decision Making in Cameroon State Universities – **Tah Delphine Berka Sakwe | University of Buea Cameroon | Cameroon**	**618.** Conceptions of Assessment among In-service UB Teachers in Education Programme: Implications for Practice and Professional Development – **Sello E. Moyo, Gaelebale Nnunu Tsheko, Figi Phuti-Kelebonye | University of Botswana | Botswana**	**532.** Security Measures in the Development, Administration, and Processing of Exams – **Rahman Mehralıyev, Tural Dunyamalıyev | State Examination Centre, Azerbaijan | Azerbaijan**
11:48–12:06	**116.** Exploring Dynamic Curriculum Integration And Agile Assessments To Adapt Educational Transformations – **Kanyi Gioko | Kenya National Examination Council | Kenya**	**216.** Enabling Competency-Based Education Through Holistic Progress Cards: A Paradigm Shift in School Based Assessments in India – **Prof. Indrani Bhaduri, Prof. Dinesh Prasad Saklani, Dr. Meena Yadav, Dr. Zahra Kazmi | NCERT, India | India**	**419.** Comparative Analysis of Pre-Moderated and Post-Moderated Scores for School-Based Projects in Food and Nutrition in Eswatini – **Nolwazi Ntombela, Makhosazane Nyoni | Examinations Council of Eswatini | Eswatini**	**540.** CXC's Approach to Artificial Intelligence use in Assessment for the Secondary School System in the Caribbean: Policy and Standards – **Wayne Wesley, Nicole Manning, James Young | Caribbean Examinations Council | Barbados**
12:06–12:24	**110.** Responsive and Purposeful Assessment for Professional Learning **– Dr. Marie-Louise Botha | Stellenbosch University | South Africa**	**301.** Item-Level Diagnostics of BECE Basic Science Test Using CTT and IRT: Implications for National Assessment Reforms – **Allwell Sunny Njigwum, Musa Adekunle Ayanwale, Vincent Anosike Asuru | National University of Lesotho; Ignatius Ajuru University of Education, Nigeria | Lesotho**	**613.** Cluster Analysis of School Performance in Primary School Leaving Examinations in Compulsory Taught and Non-Taught Subjects – **Nonde Mukuma | Examinations Council of Zambia | Zambia**	**521.** Impact of Integrating AI-Powered Tools in Teaching Biology on Grade 12 Learners' Performance: A Case of Nakonde Secondary School **– Festus Kalunga, Asiana Banda, Murali Dadi | Copperbelt University, Zambia | Zambia**
12:24–12:42	**120.** Individual and Collaborative Assessment: Strategies for Developing Collaboration Competence in Pre-Service Mathematics Teachers – **Maureen Kanchebele Sinyangwe, Jive Lubbungu, Harrison Daka, Rachel Kabeta, Boniface Lisuba | Kwame Nkrumah University; University of Zambia; Mulungushi University; Examination Council of Zambia | Zambia**	**208.** Availability, Adequacy and Utilization of Digital Devices in Students' Assessment in Nigerian Technical Colleges – **Dr. Mohammed Aminu Mohammed, Mr. Pius S. Osaigbovo, Dr. Evans O. Omorodion, Prof. Raymond Emmanuel | National Business and Technical Examinations Board (NABTEB), Nigeria | Nigeria**	**616.** Evaluating the Impact of NIPUN Bharat on Foundational Numeracy in India: Insights from National Assessments – **Prof Dinesh Prasad Saklani, Prof Indrani Bhaduri, Bhaswati De, Vivek Gupta | NCERT, Ministry of Education, India | India**	**516.** Reorienting English Language Assessment: The Role of Artificial Intelligence in Instruction and Assessment of English Language in Kenya – **Dr. Tobias O. Owiti | Kenya National Examinations Council | Kenya**
12:42–13:00	**102.** Mathematics teachers' perceptions on the introduction of school-based assessment in mathematics – **Allan Musonda, Christine Musenge | Copperbelt University; Ndeke Secondary School | Zambia**	**220.** From Segmentation to Synergy: A New Framework for Assessment Integration – **Theshaya Naidoo | University of KwaZulu Natal, South Africa | South Africa**	**606.** Assessing Stakeholders' Information Needs and Perceptions on Assessment Results Regarding National Examinations in Malawi – **Dorothy Nampota, Fannie Chilunga, Esther Khundi, Grace Koloviko, Chimwemwe Zidana, Austin Chimbalu, Gift Tembo, Edward Masoambeta | Malawi National Examinations Board (MANEB) | Malawi**	**538.** Mobile-Based Adaptive Assessment for Student Selection – **Thokozani Elvis Chisale | Institute of Chartered Accountants in Malawi | Malawi**
13:00–14:00	*LUNCH*			
14:00–14:18	**105.** Teachers' Competencies in Assessing and Instructing Learners under Competency Based Curriculum in Lusaka – **Chama Kabumbu | Cavendish University Zambia | Zambia**	**303.** Examining South Africa's grade 12 mathematics performance by question: Insights from 2014-2024 National Senior Certificate data **– Biki Lepota | Umalusi | South Africa**	**414.** Contemporary Issues in Test Biasness in Public Examinations in Nigeria – **Moses Oladele O. | National Examinations Council, Nigeria | Nigeria**	**501.** Exploring the Impact of Artificial Intelligence on the Validity and Efficiency of Large-Scale Educational Assessments – **Abuh A. Yahaya | National Examinations Council (NECO), Nigeria | Nigeria**
14:18–14:36	**123.** Are Online Schools Meeting Assessment Standards? A Closer Look at Business Studies SBA Tasks – **Nomaswazi Shabalala | Umalusi | South Africa**	**201.** Holistic Assessment for Lower Grades Pupils: Nurturing Talents for Self-Employment in Future – **Alfred D. Mdima | The National Examinations Council of Tanzania (NECTA) | Tanzania**	**611.** Assessment Stakeholders Workshops in Edo State Nigeria: Process, Prospects and Problems – **Moses Oladele O. | National Examinations Council, Nigeria | Nigeria**	**507.** Integration of Technology in Primary Education for Global Sustainability: A Case Study in Cross River State – **Cornelius-Ukpepi, Bernedette U.; Nja, Cecilia O.; Ndifon, Rita A. | University of Calabar | Nigeria**

14:36–14:54	**118.** Evaluating Teachers' Awareness of Curriculum-Aligned Assessment Practices for Learners with Special Needs in Zambia's Competence-Based Curriculum – **Lillian Nsalamu Lialabi | Libala Secondary School | Zambia**	**203.** Faith-Based Schools and Compulsory Policy of Religious Education as a Moral Saver: A Case of the Marianist Education in Zambia – **Audrey Muyuni, Ireen Moonga, Sheila Chilala, Fred Moonga | Mulungushi University; Eswatini University | Zambia**	**425.** An Inclusive Perspective – **Incorporating South African Sign Language Home Language into The National Senior Certificate Examinations: Successes and Challenges Explored – Christo Thurston | Department of Basic Education | South Africa**	**508.** Artificial intelligence (AI) and academic integrity in assessments in nursing education at higher education institutions in South Africa **– Dr Fiona Singh | University of Zululand | South Africa**
14:54–15:12	**125.** Review of Assessment Practices in Outcomes-Based Education: A Case Study of Secondary School Teachers of Physical Science in Zambia – **Shadreck Nkoya, Louise M. Botha | ECZ, Stellenbosch University | Zambia**	**211.** An Evaluation of Examination Malpractice Trends in Five Chinsali District Secondary Schools – **Ireen Moonga, Mable Nyirenda, Audrey Muyuni, Jive Lubbungu | Mulungushi University; Kwame Nkrumah University | Zambia**	**405.** On-screen, Adaptive Personalised Assessments: Meeting Accessibility Needs for Learners in Wales – **Darren Cooper | AlphaPlus | United Kingdom**	**529.** Harnessing Ethical AI in Student Academic Performance Prediction: A Machine Learning Perspective – **Musa Adekunle Ayanwale | University of Johannesburg | South Africa**
15:12–15:30	**101.** Assessment of The Alignment of the WASSCE Civic Education Questions with the National Curriculum in Nigeria – **Adenike Adedigba Akinlua, Dr. Adunola Osoba | WAEC International Office, Nigeria | Nigeria**	**209.** Ensuring Accurate Measurement in School-Based Projects through Context-Applicable Critical Appraisal Guidelines: The Case of ZIMSEC **– F. Chinyemba | Zimbabwe School Examinations Council | Zimbabwe**	**605.** Cultivating a mindset for inclusive assessment – **Divya Varier | George Mason University | United States**	**537.** Bridging the Digital Divide through Online Authoring – **Shaun Crowley, Sid Spalding | AQA Global Assessment Services | United Kingdom**
15:30–16:00	***COFFEE BREAK***			
16:00–16:18		**221.** Assessment Challenges of Beginning Primary School Teachers in Kafue District – **Victoria Silumba | Kamwala Secondary School | Zambia**	**404.** Inclusive Assessment Practices for Secondary Students with Cerebral Palsy: A Study of Five African Countries – **Daniel L. Mpolomoka, Oluwaseun Temitope Lawal, Gilliet Chigunwe, Helena N. Amadhila, Nkemngong Atemnkeng | Unicaf University, Federal College of Education Iwo, Zimbabwe Open University, University of Namibia, Ministry of Scientific Research and Innovation Cameroon | Zambia**	**504.** Enhancing Assessment Agility through Generative AI: Supporting Competence-Based Curriculum Implementation in Zambia – **Brian Halubanza, Rachel Kabeta, Lucy Kamboni, Selina Kadakwiza | Mulungushi University, Kwame Nkrumah University | Zambia**
16:18–16:36			**413.** Equity and Fairness: Inclusivity and Mitigating Biasness in Assessment for Diverse Student Population – **Linda Munyenga | Examinations Council of Zambia | Zambia**	**541.** Harnessing AI for Equity and Excellence in High-Stakes Assessment – **Amanda B. Jewell | Prometric**
16:36–16:54			**420.** Assessing the Inclusivity of Assessment Systems: Teacher Perceptions and Implications for Practice – **Phiri Prisca Sulo, Daniel Mpolomoka | Evelyn Hone College; Unicaf University | Zambia**	
16:54–17:12			**614.** Zambian Educators' Lived Experiences with Big Data and Assessment Interpretation for Personalized Learning – **Obrain Mwaanga, Sakala Bathseba Sophia Charles | David Livingstone College of Education; Examinations Council of Zambia | Zambia**	
17:12–17:30			**619.** Effective Assessment & Data Interpretation in Primary and Secondary Schools: Towards Improved Learning Outcomes and Instructional Strategies in Zambia **– Sichali Cheyo, Christine Mushibwe, Rose Chikopela, Joseph Hachintu, Daniel L. Mpolomoka, Viliza Silwamba | Unicaf University, Chalimbana University, Nkrumah University | Zambia**	

18:30–22:00	**GOLDEN JUBILEE BANQUET**
	END OF DAY 3

DAY 4: WEDNESDAY, 24TH SEPTEMBER 2025

EXCURSIONS

TIME	ACTIVITY	FACILITATOR
08:30–09:00	Arrival at AVANI	Local Organising Committee (LOC)
09:00–15:00	Excursions	Local Organising Committee (LOC)

END OF DAY 4

DAY 5: THURSDAY, 25TH SEPTEMBER 2025

TIME	ACTIVITY	FACILITATOR
08:00–09:00	Arrival and Registration	Local Organising Committee (LOC)

KEYNOTE ADDRESS

09:00–10:00	**Towards a Freirean approach to curriculum-aligned assessment of higher education in Zambia**	**Professor Kazhila Chinsembu**	**Higher Education Authority, Zambia**	**Chairperson: Dr Naveed Yousuf**
10:00–11:00	**Measuring What Matters—or Just What's Measurable? Balancing Purpose, Precision, and Pragmatism in Foundational Learning Assessment**	**Professor Cally Ardington**	**University of Cape Town, South Africa**	**Chairperson: Dr. Mary Pitoniak**
11:00–11:30	*COFFEE BREAK*			

PARALLEL SESSIONS

Time	ROOM1	ROOM2	ROOM3	ROOM4
11:30–11:48	**107.** Building Functional Literacy Through Agile Assessment: Kazakhstan's Experience with PISA-like Testing in Secondary Education – **Diana Sartauova, Fariza Khamza | Center for Pedagogical Measurements, Kazakhstan | Kazakhstan**	**305.** The Shift from Traditional Assessment to Alternative Assessment: The Case of the Eswatini Prevocational Certificate of Secondary Education Programme – **Dr. Sifiso Hlandze | Examinations Council of Eswatini | Eswatini**	**411.** Investigating factors influencing the performance of deaf candidates in mathematics and English Language: A case for the High School for the Deaf in Eswatini **– Gugu Gumbi Mthethwa | Examinations Council of Eswatini | Eswatini**	**539.** Promoting Excellence through Self-Evaluation: Implementing the IAEA Standards in Technology-Based Assessment – **Vali Huseyn | Independent (Vretta) | Azerbaijan**
11:48–12:06	**109.** From Policy to Practice: Building National Capacity for Competency-Based Assessment in Zambia – **Dr. Arnold J. Brouwer, ECZ Zambia | ECZ and RCEC | Netherlands**	**217.** BEYOND EVALUATION: An Interrogation of Teachers of English Comments in Formative Assessment of Students' Writing Skills – **Rachel Mawia Ngumbao | Kenya National Examinations Council | Kenya**	**423.** Analysing the Cognitive Demands of EGCSE Physical Science Question Papers Using the Semantics Dimension of the Legitimation Code Theory **– Vuyisile Matsebula, Lennox Nkambule | Examinations Council of Eswatini | Eswatini**	**530.** Leveraging AI and Real-Time Analytics for Transparent and Secure Public Examinations: The SSC Digital Transformation Model **– Nagaraja Krishnappa, Shailendra Uttam, Rahul Kumar Sinha, Rakesh Meena | Staff Selection Commission | India**
12:06–12:24	**112.** Assessing the Readiness of Test Developers and Teachers for Implementation of Competency-Based Assessment in Zambia – **Edward Songa, Boniface Lisuba | Examinations Council of Zambia | Zambia**	**206.** Evaluating the Predictive Validity of Forecast Grades Generated from Formative Assessments for NSSCO and NSSCAS Examinations – **Dr Elizabeth Ndjendja, Mr Abednego Ananias | DNEA (MEIYSAC), Namibia | Namibia**	**610.** Psychometric Quality of Literature-in-English Assessments Using the 3PL IRT Model: Evidence from West African Senior School Certificate Examination 2019-2023 MCQ in Ghana – **Kwaku Dankwa, Ebenezer Nkuah Ankamah | The West African Examinations Council | Ghana**	**520.** Challenges in Transitioning from Paper-Based to Computer-Based High-Stakes Examinations: A Pilot Study – **Fariza Khamza, Diana Sartauova | Nazarbayev Intellectual Schools, Kazakhstan | Kazakhstan**
12:24–12:42	**124.** Continuous Assessment Amidst the Curriculum Shifts in Uganda's Lower Secondary School Education: Teachers' Perceptions from the Island District of	**311.** The Impact of Test Anxiety on Cognitive Functioning and Academic Performance Among University Students: An	**607.** Informing Learning Quality through Assessment: A Study of Formative and Summative Assessment Practices – **Dr. Wilson K.**	**517.** The Perception of the Primary Teachers on the use of Tablets to enhance Authentic Assessment in the Competency Based Curriculum **– Edwin Kubai | Kenya**

	Kalangala – **Peter Lwanga Kayizzi | National Curriculum Development Centre, Uganda | Uganda**	Evaluation of Coping Strategies and Interventions – **Rosemond Wilson, Boateng Owusu-Ansah | The West African Examinations Council | Nigeria**	**Chelimo | Kenya National Examinations Council | Kenya**	**National Examinations Council | Kenya**
12:42–13:00	**103.** Navigating Assessment Reforms in Zambia's 2023 Curriculum: A Study of Primary and Secondary Education in Mpika District – **Baxter Mwansa, Dr. Audrey Muyuni, Ireen Moonga | Examinations Council of Zambia, Mulungushi University | Zambia**	**212.** Enhancing Adherence to Continuous Assessment Standards: Insights from the 2023 Moderation Exercise in Zambian Colleges of Education – **Justine Kimena | Technical Education, Vocational and Entrepreneurship Training Authority | Zambia**	**424.** In Developing Rasch Scale Anchoring to Distinguish Test Scores Meaning – **Zouh Fong Chieng | University of Malaya, Malaysia | Malaysia**	**526.** Enhancing Civic Education through Generative AI: A Case of Selected Higher Learning Institutions in Zambia – **Lucy Kamboni, Brian Halubanza, Rachel Kabeta | Kwame Nkrumah University; Mulungushi University | Zambia**
13:00–14:00	***LUNCH***			
14:00–14:18	**106.** Implementation of the New Competence-Based Curriculum Assessment in Secondary Schools of Chilanga District – **David Nyimbili, Lenny W. N. Longwe | Lusaka West School Pvt, Ministry of Education (Chilanga) | Zambia**	**309.** Tipping the Scales: Assessing for Skills in Schools of Skills – **Matsobane Elaine Johnstone | Umalusi | South Africa**	**421.** Equitable Resource Allocation and Student Achievement: A Correlational Analysis of NECO Examination Performance in Nigeria – **Prof. Dantani Ibrahim Wushishi, Dr Innocent Uche Ezenwanne, Lukman O. Suleman | National Examinations Council (NECO) | Nigeria**	**502.** Ethical Evaluation of AI in Nigerian Educational Sector: Bridging Gaps in Fairness, Security, and Privacy – **Adjah Ekwang Adjah, Amos Josiah Dangut | The West African Examinations Council, Nigeria | Nigeria**
14:18–14:36	**115.** Research into Competency-Based Curriculum-Aligned Assessment Practices – **Kalimukwa Likando | Ministry of Education, Zambia | Zambia**	**223.** Enhancing Student Success through a Reflective Flipped Classroom Model in Engineering Education – **Moses Basitere; Jason Minnie | UCT | South Africa**	**417.** Access Arrangements for Inclusivity: The Aga Khan University Examination Board (AKU-EB) Experience – **Munira Muhammad Rangwala, Naveed Yousuf, Amjad Ali Shah | Aga Khan University Examination Board | Pakistan**	**515.** Ethical Concerns on the Use of Artificial Intelligence in the Assessment of Learners in TVET Institutions in Nigeria – **Dr. Mohammed Aminu Mohammed, Mr. Pius Osaigbovo Strphen, Dr. Irene Ovekhairi Iluobe, Mrs. Evelyn Omoyemwen Egonmwan | National Business and Technical Examinations Board (NABTEB), Nigeria | Nigeria**
14:36–14:54	**127.** Assessing the Impact of Mandatory ICT Education on the Competence Based Curriculum in Zambian Secondary Schools – **Teza Musakanya, Mutati Henry | Examinations Council of Zambia | Zambia**	**308.** Balancing Accountability and Learning: Exam-Oriented Teaching and Curriculum Alignment in Zambian Classrooms – **Kashumba Kabombo, Obrain Mwaanga, Elliot Machinyise, Josephine Mwango | David Livingstone College of Education | Zambia**	**622.** Small Samples and Minority Languages: A Multilevel Modelling Approach – **Mkululi Wami, Louise Badham, Antony Furlong | International Baccalaureate Organization | The Netherlands**	**522.** Technology-Enhanced Teaching of Geometric Transformations in Selected Secondary Schools of Chama District, Zambia – **Garvin Mugala, Asiana Banda, Mubanga Lupupa | Copperbelt University, Zambia | Zambia**
14:54–15:12	**114.** TIMSS Informing Gender-Inclusive Mathematics Curriculum Implementation – **Jennie Golding, Grace Grima, Mary Richardson | UCL, Pearson UK | United Kingdom**	**204.** The Importance of Formative Assessment in the Learning Teaching Process – **Chiwama Bright M. | Examinations Council of Zambia | Zambia**	**609.** A Compromise Too Far? Exploring Practical Limits for Grade Reliability in National Examinations – **Kevin Mason, Ben Stafford | Pearson UK | United Kingdom**	**527.** Secure Design for Computer-Based Assessment Systems in Tanzanian Teacher Education Colleges – **Maduhu Mshangi Mlyatu, Magreth Venaely, Japhet Guyai, Simon Modest Meela, Robert A. Londo | National Examinations Council of Tanzania | Tanzania**
15:12–15:30	**128.** Investigating School Administrators' and Education Standards Officers' Monitoring and Evaluation of Teacher Performance in Nyimba District of Zambia – **Viliza Silwamba, Harrison Daka, Lupiya Mpolomoka, Christine Mushibwe | Unicaf University Zambia; University of Zambia | Zambia**	**215.** Teacher feedback: empowering or not – **Maureen K Kanchebele-Sinyangwe, Jive Lubbungu | Kwame Nkrumah University, Zambia | Zambia**	**401.** Equity in Assessments: A Comparative Study of Rural and Urban Learner Experience in High-Stakes Examinations **– Annel Sibajene Siaciwena | Mumpulumba Secondary School, Zambia | Zambia**	**523.** Leveraging OpenEMIS for Efficient, Fair, Secure, and Accessible Education Assessments **– Jon F. Kapp | Karl Turnbull| Dr. Elizabeth Ndjendja |Community Systems Foundation | United States | Information Technology Director, OpenEMIS Initiative**
15:30–16:00	***COFFEE BREAK***			
16:00–16:18		**222.** An Analysis on the Responsiveness of Assessment to Students with Hearing Impairment – **Carol Mubisi, Charity Meki Kombe, Maureen Mwalungali | Zambia Institute of**	**409.** The Rural-Urban Dilemma: Reconsidering the Missing Equity in School Certificate English Language Examinations in Zambia – **Gift Kaira, Kapesha Ngulube | Mulungushi**	**524.** Optimizing Technology Tools: Leveraging Technological Advancements for Fair, Secure, and Accessible Assessments – **Kasolo Mambwe | Examinations Council of Zambia | Zambia**

		Special Education; Mulungushi University | Zambia	**University | Zambia**	
16:18–16:36		**317.** Analysing Pupils' Performance in Chinese Language Grade Nine High Stakes Examinations through the Lens of Vroom's Expectancy Theory **– David Sani Mwanza, Guoping Fan| University of Zambia, Confucius Institute| Zambia**	**415.** Bridging the Gap in Promoting Equity and Fairness in Assessment – **Mr. Diven Nsang'anyi | Chengelo International School | Zambia**	**533.** Data Mining and Machine Learning to Determine Learner Performance in School Assessments – **Reuben Chibala Kayoba, Dr. Mwenge Mulenga | Rusangu University; NIPA University | Zambia**
16:36–16:54			**601.** Modelling the Failure and Success Rates of Selected University Courses from Public University in Kitwe District of Zambia – **Alex Samuel Mungo, Joseph Mwape | Mukuba University | Zambia**	
16:54–17:12			**402.** Role of ZIMSEC Science Kits in Ensuring Fairness in Zimbabwe's High-Stakes Science Assessments – **Bayiwayi Solomon | Zimbabwe School Examinations Council (ZIMSEC) | Zimbabwe**	
17:12–17:30				

17:00–18:30	**GENERAL ASSEMBLY (BUSINESS) MEETING**
18:30–22:00	**GALA DINNER (MUKUNI BOMA)**
	END OF DAY 5

DAY 6: FRIDAY, 26TH SEPTEMBER 2025

TIME	ACTIVITY		FACILITATOR	
08:45–08:50	Entertainment		Director of Programmes	
08:50–09:00	**Arrival of Guest of Honour - Dr. Kelvin Mambwe PS Educational Services**		Director of Programmes	
Keynote Addresses				
09:00–09:30	**Introducing the Fifth Edition of *Educational Measurement*, a Key Reference for Educational Assessment**	**Dr. Mary Pitoniak**	**Immediate Past IAEA President**	**Chairperson: Dr Wayne Wesley**
09:30–10:30	**Experiences and prospects for integrating ICT in assessment systems for Southern African countries**	**Professor Dorothy Nampota**	**Malawi National Examinations Board**	**Chairperson: Prof. David Sani Mwanza**
Plenary Presentation				
10:30–11:00	**AI in Educational Assessment**		**Kevin E. Baird**	**Prometric**
11:00–11:30	***COFFEE BREAK***			
CLOSING CEREMONY				
11:30–11:40	**Remarks**		IAEA President - Dr. Mafu Rakometsi	
11:45–12:00	**Remarks**		ECZ CEO - Dr. Michael M. Chilala| ECZ Board Vice Chairperson - Mrs. Esther Haamaundu	
12:00–12:30	**Closing Address**		Permanent Secretary - Educational Services, Dr. Kelvin Mambwe	
12:30–12:35	**National Anthem**		Director of Programmes	
	Closing Prayer		Director of Programmes	
13:00–14:00	***LUNCH***			

END OF THE 50TH CONFERENCE OF THE INTERNATIONAL ASSOCIATION FOR EDUCATIONAL ASSESSMENT (IAEA)

Abstracts

101.Assessment of The Alignment of the West African Senior School Certificate Examination Civic Education Questions with the National Curriculum in Nigeria

Authors: Dr. Adenike Adedigba, AKINLUA

Dr. Adunola, Osoba

Abstract

This study assessed the alignment of the West African Senior Secondary School Certificate Examination for School Candidates (WASSCE(SC)) questions with the senior secondary school national curriculum in Nigeria. Civic Education is vital in helping students acquire knowledge, attitude, values and basics skills to help them become responsible and patriotic members of the society by applying them to their daily experiences. Not only that Civic Education aimed at inculcating into students the understanding of emerging issues in the society. Hence, it becomes important that these aims are achieved which called for the assessment of Civic Education questions in WASSCE(SC). The study adopted an ex-post facto research design. The population for the study comprised curriculum expert, senior secondary school teachers, and item writers/ moderators/examiners in Nigeria. It also involved all the WASSCE questions from 2015 to 2020. The systematic random sampling was adopted in selecting year 2016, 2018 and 2020. A four-man panel of experts consisting of a curriculum expert, a Civic Education teacher in the senior secondary school, an item writer/moderator/examiner and a research officer were constituted to assess the alignment of the two components of Civic Education questions with the curriculum in terms of coverage of topics in the syllabus, question distribution across levels of thinking (Blooms Taxonomy), alignment of questions with the aims of the syllabus among others. This was achieved using relevant documents such as national curriculum, question papers, table of specification (Blooms Taxonomy) and examination syllabus. The findings showed that the overall rating of alignment of Civic Education for the years under review was rated Excellent. Also, the questions were generally suitable in terms of alignment with the national curriculum and examination syllabus considering topic coverage, clarity and alignment with the aims of the syllabus. Recommendations from this study will keep curriculum developers, teachers and WAEC informed on the necessity of maintaining the consistency between areas of the curriculum to be covered in the class and what are being assessed. Also, a need for periodic curriculum review and training of item writers for a quality teaching, learning and assessment of Civic Education in Nigeria.

Keywords: candidates, Civic Education. Curriculum-alignment, questions, WASSCE.

102.Mathematics teachers' perceptions on the introduction of school-based assessment in mathematics: A case of selected secondary schools in Kitwe district, Zambia.

Authors: Allan Musonda (Copperbelt University, Kitwe, Zambia.) and Christine Musenge (Ndeke Secondary School, Kitwe, Zambia. musengekristen12@gmail.com).

ABSTRACT

The study investigated the perceptions of teachers of mathematics from selected secondary schools in Kitwe district, Copper-belt province, Zambia on the introduction of School-based Assessment (SBA) in mathematics in secondary schools. The background to the study is premised on the understanding that mathematics is one of the STEM subjects in secondary schools. However, while

other subjects in STEM such as biology, chemistry, and physics have School Based Assessments, this is not the case for mathematics. Thus, this study intended to find out mathematics teachers' perceptions on whether SBA should be introduced in mathematics assessments, and also to find out from the mathematics teachers how SBA in mathematics may be conducted should it be introduced in schools and probably suggest topics suitable for SBA. Eight secondary schools were randomly selected in Kitwe district of Zambia: four secondary and four combined schools. In this study, secondary schools are those schools that have grade eight up to twelve while combined schools are those that have grade one up to twelve. Kitwe district has sixteen secondary schools and thirty-two combined schools. Data was collected from 133 grade eleven pupils and 111 teachers of mathematics who were selected purposefully. Questionnaires and interviews were used to collect data from the participants. Data from the questionnaires was analyzed using descriptive statistics and the responses from the interviews were analyzed thematically by picking major themes from the data.

Initial findings reveal that teachers of mathematics are of the view that SBA in mathematics at secondary school should be introduced as it has been observed that learners perform well in subjects where SBA is conducted. The responses from teachers who conduct SBA in their subjects showed that SBA has a positive impact on the performance of the learners in the final examinations. However, challenges of SBA were mentioned and they included limited resources in schools and large number of learners in classes which cause them to conduct SBA in groups instead of learners doing the assessments individually. It was also revealed that should SBA be introduced in mathematics, teachers would need training in how to conduct such assessments.

Key words: School based assessment (SBA), mathematics, teachers of mathematics

103. Navigating Assessment Reforms in Zambia's 2023 Curriculum: A Study of Primary and Secondary Education in Mpika District of Muchinga Province.

Authors: Baxter Mwansa1, Dr. Audrey Muyuni2, 3Ireen Moonga

Affiliations: 1Examinations Council of Zambia, 1, 2, 3,4 Mulungushi University,

Abstract

This study explores the implementation and effects of assessment reforms introduced in Zambia's 2023 curriculum within primary and secondary education in Mpika District, Muchinga Province. The new curriculum referred to as a competence-based curriculum (CBC) puts more emphasis on the competence-based assessment (CBA) which is good for individual and national development. Zambian educators have however expressed a mix of support and concern regarding the assessment reforms introduced in the 2023 curriculum. While the reforms aim to enhance the quality of education by emphasizing competency-based learning, several challenges have been identified in their implementation including; inadequate teacher training, overcrowded classrooms, resource shortages, curriculum alignment and stakeholders' engagement, among others. These concerns create a gap on the assessment process. As such, the research aims to analyze teachers' and pupils' experiences, challenges, and the effectiveness of new assessment methods amidst concerns and use the insights positively. The study will employ a mixed-methods approach, integrating quantitative and qualitative data collection techniques. Surveys will be conducted among teachers and students to gather statistical insights, while in-depth interviews and focus group discussions will provide a deeper understanding of their perspectives and challenges. Data will be collected from; examination specialists from examination council of Zambia, District education standards officer, Head teachers, teachers and pupils from selected

schools. Additionally, document analysis of curriculum policies and assessment guidelines will complement the findings. The study will identify factors influencing the success or failure of assessment reforms, including teacher preparedness, resource availability, and institutional support. The research is expected to provide valuable recommendations for policymakers, educators, and curriculum developers to refine and enhance assessment practices in Zambia. Ultimately, this study aims to contribute to the improvement of educational assessment strategies, ensuring they align with national goals and enhance learning outcomes for students in Mpika District and the nation at large.

Keywords: Assessment reforms, curriculum, competency-based assessment, primary, secondary education, educational policy.

104.Daptive Assessment Frameworks in A Dynamic Curriculum: Re-Imagining Teacher Evaluation in Zambia's Phased CBC Implementation

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ABSTRACT

This study examines how teacher evaluation in Zambia can be restructured to align with the Competency-Based Curriculum (CBC), which is being implemented in phases. Traditional teacher evaluation models have historically prioritized instructional inputs, such as lesson planning and pedagogical techniques, rather than assessing learning outputs that reflect student competencies (Darling-Hammond, 2017). As Zambia transitions toward a competency-driven approach, this study advocates for an Adaptive Assessment Framework that evaluates teachers based on student mastery of skills and competencies, ensuring that assessment methodologies evolve alongside curricular changes.

Grounded in the Constructivist Learning Theory (Vygotsky, 1978), Adaptive Expertise Framework (Bransford et al., 2000), the study emphasizes the need for flexible, inclusive, and performance-based teacher evaluation models. It also integrates principles from Competency-Based Assessment (Wolf, 2001) and Equity and Inclusive Assessment (Brookhart, 2013) to ensure fairness in evaluating teacher effectiveness.

This study adopts a qualitative approach, utilising a systematic review of published peer reviewed literature, policy documents and reports to analyse teacher evaluation frameworks. Additionally, descriptive interviews with Education Administrators, Standards Officers (ESOs), School administrators and Heads of Departments (HODs) in Lusaka Province will be conducted. Findings will provide insights into teacher preparedness, assessment gaps, and best practices in competency-based teacher evaluation.

Drawing on global best practices and Zambia's 2023 Zambia Education Curriculum Framework (ZECF), the study proposes strategies for integrating competency-based teacher evaluation models, addressing implementation challenges, and ensuring fairness and inclusivity. The study's recommendations will guide policy adjustments to align teacher evaluation with CBC principles,

ensuring that assessments reflect and promote learner skill mastery rather than merely measuring instructional compliance.

Key words: Adaptive Assessment Framework, Competency-Based Curriculum, Teacher Evaluation, Student Mastery of Skills, Competency-Based Assessment, Adaptive Expertise Framework, Equity and Inclusive Assessment.

105.Teachers' Competencies in Assessing and Instructing of Leaners Under Competency Based Curriculum in Schools in Lusaka. The Case Study of Selected Secondary and Primary Schools in Lusaka District.

Chama Kabumbu (Mr)

(Lecturer, Researcher, Cavendish University Zambia, Dept. of Development studies, ckabumbu@cavendish.co.zm)

Abstract

This research will aim at determining the levels of competencies among teachers in implementing assessment and instructional methods under the competency-based curriculum in selected schools in Lusaka Zambia. The specific objectives of the study will be as follows; to establish the methods of assessments and instruction required under the competency based curriculum in Zambia, to ascertain teachers' knowledge and skills in competency based curriculum assessments and teaching methods, to determine the level of teachers' application of competency-based curriculum assessments and instructions, and to examine the challenges faced by teachers in applying required assessment and instructional methods under the competency based curriculum. Competency Based Curriculum (CBC) is said to be a means by which a country can equip its learners with the necessary knowledge, skills as well as values that will help them adapt to a highly technological global village (UNESCO, 2015). Further, Competency Based Curriculum (CBC) enables students to use the skills acquired through learner-centered education to perform in a practical and measurable way. As a result, many countries have implemented curriculum reforms related to the concept of key competencies and learning outcomes. Zambia has not been left out as one of the countries that has just embarked on the implementation of a Competency Based curriculum starting in the 2025 financial year. Effective implementation of any curriculum is dependent on the competencies of teachers who are actually the implementers of any curriculum at classroom levels. For there to be successful implementation of the Competency Based Curriculum in Zambia therefore, teachers need to be skilled and equipped especially in the methods of assessments of learners and in instructional methods required by a Competency based curriculum. It has been observed that in many cases in Africa, where competency-based curriculum has been implemented, teachers lack the required knowledge, skills, experience, and competencies in implementing CBC, especially in leaner assessments and teaching methods. This leads to ineffective implementation of CBC. This research therefore, aims at determining the level of competencies among teachers in assessing and instructing learners under the competency-based curriculum in selected schools in Lusaka Zambia. A mixed method research design will be adopted. The study will target 10 primary schools and 10 secondary schools located in Lusaka district. The target population will consist of teachers and learners in selected grades. A sample size of 100 teachers and 50 learners will be selected for the study using a simple random sampling method and purposive sampling. A semi-structured questionnaire and interviews will be applied to collect data. Data analysis will be performed using descriptive statistics and thematic analysis

as well as narations. The findings of the study will be useful in replanning and strategizing the implementation process of the competency-based curriculum in Zambia as it regards effective assessment and instruction of learners by teachers as required by the curriculum.

Key words: Competency-Based Curriculum, Assessment methods, Instructional methods, teachers' competencies.

106. Implementation of The New Competence-Based Curriculum Assessment In Secondary Schools Of Chilanga District – A Systematic Research Review.

Mr. David Nyimbili

LUSAKA WEST SCHOOL PVT

Ms. Lenny W. N. Longwe

MINISTRY OF EDUCATION (CHILANGA)

ABSTRACT

The new Competence-Based Curriculum (CBC) of 2023 was rolled out in Zambia in 2025. This is a new educational approach that focuses on learners acquiring specific competencies and skills, that would prepare them for the demands of the 21st century emphasising the development of critical thinking, problem-solving, and creativity skills. This is a major shift from the 2013 Curriculum Framework, introduced in 2015, and leaned towards acquisition of theoretical knowledge.

CBC assessment is an approach that focuses on the learners demonstrating mastery of specific competencies, skills, and knowledge. CBC assesses the learner's ability to apply what they have learned in real-world contexts, rather than just recalling information and thus prepares them for success in their future careers and personal lives.

This study will be conducted in Zambia, Lusaka Province and Chilanga district in particular. The main objective of the study is to determine the perceptions of the educationists and learners on the implementation of the CBC. Furthermore, the study intends to investigate how teachers assess student competencies in the classroom, and what challenges they face. In addition, the study will explore the effects of CBC assessment on learning outcomes and academic performance. Finaly, the study will evaluate the level of support from stakeholders in the implementation of CBC assessment.

A mixed-methods approach, combining both quantitative and qualitative data collection and analysis will be adopted for the study. The targeted participants will include: all secondary school administrators, selected teachers, and selected learners. Databases such as ERIC, JSTOR, and Scopus will be explored for studies published between 2022 and 2025 using keywords. The study will evaluate the alignment between the CBC assessment intentions and the actual implementation on the ground.

The study intends to solicit suggestions for enhancing the implementation of CBC assessment considering the experiences. The findings are expected to disclose the strengths and weaknesses of the implementation of CBC assessment in various contexts. This will lead to recommendations for enhancing the conduct of CBC assessment, which is a critical link to the learners acquiring specific competencies and skills.

Key words

competence-based assessment, competence-based curriculum

107.Building Functional Literacy Through Agile Assessment: Kazakhstan's Experience with PISA-like Testing in Secondary Education

Authors: Diana Sartauova, Fariza Khamza

Abstract

The ability to apply knowledge in real world context is getting more important than it was ever before. Therefore, in Kazakhstan it became crucial to study how well 14-year-old students are prepared for the world. There is an international study conducted in all OECD member countries as PISA. We have taken the same approach and started to do the same study but in the context of our country. This study focuses on what level do 14 year olds of Kazakstani students demonstrate functional literacy.

To measure the level of students functional literacy numerical data was gathered through testing students in main three domains such as reading, math and science literacy. There were approximately 14 000 students across nearly 250 schools from Kazakhstan. Randomized selection was performed to ensure different demographic, regional and social background students. Also 120 items were constructed by the Specialist of Center for Pedagogical Measurements to assess students skills on these three domains. All items were first piloted in 20 Nazarbayev Intellectual school. All piloted items have demonstrated high psychometric data and functioned well.

The results showed that 14 year old students in Kazakhstan are very good at solving math items rather than reading. Science is also challenging topic for Kazakhstan. After the testing students received individual reports on their performance as well as teachers. Additionally teachers were provided with webinar on how to work with those reports and how to work with those types of items.

This initiative not only strengthened functional literacy among students but also introduced a sustainable model of agile assessment for the Kazakhstani education system. Key outcomes include:

- Increased awareness and understanding of functional literacy among teachers and school leaders.
- Enhanced digital assessment infrastructure in secondary schools.
- Improved student engagement through authentic, context-based test items.

108. Agile Assessment Strategies for Competency-Based Civic Education Curriculum:

Lessons from Zambia's Public Universities

Dingase E. Mtonga

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ABSTRACT

Globally, the emphasis on competency-based education necessitates agile assessment methodologies that move beyond traditional knowledge recall. Zambia's transition to a Competency-Based Curriculum (CBC) demands innovative assessment strategies to evaluate civic education competencies like critical thinking, ethical leadership, and community engagement. However, a significant research gap persists regarding the implementation of agile assessment strategies in measuring student learning in higher learning institutions, particulary in civic education. This gap may hinder the ability of these institutions to adapt to rapid educational transformations and ensure graduates possess necessary civic competencies. This qualitative case study proposes to investigate the agile assessment strategies employed in competency-based civic education curricula in Zambian public universities focusing on; examining stakeholders (lecturers, students, and university administrators) perceptions of current assessment strategies; identifying institutional barriers to agile assessment implementation; and designing a participatory framework for CBC-aligned assessments. Adopting s constructivist learning theory, a qualitative case study design will be employed to provide an in-depth understanding of the phenomenon within the specific context of three selected Zambian public universities. Purposive and criterion sampling techniques will be utilised to sample approximately 30-40 participants to achieve data saturation. Semi-structured interviews with stakeholders will gather detailed perspectives on agile assessment strategies and their implementation. Focus group discussions with students will explore their perceptions of civic education assessments strategies, while document analysis will provide contextual information and insights into policy and curriculum alignment. Thematic analysis will be used to identify themes and patterns within the transcribed data by coding, categorising, and interpreting findings. The findings will be presented thematically, supported by direct quotations. This proposed research intends to address three gaps: limited empirical evidence on agile civic assessments strategies in public universities; institutional resistance to departing from traditional grading systems and; lack of participatory frameworks for CBC-aligned assessments strategies. By centering the experiences of frontline educators and students, this study offers a transferable approach to navigating curriculum reforms in Sub-Saharan Africa, with findings to be disseminated through workshops and open-access publications to maximise impact on civic education transformation.

Keywords: agile assessments, civic education, competency-based curriculum, public universities, strategies

109. From Policy to Practice: Building National Capacity for Competency-Based Assessment in Zambia – A Collaborative Journey by ECZ and RCEC

Dr. Arnold J. Brouwer, Research Centre for Examination and Certification

Zambia is currently undertaking a comprehensive reform of its education system, transitioning from an Outcome-Based Education (OBE) model to a Competency-Based Education (CBE) framework. This national shift aims to better prepare learners with applied skills and higher-order thinking competencies. To support this reform, the Examinations Council of Zambia (ECZ) partnered with the Research Centre for Examination and Certification (RCEC) in the Netherlands to implement a nationwide capacity-building initiative in Competency-Based Curriculum (CBC) and Competency-Based Assessment (CBA).

From December 2024 to March 2025, a structured programme was delivered in seven stages, including needs assessment, training, follow-up, and evaluation. Over 180 experts from ECZ and the Ministry of Education participated in workshops and collaborative sessions. The programme emphasised practical application through the use of national syllabi and curriculum documents. Key training components included writing SMART learning objectives, aligning content with Bloom's Taxonomy, developing competency-based test items, and constructing rubrics and scoring models. International quality standards were blended with contextual adaptation to ensure local relevance.

The programme led to measurable gains in both individual competencies and institutional capacity. Participants reported increased confidence in designing valid, fair, and reliable assessment instruments. ECZ successfully finalised and validated examination syllabi for Primary and Ordinary levels and embedded internal quality assurance mechanisms for ongoing development. Feedback highlighted the value of hands-on training, peer collaboration, and quality control tools. Challenges included large group sizes, which limited personal interaction.

This collaboration illustrates how strategic international partnerships can catalyse educational system reform. Key lessons include the importance of contextual anchoring, iterative feedback mechanisms, and sustained support. ECZ and RCEC are now exploring next steps, including training for Advanced Level, the formation of a national CBA advisory group, and long-term evaluation. The Zambian case offers a replicable model for countries seeking to implement competency-based assessment through capacity development rooted in mutual trust and local leadership.

Keywords: Competency-Based Assessment, Capacity Building, Curriculum Reform, Quality Assurance, International Collaboration, Zambia

110. Responsive and Purposeful Assessment for Professional Learning: Addressing Educational Transformations

Author

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Abstract

"If we teach today's students as we taught yesterday's, we rob them of tomorrow" (John

Dewey in West, 2013). In our modern era, the 21st century, critical thinking and problem -solving skills have become essential for navigating an increasingly complex world. Employers highly value these skills, as employees who think critically and independently are considered trustworthy, reliable and capable (Doyle, 2020). Such skills enable employees to assess situations, identify challenges, and develop effective solutions, characteristics that are increasingly sought after in the modern workplace (Lisnawati et al., 2024). As student teachers prepare for their future roles as professional educators, it is essential for educators to foster a dynamic learning environment that cultivates informed, educated, critical, and well -rounded individual s, equipping them for the complexities of the 21st -century workforce and preserving their potential for future opportunities. Based on Mezirow's Transformative Learning Theory (Kitchenham, 2008) as a conceptual lens, this paper intends to respond to the question of how to transform teaching, learning and, especially, assessment (TLA) from what we know and have been doing (foundation) to where we

are heading (future). Through this lens, the educator endeavours to enhance TLA praxis (Smith, 2001) in a Sciences teaching module, guiding students to enhance their own understanding of TLA processes within sciences teaching through self -directed learning (SDL). SDL is an approach to teaching where students take responsibility for their own learning, become critical thinkers, and develop higher order thinking skills (Bosch, Mentz, & Goede, 2019) , placing students on a journey of critical engagement of their own TLA practices . Assessing SDL involves the evaluati on of both the process and the outcome of the student 's independent learning journey. This can be done through various methods, including performance -based tasks and self -reflection, and p roject -based assessment. With this paper the educator /author endeavours to address the migration of assessment of practice to assessment for practice, or assessment for professional learning (Af PL).

This paper explores both past and ongoing efforts to address educational transformations and ensure the development of well -rounded professional teachers for the future, focus ing on responsive and purposeful assessment for professional development that align with changing curricula.

Keywords

Educational transformation , Professional learning, Responsive a assessment

111.Preparing Students for the Future of Work: An Analysis of the "World of Work (WoW)" and Skill India Programmes

Authors:

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Prof. Indrani Bhaduri, Head and CEO PARAKH, NCERT, New Delhi, India
Prof. Dinesh Prasad Saklani, Director, NCERT, New Delhi, India
Dr. Zahra Kazmi, Lead Subject Matter Expert, PARAKH, NCERT, New Delhi, India

Abstract:

As the global workforce undergoes a profound transformation driven by technological disruption, automation, and evolving industry needs, there is an urgent need to reimagine education systems to prepare students for the future of work. India's National Education Policy (NEP) 2020 emphasizes critical thinking, problem-solving, adaptability, and vocational training as key pillars of school education reform. Aligned with this vision, the World of Work (WoW) initiative, conceptualized by National Assessment Centre PARAKH under the Ministry of Education, Government of India introduces structured career awareness and experiential learning programs across schools. Complementing this initiative is the restructured Skill India Programme, which now integrates three flagship schemes under a unified framework—Pradhan Mantri Kaushal Yojana 4.0 (PMKY 4.0), Pradhan Mantri National Apprenticeship Promotion Scheme (PM-NAPS), and Jan Shikshan Sansthan (JSS)—to deliver demand-driven, technology-enabled, and industry-aligned training.

This paper examines the rationale, design, and implementation of the WoW initiative within the context of India's broader skilling ecosystem. Through a critical analysis of WoW's objectives, pedagogical approach, and its impact on student aspirations and employability, the paper highlights how early exposure to careers, skill development, and workplace realities can foster future-ready learners capable of navigating the demands of a dynamic, technology-driven economy. The study concludes that such initiatives are essential for building a workforce aligned

with the Viksit Bharat 2047 vision, underscoring the importance of scalability and continuous innovation in career education.

Keywords: National Education Policy (NEP) 2020, World of Work (WoW), Pradhan Mantri Kaushal Yojana 4.0 (PMKY 4.0), Pradhan Mantri National Apprenticeship Promotion Scheme (PM-NAPS), and Jan Shikshan Sansthan (JSS).

112. Assessing the Readiness of Test Developers and Teachers for Implementation of Competency-Based Assessment in Zambia

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Abstract:

The 2023 Zambia Education Curriculum Framework ushered in a 3-6-4-2 schooling structure comprising Early Childhood Education (3 years), Primary Education (Grades 1 – 6), Secondary Education – Ordinary Level (Forms 1 – 4), Secondary Education – Advanced Level (Forms 5 – 6) and Tertiary Education. It introduced a shift from outcome based instructional and assessment approaches to competency-based instruction and assessment. Instruction under this framework commenced in 2025 at ECE Year 1, Grade 1 and Form 1. The first national examinations to be conducted under this system will be in 2027 (A Level Year 2) and in 2028 (Grades 6 and Form 4 and Tertiary Year 3). Meanwhile, teachers are required to continuously conduct school-based assessments (SBA) during the teaching and learning process in schools. As such, the successful implementation of this reform requires preparedness on the part of both teachers and test developers. This qualitative phenomenological study was therefore designed to examine teachers' and test developers' conceptual and procedural understanding of competency-based assessment (CBA) and assess their preparedness in terms of skills, resources and institutional support. Further, the study sought to identify the challenges they faced in CBA implementation and propose strategies to enhance their readiness. Ten (10) test developers and twenty (20) teachers at ECE (5), Grade 1 (5) and Form 1 (10) were purposively sampled and data were collected from them using semi-structured interviews, focus group discussions, document analysis and classroom observations. The data were analysed using thematic analysis, with code categories generated under conceptual understanding, procedural understanding, resources, institutional support, challenges and proposed strategies. The findings revealed higher conceptual and procedural understanding of CBA among test developers than among teachers. Among the challenges identified was inadequacy of training for teachers, as well as limited resources and insufficient institutional support. Recommendations were made for all teachers to receive the same comprehensive training in CBA given to test developers. Further, it was suggested that the teacher education curriculum needed to be aligned with the principles of CBA as a way of enhancing teacher readiness and ensuring success of the CBA reform. The empirical insights gained through this study have potential to guide targeted interventions and policy adjustments.

Keywords: Competency-Based Assessment (CBA), Teacher Readiness, Test Developer Readiness, School-Based Assessment (SBA)

113.Teachers Adoption of Dynamic Integrated Curriculum: Opportunities and Challenges. A Case of Junior Secondary Schools, Kenya.

Elizabeth J. Katam* (Kenyatta University,Kenya. katam.elizabeth@ku.ac.ke) and Ann W. Gachoya (Ministry of Education Kenya, anngachoya@yahoo.com).

Abstract

The assessment practices supports the curriculum and the education practice. The rapidity of knowledge and emerging trends globally, Africa included has influenced adoption of reforms and curriculum frameworks thereby guiding implementation and assessment of integrated curriculum. In Kenya and other nations, 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 demonstrated through assessment. Dewey emphasis that the organization of subject matter ought to be related to students' experiences since they are the consumers of the curriculum. However, merits of curriculum integrated have continued to be critiqued by scholars. The teacher's insights as key curriculum implementers and assessors are crucial with the view of strengthening CBC assessment 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 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 broad assessment areas offered for formative assessment enhancing use of various tools and ease of applicability of new knowledge and skills. The challenges teachers face in assessing integrated subjects include inadequate training on assessment and principles of assessments largely ignored such as comprehensiveness and balance. One of the recommendations is rationalizing of integrated subjects to guide assessment.

Key words: Integrated curriculum, Assessment and holistic development.

114. TIMSS informing gender-inclusive mathematics curriculum implementation

Authors:

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Grace Grima, Pearson UK

Mary Richardson, University College London

Abstract:

As a large-scale international study, TIMSS has two features that support learning for the implemented mathematics curriculum: first, for many participating countries, the TIMSS mathematics framework is closely aligned to the codified intended curriculum; second, TIMSS is a low-stakes assessment (of grade 4 and 8 learners). Second, the performance and

attitudes/experiences evidenced are likely to be ecologically valid and persistent given that participating students have typically not focused on intense preparation for TIMSS assessments, nor is there any reason for them to present questionnaire responses with any particular bias.

It is particularly concerning that in TIMSS 2023 grade 8 assessments 21 of 42 participating countries showed a statistically significant gender gap in performance, as well as gaps in attitude/reported experience, in favour of boys. Four showed a performance bias in favour of girls (for which some of the reasons are well-understood – though no less concerning).

Recent performance of England's students in international large-scale assessments has been near gender-equal, though reported experiences and attitudes have often been gendered in favour of boys. However, in TIMSS 2023, the average score for grade 8 boys was 538, compared to 512 for girls. England's was the biggest such gap across all participating countries. This paper focuses on the TIMSS evidence for England, arguing that an assessment already well-aligned with intended curriculum should be harnessed to reverse-engineer the enacted curriculum in mathematics classrooms, in ways that are in general known to benefit all students, but to differentially benefit girls.

We draw on the TIMSS 2023 analysis we led for England to show that distinctively gendered patterns of attitudes and aspirations have emerged by grade 4, and we analyse aspects of recent policy and normative classroom practice that might have contributed to such gaps. We contextualise that in the wider literature around gender and mathematics in relation to participation, performance, attitudes and aspirations. We draw out from the literature key knowledge about ways in which the exposed issues might be addressed, and gaps in that knowledge. We discuss ways in which both policy makers/influencers and teachers might respond.

Keywords: TIMSS, gender, mathematics, implemented curriculum

115. Research into Competency-Based Curriculum-Aligned Assessment Practices

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Abstract

This research paper examines the transition from the traditional Basic Education Curriculum (BEC) to the Competency -Based Curriculum (CBC) in Zambia, focusing on the implications for curriculum -aligned assessment practices because these directly influence teaching strategies, learning outcomes and overall educational effectiveness. These are issues like data -driven decision -making, enhanced learning outc omes, teacher professional development, curriculum review, learner engagement and motivation as well as equity and accessibility. The implications of these practices are multifaceted – impacting educators, learner s and the entire education system. As Zambia embraces the C ompetency -Based Curriculum, which emphasises student -centred learning and skills acquisition, the need for aligned assessment methods becomes increasingly felt. This study explores the opportunities and challenges presented by this shift, highlighting the importance of formative and summative assessments that accurately reflect learner competencies and learning outcomes. Through qualitative analysis, the research identifies best practices for implementing effective assessment strategies t hat align with the principles of the Competency -Based Curriculum. Key findings suggest that successful transition requires comprehensive training

for educators, the development of assessment tools that foster critical thinking and problem - solving skills, and active stakeholder engagement in the curriculum design process. The Competency -Based Curriculum (CBC) represents a significant shift in educational paradigms (where it has been implemented) to enhance learners' skills and competencies. The development of assessment tools (design, philosophy shift, integration of technology, providing specific criteria for evaluating student performance, feedback mechanisms, challenges and just other considerations) within the framework is crucial to effectively measure student progress and ensure that learning outcomes are met. The paper concludes with recommendations for policy adjustments and professional development initiatives aimed at enhancing the effectiveness of curriculum -aligned assessment in the context of Z ambia's educational reform. Otherwise, the development of assessment tools in the Competency -Based Curriculum is a dynamic process that reflects a broader shift in educational philosophy. By focusing on competencies and integrating various assessment methods, educators can provide a more holistic evaluation of student learning. Continuous feedback, the use of technology and stakeholder involvement are vital components in enhancing the effectiveness of these tools, ultimately contributing to the development of well - rounded learners equipped for the challenges in a rapidly changing world.

Keywords : Competency -Based Curriculum ; Curriculum -aligned assessment practices ; Teacher professional development Competencies

116. Exploring Dynamic Curriculum Integration and Agile Assessments To Adapt Educational Transformations.

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Abstract

In the ever-changing educational landscape, curriculum-aligned assessments are necessary to guarantee assessment techniques and approaches that accurately determine the learning outcomes as depicted in the curriculum design. This study sought to examine two key areas that touch directly on curriculum alignment to assessment i.e. agile assessment techniques in line with the ever-changing curriculum designs and the corresponding curriculum integration that embraces and integrates these changes. The study established the need for assessments to be moderated to allow them to align with the established and approved curricular frameworks while adapting to new educational methodologies and content. Considering the dynamic nature of the curriculum changes the traditional evaluation techniques have been found to frequently fall short in effectively evaluating students' competencies and comprehension of content (Pellegrino, 2016). This calls for active efforts that enable educators to modify assessments and make them dynamically reflect the fluid nature of curriculum objectives. Assessments must change to reflect the emphasis on 21st-century abilities, such as critical thinking and problem-solving, as educational paradigms change (Tierney & Simon, 2015). The research aimed at examining frameworks and approaches that can be used in bridging this gap while creating agile assessments that are in line with current educational standards. Educators can be supported to create a more comprehensive and adaptable assessment framework that not only gauges student progress but also encourages more in-depth learning experiences by leveraging formative assessments, digital resources, and collaborative evaluation techniques (Black &

Wiliam, 2009).
Other useful interventions that were discussed include using technology to enhance assessment making it easier to gather data analytics on student performance in real time, allowing for prompt feedback and informed curricular modifications (Bennett, 2011). As curriculum and learning objectives continue to change, this kind of flexibility is essential to preserving the relevance of educational assessments in the 21st century. The study highlighted the value of collaboration between educators, administrators, and stakeholders to maintain the validity and reliability of assessments. It established the need to promote continuous professional development for educators to stay up to date on best practices in curriculum-aligned assessment.

Keywords: curriculum-aligned assessment, agile assessments, adaptable assessment framework

117.Advancing Educational Assessment Reform: Usability of Flexible and Adaptive Assessment Models in Zambia.

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ABSTRACT

This paper discusses the usability and potential impact of flexible and adaptive assessment models in Zambia's changing educational system. As the country moves toward competency-based curricula, there is need for assessment practices that are dynamic, inclusive, and responsive to learners' diverse needs. Drawing on global frameworks such as Universal Design for Learning (UDL) and performance-based assessments, the study discusses how such models could align with Zambia's Revised Curriculum Framework (2013). It examines policy provisions, implementation challenges, preparedness of teachers, availability of infrastructure, and cultural factors influencing assessment practices. The paper also explores the role of professional development, the digital divide, and the possibility of collaborations with stakeholders in scaling sustainable and contextually relevant solutions. Through reviewing literature, policy analysis, and case studies, the study proposes recommendations that could bridge the gap between policy objectives and classroom realities in Zambia. In conclusion, the paper argues that while flexible and adaptive assessments have potential to transform, success depends on systemic support, capacity building, and equitable resource distribution.

Keywords

Flexible assessment, adaptive learning, continuous assessment, competency-based education, Universal Design for Learning, education policy.

118. Evaluating Teachers' Awareness of Curriculum-Aligned Assessment Practices for Learners with Special Needs in Zambia's Competence-Based Curriculum

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ABSTRACT

In Zambia, the education sector has undergone significant reforms aimed at enhancing the quality of teaching and learning. A key focus of these reforms is the implementation of curriculum-aligned assessment practices within the Competence-Based Curriculum (CBC), particularly for learners with special needs. This study evaluates teachers' awareness of these practices, examining the extent of their understanding, the challenges they face during implementation, and the relationship between teachers' awareness and learner outcomes.

Using a mixed-methods approach, the study combines quantitative and qualitative data collection methods, including online questionnaires, interviews, and document analysis. A sample of 150 teachers from 30 schools in the Lusaka and Copperbelt provinces will participate in the research. The target population consists of teachers who have been implementing the CBC for at least six months and have experience teaching learners with special needs. Quantitative data will be analyzed using descriptive statistics, correlation analysis, and regression analysis to explore relationships and predict outcomes, while qualitative data will undergo thematic analysis to provide in-depth insights into teachers' experiences and challenges.

The findings are expected to contribute valuable insights to inclusive education and policy-making in Zambia. They aim to inform teacher training programs, improve curriculum design, and address gaps in assessment practices for learners with special needs. Ultimately, the research seeks to enhance transparency, efficiency, and inclusivity within Zambia's education system by fostering better alignment between curriculum objectives and assessment practices.

KEYWORDS

Curriculum-aligned assessment practices, Competence-Based Curriculum (CBC), Learners with special needs, teacher awareness, Zambia.

119. Analyzing the Alignment of the Hospitality Skills Training with Industry Needs in the Copperbelt Province, Zambia.

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Abstract:

The hospitality and tourism industry is integral to economic growth and job creation. Nonetheless, a notable disparity exists between the training duration, and skills acquired by graduates and the practical requirements of the industry. The study will also underscore the importance of industry-academia collaboration in designing competency-based programs that align with market needs. The study aims to identify the competencies required by the industry, assess existing training content, methodologies, and recommend improvements to bridge the gap between education and

practice. A mixed-methods approach will be employed, utilizing both qualitative and quantitative research techniques. Data collection will involve structured interviews with industry professionals, hospitality educators, and students who are receiving the training in Hospitality and Tourism Management. Quantitative data will be analyzed using statistical tools (SPSS), Descriptive Statistics: Frequencies, and percentages will be used to summarize responses. Inferential Statistics will use Chi-square tests to compare perceptions across stakeholder groups. Regression analysis will be used to identify predictors of employability using internship quality and facility access. Qualitative responses will undergo thematic analysis for Qualitative data to describe the successes, challenges and opportunities in practical training. Open coding of interview transcripts will be done to identify recurring themes. The findings will be shared with stakeholders. Addressing the skills gap will enhance graduate employability and contribute to the sustainable development of the hospitality and tourism sector in Kitwe, Zambia.

Keywords: - Hospitality Skills Training, Industry Needs Alignment, Hospitality Education, Skills Gap, Competency-Based Training (CBT), Vocational Education (TVET), Employability Skills.

120. Individual and Collaborative Assessment: Strategies for Developing Collaboration Competence in Pre-Service Mathematics Teachers

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Abstract

Collaboration is a critical 21st-century competence emphasized in educational curricula worldwide. The 2023 Zambia Education Curriculum framework has highlighted it among the key competences to be developed through Zambia's Education system. Assessment practices can contribute to the development of collaborative competence. However, it remains unclear how this is achieved in the Zambian education context in general and teacher training in particular. What is evident is that learning in groups or doing group work is championed, but assessment practices often prioritise individual achievement over group-level achievement. This study, anchored in the social interdependence and constructive alignment learning theories, sought to find out how collaborative learning can be aligned with meaningful assessment practices. It investigates the considerations necessary for effectively assessing collaboration within group work and examines how such assessments can complement individual assessments in strengthening collaborative competence. Conducted with 28 purposively selected fourth-year mathematics major pre-service teachers at a public university in Central Zambia, the study employed semi-structured interviews, focus group discussions, classroom observations, and document analysis as data collection methods and thematic analysis of collected data. The key findings reveal that effective group-level assessment requires explicit criteria such as shared responsibility, conflict resolution, communication quality, and collective problem-solving. They further reveal the need for devising strategies for minimising potential tensions between fairness in individual accountability and the pedagogical goal of fostering interdependence. The study proposes use of a combination of group-process assessments and individual assessments for recognition of both collective and individual contributions to student achievement and development of collaboration competence. This research contributes to the discourse on assessment in education by advocating

for aligning collaborative learning with relevant assessment practices. The findings hold particular relevance for teacher training programmes aiming to cultivate collaboration competence in future educators who in turn would have to implement in a similar manner for learners in schools whom they will be teaching upon successful complementing of their teacher training programme.

Key words: Competence, collaboration, assessment practices, pre-service Mathematics teachers

122.An Evaluation of Teacher Competencies in Developing Learning Assessment Items in Civic Education in Selected Secondary Schools Of Kalomo District, Zambia

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ABSTRACT

The purpose of this study was to evaluate teacher competencies in developing learner's assessment items in Civic Education in selected secondary schools in Kalomo district. Learner assessment is part and parcel of the teaching and learning process and therefore teachers as curriculum implementers should have the necessary knowledge and skills in assessment item development if they are to effectively implement the curriculum as well as determine if learners have achieved the desired learning outcomes. The National Learning Assessment Framework (NLAF) in Zambia puts emphasis on the use of assessment as a tool to improve teaching and learning. This study was guided by the following research objectives; to examine teacher's skills and knowledge in developing learning assessment items in selected secondary schools in Kalomo district, to analyze procedures that are used by teachers in developing learning assessment items in selected secondary schools in Kalomo district, to examine teacher's views on how teacher education had prepared them in the area of developing assessment items in Civic Education and to analyze the quality of assessment items that were produced by teachers of civic education in selected secondary schools in Kalomo district. The mixed method research approach was employed in this study and specifically the concurrent embedded design was used. This study had a sample size of 111 participants consisting of 40 teachers of civic education, 50 student teachers, 10 Head of sections, 10 Head Teachers and 1 Education Standards Officer. Data was collected through interviews, questionnaires, as well as document analysis. Data was then analyzed using themes and an independent samples t-test. Findings showed that most teachers of civic education lacked the knowledge and skills to develop assessment items of quality. Based on the findings recommendations were made that colleges of education and universities in Zambia should equip students of education with both theoretical and practical competencies in the development of assessment items. The Ministry of Education through the Directorate of Teacher Education and Specialized Services should come up with a robust and comprehensive Continuing Professional Development program that should focus on equipping teachers of Civic Education with theoretical and practice competencies in assessment at classroom level.

Key words: assessment, teacher competency, skills and knowledge, Civic Education.

123. Are Online Schools Meeting Assessment Standards? A Closer Look at Business Studies SBA Tasks

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Abstract

Under the General and Further Education and Training Quality Assurance Act (GENFETQA), Umalusi is mandated to ensure the quality of assessments at exit points in South Africa. This includes the moderation of School-Based Assessment (SBA), a compulsory and integral component of the National Senior Certificate (NSC). In 2023 and 2024, Umalusi moderated Business Studies SBA tasks for online schools to determine whether they were administered in accordance with the Curriculum and Assessment Policy Statement (CAPS) and the relevant Subject Assessment Guidelines (SAGs) issued by assessment bodies. To uphold the credibility of the NSC and ensure that online schools meet SBA assessment standards, Umalusi has implemented non-negotiable requirements as an interim measure, pending the finalisation of broader regulatory frameworks. Guided by a constructivist learning theory framework, this study investigates the quality of Business Studies SBA tasks in online schools, providing insights into the compliance and standards of online schools' SBA assessments. The central research question is: What do external moderation reports reveal about the quality and standards of Business Studies SBA tasks in online schools? The study employed a qualitative approach, using document analysis of 24 SBA moderation reports. One subject (Business Studies) and one assessment body were purposively sampled. The analysis was guided by a 12-criteria SBA moderation instrument, which helped identify key themes related to assessment task quality. The findings indicate that SBA tasks in Business Studies fell short of the required standards, particularly in areas such as task quality, questioning effectiveness, question types, cognitive demand, and internal moderation. These deficiencies compromised the overall quality and reliability of the assessments and adversely affected learners' preparedness for the final examinations. The study recommends that assessment bodies/examination councils enhance teacher training on SBA standards and establish rigorous monitoring frameworks to ensure ongoing compliance and quality. Governance should focus on aligning SBA tasks with assessment standards and enhance competence in SBA implementation.

Keywords: Assessment tasks, online schools, exit points

124. Continuous assessment amidst the curriculum shifts in Uganda's Lower secondary school education: Teachers' perceptions from the island district of Kalangala.

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Abstract

In 2020, Uganda rolled out the competency-based curriculum, shifting away from the traditional knowledge-based approach that had existed practically since 1918. Assessment was one of the major pedagogical shifts in the competency-based curriculum from a dominantly summative assessment to an emphasis on formative assessment/continuous assessment. The study aimed to seek perceptions on the possibilities of effective implementation of the competency-based education using continuous assessment as one of the assessment modalities. The objective of the

study was to establish the teachers' perceptions and experiences on continuous assessment in the competency-based education in Uganda. Using a phenomenology research design, nine teachers (09) from two (02) secondary schools in Kalangala district were interviewed, and corroborated with a document review. Data were analysed using thematic analysis, whereby findings revealed that continuous assessment was a good strategy in promoting the acquisition of subject-specific skills but was likely to be marred with dishonesty and underfunding at the school level. The study was limited by inadequate information to the researcher for fear of victimisation of the perpetrators of dishonesty. The study recommends stringent supervision by the examinations board of Uganda of all assessment practices, especially continuous assessment at the school level.

Key words: continuous assessment, curriculum shift, dishonesty, pedagogy, Uganda

125.Review of Assessment Practices in Outcomes-Based Education: A Case Study of Secondary School Teachers of Physical Science in Zambia

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Abstract

In outcomes-based education, the learning outcomes expected to be achieved by the learners include knowledge, skills and competencies. During the teaching and learning process, the focus is on how the learning outcomes will be achieved and demonstrated, and the learner assessments are a means by which that confirmation is made. This requires learner assessments to be aligned with the outcomes stated in the curriculum.

The Ministry of Education in Zambia rolled out an outcomes-based school curriculum in 2013. This study aimed to investigate how the Ministry of Education outlined curriculum innovations in its documents and how physical science teachers interpreted the curriculum through their classroom practices and learner assessments. The study, situated within an interpretive paradigm, employed a single case study to obtain a thick description and probe the alignment of policy with practice. A school in Lusaka Province, Zambia, was the site of the study, and four physical science teachers and their learners were the participants. Data was collected using document study, lesson observations, and interviews. The study employed Fullan's theory of educational change (Fullan, 2007), which outlines that educational change is not linear but involves several stages as the theoretical framework. Further, one construct of the curriculum implementation analytical framework proposed by Rogan and Grayson (2003) was used as a lens to analyse and discuss the findings.

The findings revealed that the actual classroom practice and learner assessments diverged from the policy intentions. There was a mismatch between the dictates of the curriculum and the type of learner assessments administered. Examination-oriented teaching and continuous testing of learners were prominent. The study, therefore, developed and proposed the "Kuitusatusa" model, derived from the literature and empirical data of this study, as a practical tool for aligning curriculum with practice and learner assessments.

Keywords: Outcomes-Based Education, Learner-Centred, Authentic Assessment, Assessment Alignment, Curriculum Mismatch, Kuitusatusa Model.

126.Exploring Educator Perceptions on Integrating Balanced and Inclusive Education Within Competency-Based Reform In Eswatini

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Abstract

Eswatini has recently adopted Competency-Based Education (CBE), which focuses on clear learning outcomes and performance. At the same time, the country has joined the Organisation of Southern Cooperation (OSC), which supports a different approach called Balanced and Inclusive Education (BIE). BIE, based on the 2020 Universal Declaration, values cultural identity, fairness, and ethical learning. This study, using ideas from critical pedagogy, explores how education experts from eight English-speaking Global South countries—including Eswatini—understand and assess the presence of BIE in Eswatini's new curriculum. Critical pedagogy helps us look closely at how education can either support or challenge unfair systems. It also helps us ask whether Eswatini's current education changes support BIE values such as inclusion, culture, and student voice. The study adopted a mixed methods approach that was applied to a descriptive survey that involved two methods: a semi-structured questionnaire driven survey of 18 professionals who completed a 228-hour BIE training program run by the OSC, and a group discussion with six experienced Eswatini policymakers. These six experts used a three-point scale to rate 69 BIE indicators in the curriculum (1 = not implemented, 2 = partially implemented, 3 = fully implemented). Quantitative data were analysed through descriptive statistics (frequencies and means) and thematic analysis for qualitative data. The results showed that the BIE area of Transdisciplinarity (working across subjects) was the most well-supported in the curriculum. However, Dialecticism (open thinking and dialogue) and the area of Assessment had the lowest scores. Contextuality, which focuses on meeting the needs of individual learners, scored high in some areas but was weak in how it was assessed. Most participants agreed that BIE fits best in Social Sciences and Language subjects and should be part of national exams. After training, participants saw BIE not just as a method, but as a deeper approach to ethical and inclusive education. These findings show that while some parts of the system in Eswatini support BIE, areas like leadership and assessment need improvement. Making CBE and BIE work together will require clear strategies to create a more fair, culturally relevant, and inclusive education system.

Keywords: Balanced and Inclusive Education, Competency-Based Education, Critical Pedagogy, Curriculum Reform, Inclusive Learning, Assessment.

127. Assessing the Impact of Mandatory ICT Education on the Competence Based Curriculum in Zambian Secondary Schools

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Abstract

This study aims to assess the impact of mandatory Information and Communication Technology (ICT) education on computer literacy levels in Zambian secondary schools. With ICT education now integrated into the New Competence based Curriculum, it is crucial to evaluate its effectiveness in equipping learners with essential digital competencies. The research will involve

50 school administrators—five selected from each of Zambia's ten provinces—to provide insights into the implementation, challenges, and perceived outcomes of mandatory ICT education in their respective schools.

The literature review will encompass both regional and global studies on ICT integration in education. Key sources include research conducted in Kenya and Ghana, where ICT education was similarly mandated in public secondary schools (Wangari, 2018; Owusu-Acheaw & Larson, 2015). These studies utilized mixed-method approaches, including surveys and interviews with educators and students, to evaluate the outcomes. In Zambia, prior studies have focused primarily on ICT infrastructure and access (Mwalongo, 2011), but few have explored the effectiveness of compulsory ICT education on actual computer literacy outcomes. This highlights a significant research gap that this study intends to address.

The methodology will involve a mixed-method approach. Quantitative data will be collected through structured questionnaires administered to the selected school administrators, while qualitative data will be gathered via semi-structured interviews. The study will explore variables such as availability of resources, teacher competency, student engagement, and actual improvement in digital skills. Data will be analyzed using thematic and statistical techniques to triangulate findings and present a comprehensive view of the impact.

The results are expected to inform educational policymakers and stakeholders on how mandatory ICT education is influencing digital literacy in Zambia's secondary schools and suggest improvements for more effective implementation.

Keywords: Computer Literacy, ICT Education, Zambian Secondary Schools

128. Investigating School Administrators' and Education Standards Officers' Monitoring and Evaluation of Teacher Performance in Nyimba District of Zambia

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Abstract

This study aimed at establishing whether there were any particular challenges that faced school administrators and Education Standards Officers (ESOs) in Nyimba district in their Monitoring and Evaluation (M&E) of selected secondary school teachers' performance. The objection of the study was to investigate the major challenges to monitoring and evaluation faced by school administrators and Education Standards Officers, if any. This study was conducted within the framework of mixed methodology using an embedded mixed design, the study collected data from 68 participants drawn from six secondary schools and the District Education Board Office in Nyimba. The data were collected using questionnaires and interviews. The findings were that most teachers were faced with the challenges of inadequate teaching and learning materials at their schools, minimal feedback by ESOs, inadequate staffing of ESOs and minimal motivation of teachers. Moreover, some teachers feared to meet standards officers due to inadequate preparation. On the other hand, the district was also faced with inconsistent funding from the government and therefore making timely inspections in distant schools almost impossible. My

recommendations for addressing the challenges that emerged from the findings included continuous professional trainings where Education Standards Officers and teachers in Zambia are inducted on professional ethics, shared vision, timely school visits by standards officers, the incorporation of ICTs into monitoring and evaluation, awarding of hard-working teachers, recruitment of additional standards officers and the undertaking of cluster monitoring and evaluation teachers in schools.

Keywords: Challenges, evaluation, monitoring, shared vision, teacher

129.Grounding Innovation in Local Context: Embedding the South African Competency Framework into Curriculum -Integrated Assessment

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Abstract

In response to the national imperative to strengthen curriculum relevance and learner preparedness, the Independent Examinations Board (IEB) has actively explored how the South African Competency Framework (SACF) can be translated into classroom practice. The 2025 Competency-Based Learning Experience, involving 206 Grade 7 learners across 10 independent schools, served as a practical model of how assessment can support a dynamic, competency-infused curriculum.

Centred on the theme of responsible social media use, the learning experience drew directly from the SACF's emphasis on skills such as creativity and collaboration, and character traits including ethical citizenship. Randomly mixed-school teams engaged with complex digital dilemmas in ways that mirrored the evolving demands of both society and the curriculum. Their task was to co-create solutions that were imaginative, contextually relevant, and ethically sound.

A panel of educators and IEB assessment specialists used a rubric aligned with the SACF to evaluate learners' responses, ensuring consistency, transparency, and developmental feedback. Each learner received certification reflecting their demonstrated level of competence, shifting the focus away from traditional scores towards meaningful growth.

This approach shows how assessment can support curriculum goals while preparing learners for the demands of both the classroom and real-world contexts. It enables deeper learning and authentic application, while offering teachers a clear, practice-based model for integrating competencies into their pedagogy. The findings highlight the potential of assessment-led learning experiences to advance both learner growth and teacher development, where the cultivation of transversal skills and character traits is essential for long-term success.

Keywords: South African Competency Framework, competency-based assessment, curriculum integration, collaborative learning, assessment innovation, digital citizenship, teacher development

130. Beyond the Score: A Holistic Account of South Africa's Systemic Evaluation as a Catalyst for Transformative Education Reform

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Abstract

This paper explores the development and design of the South African Systemic Evaluation model. It also considers how locally crafted standards can challenge over-reliance on global benchmarks, enabling a more context-sensitive and developmental approach to systemic transformation. The study targets Grades 3, 6, and 9, which are key transition stages in a learner's academic journey. The SASE conceptual design provides a comprehensive diagnostic to measure and analyse critical learning outcomes in Mathematics and Reading Literacy. The study brings together a learner achievement focus, incorporates whole-school evaluations, and examines district-level support structures. The model expands the unit of analysis beyond the learner to the broader education ecosystem.

The South African Department of Basic Education didn't have a national study that monitors learner achievements and factors that influence learning outcomes. The data only came from regional and international studies that are not aligned to the country's context and curriculum; therefore, the SASE seeks to address the gap and provide evidence-based data to inform policy and practice.

The SASE study is guided by Bronfenbrenner's bioecological model and Engeström's Activity Theories, both of which offer an understanding of how various contextual factors interact, providing insights that are particularly relevant to the South African educational landscape.

The data was analysed at three levels: microsystem, macrosystem, and mesosystem. The microsystem includes the context where a child spends most of their time and, as such, includes several factors (e.g., the teacher, classroom, and school). The macrosystem describes the larger environmental forces of a societal, cultural, and political nature. The interrelations between these settings in the micro- and macro-systems occur in the mesosystem.

The international benchmarks were used to analyse the data on a scale of 0-1000, where the minimum proficiency level is 400. SASE results showed that in Reading Literacy, Grade 3 learners scored an average of 438 points; Grade 6 learners scored an average of 522; and Grade 9 learners scored an average of 592 points. In Mathematics, the average scores were 428 points for Grade 3, 536 for Grade 6, and 594 for Grade 9.

The study recommended addressing the language of instruction, resource availability, and professional teacher development.

Keywords: Systemic Evaluation, Learner performance, and Systemic Transformation.

201.Holistic Assessment for Lower Grades Pupils: Nurturing Talents for Self-Employment in Future

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ABSTRACT

This study originated from Tanzanian Education system to assess the lower grades pupils of Grade Two in only cognitive domain i.e. 3Rs (Reading, Writing and Arithmetic) from 2005 – 2023. This means that other domains of psychomotor and affective domains are neither assessed at school terminal tests nor at national assessment level. So, the aim of this study was to find out as to why these two domains are not given priority in assessment of lower grades pupils. Specifically, this study dealt with the following objectives: To identify the reasons for not assessing psychomotor and affective domains for lower Grades pupils; to explore the effects for not assessing psychomotor and affective domains for lower Grades pupils; and to seek for the public experiences on how do they nurture children's talents for their self-employment in future. The area of study was in primary schools based on urban, sub-urban and rural areas. The study used mixed research methods in its approach. The instruments used for data collection were questionnaires, documentary review and interview. Sample for this study which included teachers, parents and educational officials was selected by use of stratified -random sampling and purposeful sampling techniques. The findings showed that there were no substantive reasons for not assessing psychomotor and affective domains for lower Grades pupils. However, there were many negative effects educationally for not assessing lower Grades pupils in psychomotor and affective domains. On the other hand, 90% of people sampled were on the opinion that lower Grades pupils to be assessed holistically both at school-Based Assessment and national assessment levels. Hence, the study concluded that the education system that assess only cognitive domain in lower Grades pupils is outdated and does not Nurture children's talents for their self-employment in future. The study recommended that the government through her Ministry of Education and institutions dealing with assessment of learners should ensure that all learners from Pre-Primary to Universities are assessed by use of holistic approach i.e. assessing them in Cognitive domain, psychomotor domain and affective domain.

Assessment, Holistic Assessment Approach, School-Based Assessment, National-Based Assessment, Talents

202.Teachers' and Students' perceptions to enhancing teaching and learning in secondary school through formative assessment: The case of Addis Ababa, Ethiopia

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ABSTRACT

The main purpose of this study was to determine the perceptions of teachers' and students' to enhancing teaching and learning in secondary school through formative assessment. The specific objectives of the study were: (a) To determine students' perceptions on formative assessment, (b) To determine teachers' perceptions on formative assessment, and (c) To determine whether there is significant difference in the perceptions of students towards formative assessment in different grade levels of secondary schools. To conduct this study, a descriptive survey research design was employed. A total of 160 secondary school teachers from eight secondary schools; four schools from Akaki Kality, two schools from Bole and two schools from Nifas silk lafto sub cities from Addis Ababa city administration education bureau were randomly selected and participated in this study. Additionally, 320 students from these eight secondary schools were part of the study. The data were gathered through a questionnaire. Data gathered through questionnaires were analyzed using

percentage, frequency, mean, standard deviation and one -way analysis of variance (ANOVA). The data gathered through open ended questions were analyzed qualitatively through narration. The results of the study revealed that students and teachers had a more positive perceptions towards formative assessment. Overall, there were no significant difference in the perceptions of students and teachers on formative assessment in different grade level. The conclusion shows that both teachers and students favored formative assessment as an effective method of classroom assessment. However, there is a need to enhance authenticity and transparency as a way of achieving the goal of formative assessment. Thus, it is recommended that school principals and teachers should clearly tell the students what is needed in all assessment tasks and the teachers assess their students to enable to apply their learning to real life situations.

Keywords: Assessment, Formative assessment, secondary schools, Perceptions

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203.Faith-Based Schools and Compulsory Policy of Religious Education as a Moral Saver: A Case of the Marianist Education in Zambia

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Abstract

The study focuses on the contribution the Marianist Brothers made to moral and integral boys' education through their educational philosophy at Matero Boys Secondary School popularly known as MaBoys in Lusaka Province of Zambia. To evaluate moral development in their learners, Religious Education was made compulsory and examined like any other academic subject. The Brothers' commitment in teaching and assessing RE at all levels, subjected the learners to acquire morality in all scopes of life. To ascertain the formative and summative tools utilised to enhance holistic learning in the Marianist environment, the study implored Cox's theory of phenomenology of religion. The theory was profound to generate empirical evidence from the religious perspective and lived experiences of the Marianist Brothers as well as the narrated stories from both former teachers and pupils of the first twenty-five years at MaBoys. The sample included the initial seeds of 5 Marianist Brothers, 5 former teachers and 20 former pupils from 1970 to 1991 cohorts. The study was purely qualitative and specifically used a follow-up case study design to capture and understand the Marianist applied pedagogical practices in enhancing holistic learning outcomes long after students left the school. Data was collected through semi-structured interviews, Focus Group Discussion and data analysis was done thematically from the merging themes. The findings indicated that Religious Education was the core of morality evidently seen in the lives of MaBoys graduates who served the nation in different sectors while others were self-sustained ineterpreneur. Further, findings revealed that RE was supplemented with other religious programmes which was the Marianist Brothers' initiative to impart spiritual moral behaviour in the learners through summative assessment. Additionally, frequent observations made by both Brothers and teachers on virtues of Christian life in areas of prayer, devotion and charity affected the learners' religiosity behaviour long after living the school were still devoted in spiritual activities. It was evidently shown that Marianist philosophy marked an imprint in the boys' lives

who became responsible citizens of the nation. The study recommends that RE should be made compulsory at all levels in both faith-based and public schools to inculcate moral values.

Keywords: Morality, Marianist Brothers, Religious Education, Compulsory Policy

204. The Importance of Formative Assessment in the Learning Teaching Process

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Abstract

In the realm of education, assessments play a pivotal role in shaping the learning journey of the learners, providing valuable insights into their progress and understanding. Formative assessment stands out as one of the pillars among the many other methods of assessment in the evaluation process. Formative assessment involves on going, real time evaluation that facilitates immediate feedback and guide instructional strategies. Thus this paper is aimed at knowing the role that formative evaluation fulfils in the learning process, this is based on a continuous assessment process that takes place in the classroom during learning based on the exploration and analysis of what transpires in regard to learner performance and the span of learners' different aspirations, future plans and objectives. Within the methodology, analytical and research methods will be used, hence establishing the relevance of evaluation; analysing the needs and interests of the learners through a survey that will be conducted in a government secondary school in Lusaka District of Zambia. The research will be exploratory in nature and analytical and critical methods will be used, applying the survey technique. It is expected to be administered to a population of 100 learners in a school from which 20 learners from different basic years will be taken as a sample. This data will be processed and presented using statistical tables, which will be analysed with different critical positions. This will be done with the sole purpose of promoting the importance of formative evaluation as one way of enhancing the quality of education being provided in schools and in the end demonstrate the results of the learning that takes place in the classroom by the leaners. It is intended that the results of this research will improve the school, performance of the learners and prove that formative assessment can be used to promote quality of education and that it should be recognised as a way of promoting learner inclusiveness in class.

205. Assessment Practices in Early Childhood Education: Balancing Innovative Play-Based Learning, Formative and Summative Approaches to School Readiness in Zambia

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Abstract

Ensuring school readiness through high-quality Early Childhood Education (ECE) is a key policy priority in Zambia, where ECE is integrated into the Early Education and Primary Education systems with a curriculum emphasizing play-based learning (PBL), 60% of the contact time. Effective assessment plays a pivotal role in monitoring developmental progress and informing instruction. However, empirical insights into how ECE teachers implement assessment practices—especially in balancing Assessment for Learning (AfL) and Assessment of Learning (AoL) within

play-based contexts—remain limited. This study investigates prevailing ECE teacher practices for assessing school readiness in Zambia.

Employing a convergent mixed-methods approach across three districts (Choma, Kabwe, Kapiri Mposhi), the study engaged 30 ECE teachers with an average of 5.7 years of experience. Quantitative data analyzed domains and practice frequency, while qualitative data explored teacher perspectives and methods. Key findings indicate a strong focus on AoL, with literacy and language development (100%), cognitive, social-emotional, and physical development (96.7%) prioritized as essential domains. Teachers blend AfL and AoL strategies within PBL frameworks, employing observation, continuous assessment, question-answer sessions, and writing activities to gauge readiness. Observation and documentation emerged as critical methods, enabling teachers to assess interactions, self-help skills, and physical abilities during play. Continuous assessment tasks and tools, such as the Instrument for Children's Literacy Attended Progress (I-CLAP), were widely used but highlighted a gap in standardized tools and systematic documentation.

This study underscores the need for contextually appropriate, curriculum-aligned assessment tools tailored to play-based settings. Enhancing teacher capacity for systematic observation and documentation could strengthen AfL and AoL practices, ultimately ensuring quality ECE and effective school readiness evaluation in Zambia.

Keywords: Play-Based Learning, Assessment for Learning, Assessment of Learning, School Readiness

206. Evaluating the Predictive Validity of Forecast Grades Generated from Formative Assessments for NSSCO and NSSCAS Examinations

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Abstract

Accurately predicting how learners will perform in high-stakes national examinations is vital. It helps inform teaching strategies, supports at-risk learners early, and plays a crucial role in setting standards for national exams. In Namibia, forecast grades, based on formative assessments done throughout the school year, are commonly used to predict learner outcomes in the NSSCO and NSSCAS examinations. Yet, questions remain about how reliable these forecast grades truly are, given that they can be influenced by factors like teacher judgment, learner motivation, and differences in school resources.

This study explores how closely learners' forecast grades match their actual performance in mathematics and science exams. The analysis is framed through the lenses of Self-Regulated Learning Theory, Cognitive Load Theory, Expectancy-Value Theory, and research on Teacher Judgment and Bias. While previous studies have shown that formative assessments can offer useful insights into learner progress, they have also pointed to worrying gaps between forecast grades and final results. These gaps demand closer examination.

Using a mixed-methods approach, we analysed both the quantitative relationship between forecast grades and exam results and gathered qualitative insights from interviews with teachers and school principals. The findings show significant differences between predicted and actual outcomes, with only weak to moderate correlations between the two. Factors such as teacher bias, inconsistencies

in assessment practices, differences in cognitive demands between classroom and exam tasks, and varying levels of learner engagement all contributed to the discrepancies.

The study highlights an urgent need for more standardized, consistent formative assessment practices across schools to make forecast grades a more reliable tool for prediction. Beyond this, our findings offer practical recommendations to strengthen assessment systems and ultimately better support learner achievement in Namibia.

Keywords: Forecast grades, Predictive validity, High-stakes examinations, Formative assessment, 'Teacher judgment bias and learner motivation

207. Evaluating the Effectiveness Of E-Portfolio-Based Assessment In National Skills Qualification (NSQ) Centres In Nigeria

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ABSTRACT

An e-portfolio is a digital collection of learners' work that showcases their knowledge, skills, and progress over time. E-portfolios have emerged as a modern assessment tool in education, offering a dynamic way for learners to document, reflect, and showcase their skills and competencies. National Skills Qualification (NSQ) Centers in Nigeria are vocational institutions, where hands-on learning is crucial, e-portfolios provide a more comprehensive and continuous methods of assessing students compared to traditional examinations. The use of e-portfolios for both formative and summative assessment is an important part of blended learning. Learners kept individual and group portfolios throughout the academic year to upload a variety of tasks, with immediate feedback. This study evaluates the effectiveness of e-portfolio-based-assessment in National Skills Qualification (NSQ) Centers in Nigeria, by examining its impact on student learning outcomes, skills acquisition, benefits and challenges. To achieve this purpose, three research questions guided the study, while one hypothesis was tested at 0.05 level of significance. The study utilized a mixed research design, incorporating both quantitative and qualitative approaches. The population of the study consisted of all the instructors and learners of National Skills Qualification (NSQ) Centers across the six geo-political zones in Nigeria. Random sample technique was used to select 500 instructors and 700 learners. Data was collected through Semi-Structured Interview (SSI) and Questionnaire on Effectiveness of E-portfolio-Based Assessment (QEPBA). Cronbach Alpha was used to check the instrument reliability coefficient which yielded 0.92 and 0.94 respectively. The quantitative data were analyzed using descriptive statistics (percentages, mean, standard deviation) and independent sample t-test statistics. While the qualitative data were analyzed thematically. Findings revealed that the e-portfolios assessment was highly effective in learners' participation. Result also showed that e-portfolios assessment was highly effective in learners' skills acquisitions. The results identified the challenges hindering the use of e-portfolio-based assessment, which include: limited digital infrastructures, lack of digital literacy among instructors and learners. Based on the findings the researchers made the following recommendations among others: e-portfolios assessment should be encouraged in vocational institutions. There should be adequate provision of digital infrastructure, electricity and training and re-training of vocational instructors on digital literacy.

Keywords: e-portfolios, feedback, showcase, formative and summative assessment

208. Availability, Adequacy and Utilization of Digital Devices in Students' Assessment in Nigerian Technical Colleges

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ABSTRACT

The integration of technology in assessment for learning has transformed the educational landscape and offers opportunities for innovative and effective learning experiences and the way students are assessed in educational institutions worldwide. In Nigerian technical colleges, the availability, adequacy and utilization of digital devices play a crucial role in determining students' assessment. With the increasing emphasis on technology-driven learning and assessment, technical colleges' aim to equip students with the skills and knowledge required for the workforce. Assessment with digital devices can enhance the process by providing efficient, accurate and timely feedback. This study explores the availability, adequacy and utilization of various forms of digital devices in assessing students' learning in technical colleges. To achieve this objective, three research questions and one hypothesis guided this study. The study adopted survey research design. The population comprised all students and teachers in technical colleges in Nigeria. A simple random sampling technique was used to select 1500 students and 400 teachers from six geo-political zones. Two Questionnaires on Availability, Adequacy and Utilization of Digital Devices for Students (QAAUDDS) and Questionnaire on Availability, Adequacy and Utilization of Digital Devices for Teachers (QAAUDDT) were used and Cronbach Alpha of 0.90 and 0.86 reliability coefficients were obtained. The data were analyzed using mean, standard deviation, and t-test. The findings revealed that digital device/tools were available and utilized to a little extent. Similarly, the result further revealed that the provision of digital devices was inadequate and there was no significant difference between teachers and students responses on the availability of digital devices/tools in technical colleges in Nigeria. It was therefore recommended that there should be adequate provision and utilization of digital tools such as computers, projectors, printers, internet facilities among others, to facilitate effective integration of assessment for learning.

Keywords: Availability, Adequacy, Utilization, Digital devices, Technical Colleges.

209.Ensuring Accurate Measurement in School-Based Projects through Context-Applicable Critical Appraisal Guidelines: The Case of ZIMSEC

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Abstract

As part of the ongoing education reform initiated by the Ministry of Primary and Secondary Education (MOPSE), Zimbabwe mandated the inclusion of School Based Continuous Assessment (SBCA) component for both primary and secondary school certificate beginning 2025. School Based Project (SBP) will be a compulsory component all students must take in the Heritage Based Curriculum. Some of the objectives of the SBCA project include cultivating research and inquiry skills, foster critical thinking, promote creativity and innovative skills, problem solving, build collaboration and communication skills, connect learning to real-world context, foster life-long learning, and encouraging learners to see things in multi-perspectives. However, aligning the learning goals and assessment will not be an easy task. So is final grading of the SBCA score can be subjective since a large portion of it is based on rubrics, observations and performance assessment. The objective of the study was to find out how the development of critical appraisal could strengthen applications of SBCA standards to enhance the quality of scores across different context. This study explored 40 Secondary School teachers through survey and interview methods to gather data on assessment issues including fairness, validity and reliability in SBCA scores. Following inductive analyses, findings indicated that teachers primarily valued fairness as an overarching driver of decision making when assessing student. Teachers' considerations of fairness centred around six emergent themes; (a) fairness of marking, (b) bias, (c) the difficulty of applying same assessment standards across different context, (d) poor quality and standard of the project work passed by teachers, and (e) moderation. The overarching thread common among the teachers was their reported challenge in maintaining fair assessment practice. Teachers argue that when assessment is designed to align with the goals of the curriculum, moderation efforts should ensure that different applications of standards remain within acceptable limits. They suggest the final score of the project should be based on the summative result. The study concludes by calling for establishing the development of contextually relevant, flexible, and clear criteria that are adaptable and transferable to different settings. It was recommended to provide educators with support and guidance on implementing guidelines.

Key words: Critical appraisal; measurement; heritage-based curriculum; assessment standards; clear criteria; school based project.

210. The Early Grade Reading Assessment (EGRA) Examined Against Two Prevailing Frameworks for Assessment Quality

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Abstract:
The Early Grade Reading Assessment (EGRA), a low-cost tool assessing fundamental reading skills, has been widely implemented in over 70 countries and 130 languages, particularly in low and middle-income countries (LMICs). EGRA assesses the building blocks of reading fluency and comprehension and is used by Ministries of Education for formative purposes (i.e.,inform instruction and teacher in-service training); and by international donors and funders to track impact (i.e., proportion of students participating in interventions with improved learning).
The EGRA is an example of a flexible tool that can serve both summative and formative purposes. The EGRA Toolkit, now in its third revision (2009, 2016, 2025), provides a theoretical framework to develop a fit-for-purpose and contextually-relevant assessment. The Toolkit provides guidance on item development, test administration, team roles, and capacities necessary for the given

purpose of the assessment. Given EGRA's broad use as a formative and summative assessment, this paper examines the technical underpinnings of the 2025 EGRA Toolkit against global assessment standards to answer the following question: How does the EGRA guidance ensure high-quality assessment data for both formative and summative uses?
This paper analyzes EGRA's technical principles against two global assessment standards: the IAEA's International Standards for Educational Assessment Organizations (2024) and UIS' Criteria for Use of an Assessment to Report on SDG 4.1.1 (2024). Since EGRA was recently accepted for reporting on SDG4.1.1 we include the six criteria set forth by the SDG4 custodian agency, UNESCO Institute for Statistics (UIS), as one of the two sets of standards. The standards emphasize principles of validity, reliability, fairness, organizational capacity, and data integrity.

The analysis revealed that 1) there is a high level of correspondence across the two standards and some areas of distinction and 2) the two frameworks map onto the EGRA Toolkit without gaps. This means that the 2025 EGRA Toolkit provides technically strong formative and summative assessment options for foundational reading. The findings from this paper are usable to practitioners in LMICs so they can confidently use the EGRA Toolkit guidance since it satisfies prevailing standards for assessment quality.
Keywords: EGRA, SDG4, International Standards, LMIC, reading

211. An Evaluation of Examination Malpractice Trends in Five Chinsali Districts Secondary Schools

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Abstract

This study investigates the trends in examination malpractice in five selected secondary schools within Chinsali District found in Muchinga Province in Zambia. The study covers a five-year period from 2018 to 2022. Lately, the Examinations Council of Zambia (ECZ) has intensified the fight against examination malpractice by putting in place stringent measures on those caught practicing the vice to ensure assessment of true learning. Unfortunately, despite these efforts by the Ministry of Education and ECZ to curb examination malpractice, the vice has continued although at a lower scale. The persistent occurrence of examination malpractice raises concerns about the effectiveness of existing interventions. The absence of empirical data on malpractice trends within Chinsali has limited the development of targeted strategies to address the problem. The main aim of the study is to determine whether examination malpractice has increased, decreased, or remained constant over the review period using five schools in Chinsali District. The specific objectives include identifying reasons behind malpractice, common types and methods used, contributing factors among students and teachers, and assessing the effectiveness of existing preventive interventions. A qualitative research paradigm underpins the study, employing a descriptive research design to gain a deeper understanding of the social and systemic factors influencing malpractice. Data will be collected through face-to-face interviews, focus group discussions and examination observation from a sample of 80 participants. The participants will include students, teachers, and administrators drawn from Chinsali Day, Chinsali Girls, Chinsali Special Unit, Mishishi Day, and Kafula Musungu secondary schools. Further, document analysis

of past examination reports within the period under study will be done. Purposive and random sampling techniques will be used to ensure diversity in school types and respondent perspectives. The anticipated results of the study are expected to reveal whether malpractice incidents are rising, declining, or holding steady over time. Additionally, the study is likely to highlight both systemic and individual-level factors contributing to malpractice, such as exam pressure, lack of preparedness, and inadequate enforcement of policies. The findings will provide policymakers and educators with evidence-based insights necessary for refining or developing new strategies to combat examination malpractice in secondary schools in Zambia.

Keywords: Examination malpractice, Chinsali District, persistent occurrence, five years

212. Enhancing Adherence to Continuous Assessment Standards: Insights from the 2023 Moderation Exercise in Zambian Colleges of Education

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Abstract

The study investigated adherence to continuous assessment requirements in Zambian Colleges of Education, using insights from the 2023 Moderation Exercise. Employing a mixed methods approach, it analysed secondary quantitative and qualitative data from the moderation exercise conducted by the Examinations Council of Zambia. The sample comprised 12 colleges, contributing to 364 courses across early childhood education, primary education, and secondary education programs. The findings revealed four main themes: document availability and quality, task variety and alignment, marking schemes and practices, and feedback provision. Despite high document availability, issues with quality and completeness persist, highlighting the need for well-labelled, complete documents. Additionally, there is a lack of task variety and alignment, inconsistent marking practices, and a need for more constructive feedback. These findings underscore the importance of diverse, well-aligned tasks, comprehensive marking schemes, and detailed feedback for effective continuous assessment. The study suggests implications for policy and practice, urging revision of guidelines to emphasize document quality and proper maintenance. Colleges should diversify assessment methods, ensure alignment with syllabus objectives, and provide professional development programs to improve marking practices and feedback provision. Acknowledging limitations, including reliance on secondary data and contextual specificity, the study calls for future research to include longitudinal and comparative studies to deepen understanding of continuous assessment practices and their impact on student learning outcomes.

Keywords: Continuous assessment, colleges of education, moderation exercise, document availability, task variety, marking schemes, feedback provision

213. An Investigation into The Effectiveness of assessment For Learning, Versus Assessment of Learning, In Promoting Student Development and Academic Development.

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Abstract

This research proposal aims to investigate the comparative effectiveness of Assessment for Learning versus Assessment of learning in fostering student development and enhancing academic achievement. The differences will be explored within the context of modern educational practices. Assessment for Learning is said to be a formative approach which is used to inform teaching and learning processes by providing students with feedback and continous improvement in order to guide their progress in their academic journey. On the other hand, Assessment of Learning is a summative approach which evaluates and measures students learning at the end of an instructional period or at their final achievements.

As educational institutions continue striving to improve learning outcomes, the integration of diverse assessment strategies is a necessity. This study will involve multiple educational settings including primary and secondary schools to investigate how these assessment types will influence student motivation, engagements and instructional strategies. Not only this but it will also identify some advantages and challenges associated with each type of assessment so that the way forward may be drawn. There will be an exploration on how teachers' perception of Assessment for learning and Assessment of learning impact their teaching practices and how the assessments can be integrated to further student learning experiences on both cognitive and non-cognitive outcomes. A mixed methods approach will be used by combining quantitative data from academic performance metrics and qualitative insights from students and teacher interviews and surveys.

These methods will help to reach many, and stakeholders, as well as the concerned community, so that a conclusive outcome is attained, with more knowledge. The findings are expected to offer insights to educators and policy makers into best practices for balancing Assessment for learning and Assessment of learning that can lead to enhanced educational experiences and outcomes. Considering such would also provide recommendations for educators to optimize assessment strategies that foster both academic and long-term learning development as it also contributes to the broader discourse on effective teaching and learning strategies.

KEYWORDS

Assessment, Learning, Formative, Summative, Feedback, Matrices, Assets, Optimize Effective, Discourse, Strategies, Perceptions

215. Teacher feedback: empowering or not

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Abstract:

Teachers' feedback, verbal or written, has the potential to progressively prepare learners to be lifelong learners. While this is the case, it is not clear what kind of feedback would help prepare

learners to be lifelong learners. The purpose of this paper is to establish the nature of the written feedback that is given to secondary school Mathematics learners in Mathematics class tasks and exercises. It also, through the learners' perceptions, explores the extent to which the teacher-given feedback paves way for learners' self- assessment and self-monitoring which are essential traits of lifelong learners. A total of 40 Grade 12 pupils from eight randomly selected secondary schools in District X, central Zambia in this qualitative study. Data were collected through document review and interviews. The study used Hattie (2009) framework on effective feedback to analyse feedback. The findings show that teachers' written feedback (a) is largely focused on errors that the pupils make and to a significant extent, did not encourage student learning and further inquiry; and also (b) focuses on 'personal and impersonal evaluation' of the learner without giving guidance for further inquiry. The results of this study suggest that written feedback on pupils' Mathematics work needs to take a different form if it is to improve pupils' learning. They further suggest that teachers need to reflect and give more attention to the comments in written feedback so that they progressively support and prepare learners to learn from the given feedback.

Keywords: lifelong learning, feedback, Mathematics learners, perception

216. Enabling Competency-Based Education Through Holistic Progress Cards: A Paradigm Shift in School Based Assessments in India

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Abstract

The National Education Policy (NEP) 2020 advocates a fundamental transformation in India's school education system—from content-heavy, summative assessments to learner-centered, competency-based evaluation. Aligned with this vision, the National Council of Educational Research and Training (NCERT), through its Performance Assessment, Review, and Analysis of Knowledge for Holistic Development (PARAKH) initiative, has developed the Holistic Progress Card (HPC) as a multidimensional, continuous assessment framework.

The HPC is conceptualized not as a summative report of academic performance, but as a dynamic, formative tool that integrates cognitive, socio-emotional, and psychomotor domains of learning across the four stages of schooling—foundational, preparatory, middle, and secondary. This paper analyzes the theoretical underpinnings and implementation potential of HPCs in promoting competency-based assessment. It frames the HPC within contemporary formative assessment paradigms—specifically, 'assessment for learning' and 'assessment as learning.' The HPC enables educators to track learner progress using observation, performance-based tasks, and contextual feedback, while simultaneously fostering student agency through self-monitoring and peer review mechanisms.

By documenting a learner's trajectory in subject-specific competencies, along with areas such as creativity, collaboration, critical thinking, ethical values, and emotional well-being, the HPC operationalizes the NEP's goals of holistic development. It creates real-time feedback loops for pedagogical adaptation, allowing instructional design to be responsive to individual learning needs. The scaffolding of the HPC evolves with learner maturity—emphasizing foundational literacy and socio-emotional competencies in early years, and progressing toward subject-specific mastery and higher-order skills such as metacognition and adaptability in later stages.

The study argues that HPCs exemplify a significant reconceptualization of assessment practices in Indian education. By integrating multiple stakeholder perspectives—teachers, students, peers, and parents—and emphasizing developmental trajectories over static performance metrics, the HPC operationalizes NEP 2020's vision for holistic, inclusive, and future-ready education. It transforms assessment into a vehicle for meaningful learning, not merely a tool for academic certification.

Keywords: Competency-based assessment, Holistic Progress Cards, PARAKH, NEP 2020, student development, formative assessment

217.Beyond Evaluation: An Interrogation of Teachers of English Comments In Formative Assessment Of Students' Writing Skills In Selected Secondary Schools In Nairobi County, Kenya

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Kenya National Examinations Council

Abstract

Despite the critical role played by the writing skill in learning and in daily life, there is concern that many Kenyan students graduate from high school with inadequate writing skills. The Kenya National Examinations Council (KNEC) yearly feedback reports reveal perpetual learner underachievement in English writing skills in the Kenya Certificate of Secondary Education (KCSE). This points to challenges in the learning of writing skills. Teacher written feedback plays a crucial role in developing learners' writing but unless their feedback provision practices are sound, their efforts may not achieve the intended benefits. The purpose of this study was to examine teachers' comments on their learners' compositions and assess their helpfulness in informing learning in writing. This paper presents the partial findings of a much larger study on teachers of English pedagogical practices in formative assessment of the writing skill. The study was undergirded by Vygotsky's Social Cultural Theory which posits that while mediation is central to learning, social interaction is the basis of learning; hence, assessment information should promote further engagement to advance learning. Conducted in 11 out of the 110 public secondary schools that sat KCSE in Nairobi County in 2021, the study involved 22 Form Four teachers, and their 198 Form Four learners selected using purposive, stratified, and simple random sampling procedures. Data which comprised teachers' comments on their learners' marked compositions was analysed using content and thematic procedures and presented in frequencies, percentages and brief descriptions. The findings revealed that written feedback was mainly teacher driven; teachers concentrated on pinpointing errors, minimally provided strategies for improvement and mostly gave vague comments that did not include adequate detail to prompt sufficient learner engagement for further development. Based on these findings, the study recommends that teachers should consider the purpose of feedback and the critical role of learners in its use; hence, give feedback comments that encourage engagement to advance learning in writing.

Key Words: Formative assessment Writing skills Teacher written feedback learner engagement

218. Assessment for Learning Vs Assessment of Learning: An Assessment of Its Implementation In Four Selected Special Schools In Zambia.

RUTH CHIFINDA, MUYUNDA MAYAMBA CHARITY

ABSTRACT

Assessment plays a crucial role in education, particularly for learners with special needs, such as those with hearing impairment. This study analyses the implementation of two distinct approaches to assessment within special schools for learners with hearing impairment: assessment for learning and assessment of learning. The purpose of this study was to find out how assessment for learning and assessment of learning was implemented in special schools particularly the four (4) main special schools in Zambia as a way of evaluating what really goes on. This study was guided by three objectives: 1. To investigate how these assessments are currently implemented in Zambia's special schools for learners with hearing impairments and their impact on educational outcomes. 2. To analyse the practices in the implementation of Assessment for Learning and Assessment of Learning, emphasizing their significance in inclusive educational settings. 3. To establish the strategies on how best these assessments can be implemented in Zambia's special schools for learners with hearing impairments

The study used qualitative approach using interviews, focus groups, classroom observations to gather perspectives on the use of Assessment for Learning and Assessment of Learning. The researchers purposively sampled (40) participants distributed as follows; Teachers (2), head teacher (1), pupils (5) with hearing impairment and parents (2) from each selected school across Zambia. Data was analyzed using themes and codes.

The study established that the ongoing feedback in the implementation of assessment for learning are often effective allowing teachers to adjust their teaching strategies based on the students' needs, varied assessment methods facilitates inclusivity and increased engagement from students with hearing impairment. On the other hand, lack of adequate training for teachers, limited resources and cultural perspective of assessment hinders the effectiveness of assessment for learning. Additionally, the study established that the in Assessment of Learning, standadised assessment provide measurable outcomes that can align with National standards and also it is easier to administer. The study however identified some challenges related to assessment of learning as focusing more on rote learning rather that foster understanding, increased stress for learners and also potential accessibility issues with testing materials and formats that do not accommodate all learners.

The study recommended the provision of training for teachers focusing on assessment for learning methodologies tailored to the needs of learners with hearing impairments. Resource allocation, policy advocacy which encourage the inclusive assessment policies that recognize the importance of both Assessment for learning and assessment of learning and ensuring adaptations are in place for learners with hearing impairment.

Key Terms: Assessment for learning, assessment of learning, Collaboration

219. Students' Learning Assessment Data; Implications for Education Policy Decision making in Cameroon state Universities

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Abstract

This concept paper explores the critical role of students' learning assessment data in informing education policy decision-making within Cameroon state universities. Given the diverse nature of assessments, ranging from homework, classroom activities, formative tests, group assignments, field trips, internship reports, practical and summative tests, administrators can collect extensive data to guide policy formulation. This paper aims to underscore the significance of leveraging students' outcomes to inform policymakers, offering insights into students' conceptions about

content and the educational efficacy of instruction. Despite numerous examples of successful integration of learning data into policymaking, the use of such data remains limited in Cameroon state universities due to barriers and preconditions that hinder their application in educational policymaking. This paper delves into the extent to which learning assessment data influence educational policymaking in these universities, examining not only factors directly linked to assessments but also the inner dynamics of policy-making processes, general planning, and evidence cultures. Ultimately, this concept paper concludes that in contexts where there is a robust planning culture and where evidence-based decision-making is prevalent, learning data are more likely to be effectively utilized in shaping educational policies. The insights gained from this exploration will offer valuable guidance for policymakers striving to enhance the educational landscape within Cameroon state universities.

Key words: Students' learning assessment, Education policy, Decision making, formative assessment, Cameroon state universities

220. From Segmentation to Synergy: A New Framework for Assessment Integration

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Amid growing demands for responsive education systems, assessment practices must evolve to reflect and support the complexities of modern learning environments. This study introduces the Feedback Loop Efficacy Model (FLEM), a theoretical framework that reconceptualizes the relationship between formative and summative assessment by emphasizing their reciprocal potential. While assessment literature tends to treat these forms as functionally distinct—with formative feedback guiding learning and summative data certifying it—there remains a lack of integrated models showing how the two can operate in tandem to enhance learner progression. The research question is therefore: How can formative and summative assessment data be systematically integrated to optimize individual learning trajectories and program-wide educational outcomes? This desktop-based study draws on an extensive review of literature across educational psychology, learning theory, and assessment methodology. It synthesizes key insights to propose model where formative feedback informs summative design, and summative outcomes recursively refine formative strategies. By framing assessments as interdependent rather than sequential or hierarchical, FLEM establishes a theoretical feedback loop in which data from each modality enhances the other.

The preliminary analysis reveals three core mechanisms through which integration is possible: adaptive assessment scheduling, cross-referenced item design, and recursive learning analytics. Together, these components allow educational systems to move beyond static assessment models and instead adopt a dynamic, responsive process of evaluation. This is particularly relevant in the Zambian context, where curricular reforms and digital learning transitions demand new forms of assessment agility. The implications are both theoretical and practical. FLEM provides a blueprint for policymakers and educators aiming to align assessment design with pedagogical responsiveness. It shifts the discourse from "assessment as measurement" to "assessment as learning infrastructure," offering a scalable model for systems navigating rapid educational transformation. As assessment systems in the Global South seek to innovate without losing credibility, FLEM bridges the gap between theory and actionable reform.

221. Assessment for learning and Assessment of learning: challenges of beginning primary school teachers in Kafue district, Zambia

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Conference Subtheme: Assessment of learning vs. Assessment of learning

Abstract

The purpose of this study was to analyze assessment challenges of beginning primary school teachers in selected primary schools in Kafue district of Lusaka province in Zambia. The mixed method research approach was employed and specifically the embedded research design was used to understand the assessment challenges of participants. Stratified random sampling and simple random sampling techniques were used to sample 100 beginning primary school teachers from 10 schools, 10 senior teachers, 10 deputy head teachers and 1 District Resource Centre Coordinator were purposively sampled. A focus group discussion guide was also used to collect data from beginning primary school teachers as a way of triangulating the data from teachers, while interview guides were used to collect data from deputy head teachers, senior teachers and the District Resource Centre Coordinator. Data was analyzed using descriptive statistics and themes. The findings showed that beginning primary school teachers experienced assessment challenges due to the high pupil enrollment due to free education, inadequate teaching and learning resources, low staffing levels, insufficient infrastructure, absenteeism of both teachers and learners and diverse learner needs. These challenges further lead to teachers work overload limiting their ability to attend to individual pupil needs. This also resulted in the compromise of the quality of education that was provided. One of the main conclusions was that teachers had serious challenges in going about doing assessment of learning and assessment for learning. Therefore, there is need to provide the necessary on-going professional support to beginning teachers to help them deal with the assessment challenges that they face. The Ministry of Education should address the challenges of infrastructure so as to decongest classrooms.

Keywords: beginning teachers, assessment of learning, assessment for learning, primary school

222.An Analysis on The Responsiveness of Assessment to Students with Hearing Impairment. A Case for Zambia Institute of Special Education

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Abstract

Sign language, used by individuals with hearing impairment, has a distinct structure and syntax that differs from spoken languages like English, relying heavily on visual and non-manual cues. This unique structure can lead to challenges in assessment, particularly in educational settings. Despite the importance of inclusive education, there's a gap in understanding how sign language impacts assessment outcomes for students with hearing impairment in Zambia. This study investigates the responsiveness of assessment to students with hearing impairment at the Zambia

Institute of Special Education (ZAMISE). The study's objectives are to examine the structure of sign language, assess performance trends of hearing-impaired students in foundational courses over three years, and identify best assessment practices. First-year students with hearing impairment enrolled in foundational courses at ZAMISE, as well as lecturers teaching these courses, will participate in the study. Using a mixed-methods approach, combining quantitative performance data analysis with qualitative insights from surveys, interviews, and focus groups, this research aims to develop evidence-based recommendations for inclusive assessment practices. The study's expected outcomes include a deeper understanding of the relationship between sign language and assessment outcomes, identification of barriers to inclusive assessment, and development of strategies to promote more inclusive learning environments. Ultimately, this research aims to contribute to inclusive education in Zambia, enhancing learning experiences and outcomes for students with hearing impairment. The findings are expected to inform policy and practice at ZAMISE and other institutions, promoting equitable education systems. By exploring the complex interactions between sign language and assessment, this study will provide valuable insights for educators, policymakers, and stakeholders.

This study also tries to bring to life what is enshrined in Vision 2030 which clearly spells out sustainability, equity, justice and inclusion. The 8th National Development Plan explains the pillars of human and Social Development enhancing human equality and reducing developmental inequalities; the students with hearing impairment are equally embraced in this pronouncement.

KEY WORDS

Inclusive, Responsive, Manual, Clue Guide, Assessment

223. Enhancing Student Success through a Reflective Flipped Classroom Model in Engineering Education

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Abstract:
In response to the growing demand for agile, student-centered pedagogical approaches, this study explores the impact of a Reflective Flipped Classroom (RFC) model implemented in an Engineering Physics course at a South African university. The RFC approach repositions students as active agents in their learning journey by combining pre-class digital preparation with in-class collaborative problem-solving and real-time feedback mechanisms.

Key assessment strategies incorporated into the model include weekly formative assessments, structured whiteboard problem-solving sessions, and participation scoring systems that reward consistent engagement. These practices enhance assessment for learning by providing continuous, low-stakes evaluation opportunities and facilitating timely instructional adjustments.

A comparison of academic performance metrics—spanning weekly test scores, class test results, and final exam outcomes—demonstrated notable improvements under the RFC model. Specifically, the pass rate increased from 72.3% in traditionally taught classes to 94.7% in RFC-structured classes, with zero supplementary exams required. These results indicate that formative feedback loops embedded in the RFC model can significantly enhance both academic performance and learner motivation.

The study further reflects on student engagement data and qualitative feedback, highlighting increased attendance, participation, and reflective learning behaviours. This evidence positions the RFC model as an effective strategy for aligning assessment with learning processes, rather than solely serving as a tool for evaluating learning outcomes.

By embedding assessment within the teaching-learning process, the RFC model exemplifies how agile, learner-focused strategies can bridge the gap between formative and summative assessment, ultimately enhancing student success in high-stakes academic environments.

Keywords:
Flipped classroom, formative assessment, reflective learning, engineering education, student engagement, agile pedagogy

301. Item-Level Diagnostics of BECE Basic Science Test Using CTT and IRT: Implications for National Assessment Reforms

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Abstract
This study compares the assessment of Basic Education Certificate Examination (BECE) Basic Science item parameters through Classical Test Theory (CTT) and Item Response Theory (IRT). Employing a combination of instrumentation and descriptive survey research designs, the study was guided by four research questions. A sample of 1,510 Junior Secondary School 3 (JSS3) students eligible for the BECE was drawn from private and public schools in Rivers State, Nigeria, using multistage sampling. The instrument for data collection was the 2020 BECE Basic Science multiple-choice test. Item analyses were conducted on the 60 test items using CTT and IRT frameworks via R software packages such as “psychometric,” “ltm,” and “mirt.” The test satisfied IRT assumptions of unidimensionality and local independence. Relative model fit analysis identified the Three-Parameter Logistic (3PL) model as the best fit for the data. The results showed that items under IRT exhibited moderate difficulty (55%), very high discrimination (71%), and a low guessing parameter, while items under the CTT framework possessed fairly moderate difficulty (35%) and high discrimination (82%). Furthermore, CTT flagged 10 items for deletion compared to four (4) items under IRT, with 83.3% and 93.3% of items retained, respectively. The results highlight the superiority of IRT in preserving item quality and efficiency. It is recommended that the State Ministry of Education and State Universal Basic Education Board (SUBEB) adopt

empirical methods like IRT and CTT for test development and item banking to enhance the validity and reliability of their assessments.

Keywords: Item Parameters, BECE Basic Science, Classical Test theory and Item Response theory

302. High-Stakes Testing in South Africa

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Abstract

The evolving educational landscape in South Africa highlights the urgent need for assessment agility, particularly in the face of high-stakes testing pressures. Students often select subjects driven more by the pursuit of a passing grade than genuine interest or academic alignment, especially during the critical transition from Mathematics to Mathematical Literacy in Grades 11 and 12. This phenomenon underscores a growing trend where exam anxiety and systemic expectations influence educational pathways, ultimately limiting students' access to tertiary opportunities and stunting the nation's potential skills pipeline.

High-stakes testing often leads to a focus on the specific subjects and skills assessed, leaving other subjects and areas of learning to be marginalized or ignored. This narrowing can result in students receiving a less well-rounded education and missing out on opportunities to develop critical thinking and creativity.

Teachers may feel pressured to focus on test preparation and teaching to the test, rather than engaging students in more meaningful and creative learning activities. Students from the low income backgrounds may be disadvantaged, as they may not have the same resources and support as their peers. Some students simply do not test well. Many students are affected by test anxiety or do not show their learning well on a standardized test, resulting in inaccurately lower scores.

Methodology

A quantitative approach was utilized to gather data. When doing Data analysis of all our grade 12 student looking deep into subject choice for the past 5 years it is clear on statistics that only 31% of south african students are registering to write Mathematics. And every year the pattern shows that a percentage is reducing.

To address these challenges, the introduction of alternative assessment methods is essential for promoting meaningful learning over rote memorization. Approaches such as performance assessments, portfolio-based evaluations, self and peer assessments, and hands-on experiments foster deeper understanding, critical thinking, and real-world application of knowledge. Cultivating an agile assessment system — one that is responsive, dynamic, and student-centered — is key to reducing the negative impacts of high-stakes testing and enabling learners to unlock their full potential in both academic and career pursuits.

Conclusion

High-stakes testing does not improve education it drives students and teachers away from learning, and at times from school. It narrows, distorts, weakens and impoverishes the curriculum while fostering forms of instruction that fail to engage students or support high-quality learning. Major educational decisions should not be based solely on a test score. This punishes students, and often teachers, for things they cannot control. Testing cannot provide adequate information about school quality or progress

303. Examining South Africa's grade 12 mathematics performance by question: Insights from 2014-2024 National Senior Certificate data

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Abstract

High-stakes examinations, such as South Africa's exit-level examinations for school leavers, demand fairness in every respect. This study examines performance in the National Senior Certificate (NSC) Mathematics examinations by question for the period spanning 2014-2024. Because the Department of Basic Education (DBE) accounts for approximately 95% of the NSC examinees, the DBE's Mathematics examinations are a particular case in point. That is to detect any changes in question difficulty across years, which might treat examinees unfairly and thereby suggest a problem in using the marks achieved to draw comparisons.

The paper is informed by question the "What does the South African grade 12 Mathematics performance by question tell us about the changes or stability in question difficulty during the period 2014-2024?" To answer the question, the study analysed (a) the DBE's NSC Technical and Diagnostic Reports for Mathematics covering the period 2014-2024 and (b) the data from Umalusi research project broadly titled "Maintaining standards" conducted over the same period.

The analysis yielded useful insights. To start with, enrolments averaged approximately 250 000 over the period, with a downward trend beginning in 2022. Second, the allocation of marks to different topics closely aligns with policy. Concerning cognitive demand, the exams have a greater proportion of questions testing routine procedures and a smaller proportion of knowledge, complex procedures and problem-solving questions than the CAPS' stipulation.

The evaluation of difficulty levels revealed that the exams have preponderance of questions of moderate difficulty. The papers are getting easier since 2022. Fourthly, the failure rate in Mathematic revolved around 46% since 2014 while the distinction rate averaged 2.8%. The failure rate decreased to 36.6% in 2023 and again in 2024 to 30.9%. Correspondingly, the distinctions rate rose to 3.4% and 3.9% in 2023 and 2024 respectively. Concerning performance by question, the results varied widely from year-to-year, thereby bringing into question the reliability of the examinations.

The results can be used by assessment bodies to improve their examination setting processes while Umalusi can use them to enhance its quality assurance processes.

Keywords: mathematics, examinations, grade 12, performance, NSC

304. Managing Exam-Related Stress Through Neurologically-Informed School Climate Training: Evidence from Western Province, Zambia Primary Schools

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Abstract

High-stakes testing is a central component of many education systems and can contribute significantly to learner stress and diminished well-being (Jerrim et al., 2024). In Zambia, standardized exams and end-of-term tests put significant pressure on both learners and teachers, especially in schools with limited resources. Learners must pass standardized exams to progress to the next grade and perform well in end-of-term tests to gain recognition in class. Teachers, in turn, are often evaluated based on their students' performance. To address this challenge, Healthy Learners is supporting the government in implementing a neurologically-informed training program for teachers in Western Province aimed at improving school climate and reducing exam-related stress among learners.

This study employs a mixed-method, pre-post evaluation design to assess the intervention's impact on learner stress, emotional well-being, and teacher job satisfaction with a sample of 1,013 primary school learners from four districts in Western Province (Nkeyema, Nalolo, Mongu, and Limulunga). Validated tools adapted from the (Child Outcomes Research Consortium (CORC), 2024) are being used to measure outcomes. The project baseline findings indicate that 42% of learners report feeling moderately stressed in the school environment, with female learners (45%) reporting higher stress levels than their male counterparts (40%). Limulunga district had the highest proportion of learners at 47%, while Nkeyema had the lowest at 34%.

The findings suggest an urgent need for school-based interventions that promote emotional safety and reduce exam-related pressure. This paper will present early findings on the effectiveness of integrating neurologically-informed training programs for teachers into the school system to counteract the negative consequences of high-stakes testing and improve learner outcomes.

Key words: High-stakes testing, learner stress, school climate, teacher neurologically-informed training, Zambia

305. The Shift from Traditional Assessment to Alternative Assessment: The Case of the Eswatini Prevocational Certificate of Secondary Education Programme

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Abstract

In the recent years, traditional forms of assessment have attracted a lot of interest from different groups. Literature indicates that there is increasing criticism of traditional forms of assessment with current educational reform movements questioning their value towards student achievement. Groups representing linguistically and culturally diverse students and students with special education needs advocate for changes in approaches to assessment. Current trends in assessment, no longer based on the view that learning entails a passive accumulation of skills, show a paradigm shift from traditional forms of assessment. Guided by the constructive alignment theory (Estrin

1993; Biggs 1996; Shepard 2000), the paper presents the opportunities and obstacles associated with implementing alternative assessment for the Eswatini Prevocational Certificate of Secondary Education (EPCSE), as seen through the eyes of educators. Alternative assessments are often aligned with constructivist principles, which emphasize that learners actively build their understanding of the world through experiences and interactions, rather than passively receiving information. Using the qualitative methodology, the author conducts an in-depth analysis to show the opportunities and obstacles associated with implementing alternative forms of assessment by the ECESWA at the EPCSE level. Purposive sampling was used to identify and select educators as key informants for this study. To gain in-depth understanding of the educators' views on the implementation of alternative forms of assessment at the EPCSE level in Eswatini, data was collected using in-depth interviews and focused group discussions. Data was analysed using a narrative approach. The study revealed that despite the challenges there were benefits of implementing alternative assessments at the EPCSE level in Eswatini. Alternative assessments reinforce deep learning by prompting students to exercise their knowledge in a way that is relevant to their future careers. However, alternative assessments tend to be laborious in terms of time and energy spent by the teacher. The study concludes that the implementation of alternative assessment has an important positive role in supporting, promoting and improving student learning in Eswatini at the EPCSE level. The paper recommends that traditional forms of assessment and other alternative forms of assessment should co-exist to achieve educational excellence for all learners in Eswatini schools.

Key words: alternative assessment, educational reforms, traditional assessment

306. Tendencies of students' choice of speciality when applying to higher education institutions in Azerbaijan with a focus on pedagogical specialities

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Abstract:
This study explores trends in the selection of pedagogical specialties among university applicants in Azerbaijan, focusing on regional distribution, gender disparities, academic preparedness, and institutional dynamics. In Azerbaijan, students are divided into mainly four groups (I–IV) based on their intended field of study (specialities), along with classification by the language of instruction (Azerbaijani and Russian sections).

Data shows that 62.48% of all allocated places in pedagogical programs are concentrated in Baku-based public universities, with 42.46% belonging to just two institutions: Baku State University and Azerbaijan State Pedagogical University. Only 29.83% of pedagogical places are located in regional state universities, and 15.98% in private institutions, which generally lack interest and infrastructure for education-related fields.

Applicants from Groups III and IV, which include teacher training programs in language, literature, and sciences, tend to have higher academic scores compared to Groups I and II. In addition to this, the average entrance exam score is 73.46% for students in the Azerbaijani section and 58.99% for those in the Russian section—indicating that students with average and high scores are more prevalent in the Azerbaijani section, highlighting a general academic gap between the two tracks. Nakhchivan Autonomous Republic stands out regionally, where 60% of students choose pedagogical fields, while only 39.49% of students in Baku do so. While analyzing the data,

gender trends show that only 29.59% of male applicants select pedagogical programs, highlighting a strong female dominance in the field.

Findings indicate that academic preparedness and career choice are deeply shaped by institutional prestige, geographic access, gender dynamics, and the public image of teaching.

The presentation will focus on the stages of student choice in university admissions, outlining how students prioritize and select institutions during the application process. It will include statistical analysis of student data based on region and gender, identifying key trends and patterns in admission preferences. Additionally, the relationship between student choices and university categories—such as public or private institutions—as well as academic language sections (Azerbaijani, English, or Russian) will be examined to understand how these factors shape student decisions and influence access to higher education.

Keywords: pedagogical fields, student choice, academic preparedness, university admissions, education policy, regional disparity

307. Creation of Accessible Examination Platform for the Differently-abled (ACCESS) Students

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Lately, there have been significant calls from all areas of society and governments to create more enabling environments for the differently-abled students in learning institutions. Differently-abled students in integrated or inclusive learning institutions often face, not only physical navigation problems around the institutions and ridicule, but also in terms of writing examinations. In most institutions in Zambia, teachers or lecturers have to read out questions for the students to give answers or physically write for the students as they dictate their examination answers. This scenario leaves much to be desired especially where credibility is required so much in both spoken and written language. The persistent challenges faced by differently-abled university students, particularly during examinations, underscore the urgent need for inclusive innovations in education. Despite advancements in assistive technologies, many students with physical, visual, or cognitive impairments continue to experience dependency, discomfort, and humiliation in their pursuit of academic success. This is so because they have to depend on other people to do things for them even when they do not share their vision.This paper proposes the development of an innovation titled Accessible Examination Platform for the Differently Abled (ACCESS), a solution designed to empower these students to write their examinations independently and with dignity. ACCESS aims to integrate adaptive technologies such as speech-to-text software, screen readers, customizable input interfaces (e.g., adaptive keyboards, Braille displays), and voice command systems into a unified platform tailored for examination settings. The platform will also feature a secure, user-friendly interface compliant with international accessibility standards to ensure fairness, data security, and minimal invigilation requirements. Moreover, it will support multiple languages and be configurable to meet individual needs and examination conditions. Through collaborative input from educators, technologists, and advocacy groups for the disabled, ACCESS will be piloted and evaluated based on efficiency, usability, and the extent to which it reduces examination-related stress. Ultimately, this innovation seeks to promote educational equity by removing systemic barriers and enabling differently-abled students

to demonstrate their knowledge and skills independently. The ACCESS platform does not merely aim to assist but to empower—transforming the examination experience from one of marginalization to one of dignity, autonomy, and academic integrity.

Keywords: Accessible, differently-able, Examination, innovation, school, dignity

308. Balancing Accountability and Learning: Exam-Oriented Teaching and Curriculum Alignment in Zambian Classrooms.

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Abstract

High-stakes testing significantly shapes classroom practice and instructional priorities within Zambia's education system, yet research often lacks learner perspectives and regional nuances. Addressing this gap, a mixed-methods study in the Southern and Western Provinces examined the impact of test-driven instruction on curriculum implementation and student well-being through surveys with 150 teachers and focus groups with 30 participants, including learners and curriculum specialists. Findings revealed that over 75% of teachers prioritize examinable content, reducing instructional depth in crucial areas like project-based learning despite a curriculum emphasizing holistic development. Consequently, learners reported heightened anxiety and disengagement in rigid, exam-focused classrooms, highlighting a significant misalignment between the curriculum's intent and the realities of test-driven instruction. This research foregrounds learner voices and provincial variations, recommending the systematic scaling up of formative assessment, prioritized teacher training in assessment literacy, and the reform of national examinations to incorporate varied, competency-based approaches to better align assessment with educational goals and reduce pressure on learners and educators alike.

Keywords: High-stakes testing, curriculum narrowing, teaching to the test, student stress, Revised Zambian Curriculum.

309. Tipping the Scales: Assessing for Skills in Schools of Skills

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South Africa has introduced Schools of Skills, which accommodate learners with mild to moderate intellectual disabilities (MID), piloting the occupation-oriented curricula since 2017. Learners with MID in the Schools of Skills experience difficulties in reading for comprehension, have short attention spans and struggle with processing large amounts of information. These learners are

unable to achieve a qualification because in South Africa, like many other countries, the determination of learners' progress and the achievement of a qualification is dependent on meeting several requirements, including sitting for high-stakes assessments such as theory tests and examinations. This is a long-standing challenge as research shows that learners with MID cannot meet the demands of high-stakes assessments. There is, therefore, an inevitable discourse on the appropriateness of the assessments prescribed in the occupation-oriented curricula, which include a combination of theory tests, an examination, and practical skills tests. This study sought to explore how the assessments prescribed for learners with MID at the Schools of Skills can be transposed from high-stakes assessments to a competence-based assessment (CBA) approach that is complementary to the curricula and the learners' needs. This study followed a mixed-method research approach. Data was collected through document analysis of the occupation-oriented curricula documents, an online survey distributed to 30 Schools of Skills principals and semi-structured interviews with six Schools of Skills principals. Data was analysed using descriptive statistics and themes. Findings indicate variations in how Schools of Skills implement the prescribed assessments due to their theoretic nature and that the Schools of Skills experience resource limitations that impede the quality of the implementation of the prescribed assessments. The study recommends that the occupation-oriented curricula be reviewed to adopt a CBA approach through the use of technical skills assessment methods underpinned by the principles of authentic assessments. The study also recommends the use of accredited technical skills test centres for the conduct of summative technical skills tests which will contribute to the credibility of the practical assessments.

Keywords: high-stakes assessments, occupation-oriented curricula, competence-based assessments, Schools of Skills, practical assessments, mild to moderate intellectual disability (MID), technical skills tests, authentic assessments

310. Assessment of Scientific Skills using Project-Based Learning – A Pilot Study from Aga Khan University Examination Board

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Organization: Aga Khan University Examination Board

Abstract:

An ideal assessment evaluates learning outcomes and fosters growth across cognitive, psychomotor, and affective domains. Globally, scientific skills like experimentation and data analysis are assessed through varied methods, including paper-based tests, performance tasks, and computer-based simulations.

In Pakistan, scientific skills are mainly assessed through one-time performance based (practical) exams at the end of secondary and higher secondary levels. Recently, paper-based MCQ assessments have been introduced for feasibility. Aga Khan University Examination Board (AKU-EB) currently uses one-time performance-based examinations and is in search of better assessment methods for evaluating scientific competence.

The purpose of this study was to explore the validity of the newly developed assessment tool through inquiry-based projects for high-stake assessment of scientific skills using: content validity, reliability, convergent validity, effectiveness and feasibility.

AKU-EB designed three projects in Chemistry, Physics, and Biology aligned with national curriculum outcomes and assessed using a validated rubric. Content validation was conducted with five experts, and the tool was piloted in an affiliated school with 162 students. Project scores were correlated with students' theory exam marks to determine convergent validity, and reliability was assessed using Cronbach's Alpha. Additionally, feedback from teachers and students was collected to evaluate the effectiveness and feasibility of the tool.

Feedback from content experts was incorporated, and the assessment tool was finalised through consensus. Project mean scores ranged from 60.09% to 66.79% (SD: 15.97–17.00) with reliability of 0.88–0.91. Correlations with theory marks were statistically significant but low to moderate ($r = 0.152$ to 0.441, $p < 0.01$), possibly due to the tool assessing skills beyond traditional theory-based tests. Students and teachers valued the real-life relevance and hands-on learning. However, concerns were raised about increased workload and the complexity of ongoing assessment and record-keeping associated with the new method.

In conclusion, the study demonstrates that inquiry-based projects, supported by a validated rubric, offer a reliable and contextually relevant method for assessing scientific skills in high-stakes settings. The positive reception from both students and teachers highlights the potential of tool to assess scientific knowledge. However, feasibility issues like teacher workload and logistics need to be addressed for wider use.

Key words: High-stake Assessment, Innovation, Scientific Skills

311. The Impact of Test Anxiety on Cognitive Functioning and Academic Performance Among

University Students: An Evaluation of Coping Strategies and Interventions

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CONFERENCE SUB -THEME
High -Stakes Testing - Mitigating Pressure: Addressing the implications of high -stakes testing on curricular focus, student stress, and educational outcomes.

ABSTRACT

This study examines the impact of test anxiety on students' cognitive functions and academic performance, along with the effectiveness of various coping strategies. Participants included a diverse group of undergraduate, graduate, and postgraduate students from multiple disciplines. Correlation analysis revealed significant relationships between anxiety symptoms and cognitive impairments. Regression analysis indicated a weak but negative impact of anxiety intensity on academic performance, with higher anxiety levels slightly reducing performance.

An ANOVA analysis evaluated the effectiveness of different coping strategies, showing no significant differences in anxiety reduction among the strategies. This suggests the need for

personalized approaches to managing test anxiety, as their e ffectiveness can vary among individuals.
Further research is recommended to identify the most effective strategies for reducing test anxiety and enhancing student well -being.

Keywords : Test anxiety, Cognitive functioning, Academic performance, Coping strategies

312. Stress Management among Candidates Sitting the School Certificate Examination in Zambia.

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Abstract
The School Certificate Examination in Zambia is one of the examinations that serves several purposes to candidates. It can be used for learners' achievements, placement to tertiary education institutions as well as for employment. With the high-stakes nature of this examination, candidates often experience significant stress which affects their academic performance and overall well-being. This study explored stress management among candidates sitting the School Certificate Examination in Zambia. It investigated the major causes of stress, coping mechanisms and the support systems that could be put in place to mitigate examination- related stress. The study employed the qualitative research design and it was informed by the Academic Stress Theory by Campbell et al (2020). Purposive sampling was used and the study sample included: 5 Deputy Headteachers, 10 Guidance and Counselling Teachers and 10 teachers teaching in secondary schools who had been handling Grade 12 classes and invigilating School Certificate Examination for more than 10 years. Data were collected through structured and semi structured interviews and it was analysed thematically. The findings indicated that inadequate preparations by the learners, fear of the examination, absenteeism during the academic calendar, inadequate syllabus coverage, inadequate sensitizations by schools, inadequate exposure to examination related materials, threats from teachers, fear not to meet their parents' expectations and worries about future prospects were some of the causes of stress. The study also showed that adequate preparation, adequate syllabus coverage, frequent talks to candidates, giving learners standard assessments during the course of learning and having adequate teaching and learning materials in schools could help in combating stress among candidates sitting School Certificate Examination. The study revealed that the government needed to invest more in Guidance and Counselling Offices in schools, training a lot of Guidance and Counselling Teachers and sending them to all the secondary schools across the country, making the Guidance and Counselling Committee a fully-fledged department with all the entitlements of a department and avoiding timetabling the so- called difficult subjects on the same day. The research concludes that stress management is essential for improved performance, enhanced well-being and increases resilience among candidates.

Key Words: Stress Management, Candidates, School Certificate Examination

313. Evaluating the Use of Authentic Assessment Methods Beyond the High-stakes Testing for Comprehensive Evaluation: A Case Study of Selected Informal Artisan Sector in Kamugunji and Starehe Sub Counties, Nairobi Kenya.

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Abstract
The evolving educational landscape has put focus on use of traditional assessment approaches which is a high-stakes testing in comparison to Authentic Assessment approaches in determining and certifying the learner achievement. Education stakeholders agree that 'Assessment Drives Instruction'. So quality Authentic assessment is the precursor to quality educational achievements. Graduands of such system find it easy to fit in the labour market, especially the in TVET Sector. But education stakeholders and industry players in particular, have been up in arms that graduates from the TVET sector are finding it difficult to fit, as the employers go extra mile in retooling these graduates. So why is there such a wide disparity between the industry players expectation and the quality of TVET graduands from our TVET training sectors? Could there be some learning /assessment strategies that are not meeting desirable outcomes?

This paper endeavours to highlights the relationship that exists between the use of Authentic Assessment in TVET institutions and the acquisition of learning competencies at selected informal traders and artisans in Nairobi County, Kenya.

The evaluation questions are: To what extent do TVET institutions use authentic assessment to enhance the acquisition of lifelong learning competencies? Do the trainers of TVET institutions have requisite skills and competencies to impart lifelong learning? The Prescriptive Instructional Design Model based on the Cognitive Learning Theory guided the study. The Post-Test Only Quasi-Experimental Evaluation design and the purposeful sampling methodology were used. Data was collected using semi-structured interviews on focused groups; and analysed using the coding, document analysis as well as the descriptive statistics. The study findings revealed that acquisition of lifelong learning is directly proportional to the use of authentic learning and assessment approaches. The study also observed that the validity and reliability of instructional and assessment data given to the trainees was affected quality of trainers engage. It is recommended that trainees and trainers be retooled to make use of authentic assessment data for effective learning and assessment as they navigate the rapidly changing educational transformations.

Keywords:

Authentic Assessment, Informal Artisan Sector, Vocational Training, Alternative Assessment Methods, High-stakes Testing, Reliability, Validity, Prescriptive Instructional Design

314. EVALUATING THE IMPLEMENTATION OF SCHOOL-BASED ASSESSMENT IN GRADE 12 MATHEMATICS: A CASE TO ENHANCE SYTEMIC CHANGE IN SOUTH AFRICA

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ABSTRACT

The study aimed to investigate the utilisation of school-based assessment (SBA) in Grade 12 mathematics from the perspective of educators within South Africa's Gauteng Department of Basic Education. Adopting a mixed-method sequential exploratory research design, the study was conducted in two phases. The first phase employed a qualitative approach, involving in-depth interviews with Grade 12 mathematics educators to explore the SBA framework, its implementation, associated challenges, and educators' recommendations. Semi-structured questions guided the discussions, and thematic analysis was used to identify recurring patterns and themes in the responses. Findings from the qualitative phase informed the development of a questionnaire, which was subsequently administered to a separate group of 38 teachers in the second, quantitative phase of the study. This phase also included an analysis of learner performance data, utilising numerical summary measures, graphical representations, and Pearson chi-square tests to examine statistical relationships. The study found that, despite various implementation challenges, SBA plays a vital role in mathematics education in South Africa and has a significant positive impact on learners' likelihood of passing Grade 12 mathematics. Additionally, the research proposed an SBA systemic change model comprising seven key conditions, emphasising stakeholder involvement, input in decision-making, and effective relationship management as essential elements. The study suggests that educational authorities should shift the focus from examinations to enhancing teaching and learning to ensure the successful implementation of SBA in Grade 12 mathematics.

Key words

Mathematics Education, School-based assessment, Assessment, High-Stakes examination, Mathematics teachers' perspectives on SBA, Accountability, Compliance and SBA, SBA in the 21st century

315. Poster submission – Test Equating for maintaining standards using Comparative Judgement

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In English schools, there are often several options available to students aiming to achieve the same qualification. Standards are maintained using statistical indicators. This poster describes an approach where additional evidence is gathered using comparative judgement to ensure grades awarded across two versions of a GCSE English qualification represent the same standard. We consider two distinct versions of GCSE English, both meeting the same content and objectives. "English 2.0" engages students with contemporary texts, attracting older students and those re-sitting. Supplementary evidence is needed to support grade setting decisions.
Equating the assessments of the two qualifications is essential, but traditional approaches are not applicable as there are no common questions. In 2024, comparative judgement exercises were conducted using assessments from both qualifications. Judges compared pairs of assessments, with each piece of work part of 22 or 23 pairs. Judges with infit values greater than 1.2 were removed from the analysis. Separation reliability was around 0.96. Theta values were regressed against qualification marks. These theta estimations were bootstrapped in order to obtain a range of possible marks, in the regressions. The range found was around seven marks in the middle of the range.

317. Analysing Pupils' Performance in Chinese Language Grade Nine High Stakes Examinations through the Lens of Vroom's Expectancy Theory.

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Abstract

The study aimed at analysing the examination performance of pupils in Chinese, English and Zambian languages. The aim was to analyse pupils' performance in Chinese language relative to their performance in other two languages. This was particularly because English is the dominant language of power in Zambia while Zambian languages are the familiar languages to most learners. Moreover, English and Zambian languages were introduced in the curriculum in the 1800's while Chinese was introduced in 2016. Theoretically, the framing and analysis of the study was done using the Expectancy theory which argues that people are motivated to put more effort in an endeavour such as studying in the case of this study, based on what they expect to benefit from doing so. Data for the study was collected qualitatively through document analysis and face to face interviews. The documents that were analysed were the grade nine examination results covering a period of four years from one school and one year from another school. The data was analysed thematically. The findings showed that overall, learners performed better in Chinese language than in English and ZL despite its perceived difficulty and having entered the curriculum later than the other two subjects. One of the reasons for this disparity was that learners were more motivated to learn Chinese language relative to other languages because of its perceived economic and social benefits. The study also provides other curricular and administrative reasons why learners perform better in Chinese language than in English and a Zambian language. Theoretically, the findings confirm Vloom's expectancy theory that learners were motivated to learn and work hard in Chinese language because of the achievability of the expected rewards. The study also provides pedagogic and administrative insights on how learners can be motivated to work hard and improve their performance in their subject.

Key words: Chinese Language, Zambian Language, Expectancy theory, examination, performance

401. Equity in Assessments: A Comparative Study of Rural and Urban Learner Experience in High-Stakes Examinations.

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Abstract

This study investigates equity in educational assessment by comparing rural and urban learner experiences in the Junior Secondary School Leaving Examination (Grade 9) and the School Certificate Examination (Grade 12) within Mwinilunga District. Employing a mixed-methods approach, the research collects data through learner surveys, focus group discussions, interviews with teachers, and a critical review of past examination papers to analyse question design and its alignment with diverse learner contexts. The study explores disparities in access to teaching and

learning resources, teacher support, exam preparedness, and learner confidence. These are factors that significantly influence performance in high-stakes examinations. Preliminary findings indicate that urban learners often benefit from better infrastructure, qualified teachers, and targeted exam preparation, while rural learners face persistent challenges including limited access to resources and less exposure to exam-specific content and formats. The review of past papers further reveals patterns in question design that may unintentionally disadvantage learners from under-resourced schools. The study underscores the need for inclusive assessment practices and policy reforms that reflect the realities of learners across geographic and socio-economic contexts. The findings provide valuable insights for educators, curriculum developers, examination bodies, and policymakers aiming to promote equity and justice in Zambia's national assessment system.

Key Words

Equity, High-Stakes Examinations, Learner Confidence, Teaching and Learning Resources

402. Role of ZIMSEC Science Kits in Ensuring Fairness in Zimbabwe's High-Stakes Science Assessments.

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Abstract

The credibility and fairness of Zimbabwe's high-stakes science assessments are critically dependent on equitable access to practical learning resources across all examination centers. Recognizing the disparities in resource availability that have historically disadvantaged students in underfunded or remote schools, the Zimbabwe School Examinations Council (ZIMSEC) has implemented a comprehensive program to distribute standardized science kits simultaneously to all centers nationwide. This distribution is accompanied by detailed instructions to ensure proper handling and utilization, aiming to promote uniformity in practical science assessments. This study investigates the impact of this coordinated distribution on fairness, resource parity, and student performance in practical examinations. Employing a mixed-methods research design, data was collected through surveys of teachers and students, interviews with educators, and classroom observations across a diverse range of examination centers. The results reveal that the simultaneous, uniform distribution of ZIMSEC science kits significantly reduces resource gaps, enabling more consistent and effective practical instruction across centers. Students in centers equipped with the kits show increased engagement in hands-on experiments, greater confidence in their practical skills, and reduced anxiety during assessments. Furthermore, the availability of standardized kits fosters inquiry-based learning approaches, promoting a culture of scientific curiosity and critical thinking among students. The findings indicate that the initiative has contributed to leveling the playing field, ensuring that all students, regardless of their school background, can participate fairly in high-stakes practical examinations. The study underscores the importance of coordinated resource distribution in enhancing assessment fairness and improving practical science outcomes. Based on these findings, it is recommended that ZIMSEC continue and expand the distribution of science kits, coupled with ongoing teacher training and curriculum integration strategies, to sustain and enhance equitable science education across Zimbabwe. Ensuring resource parity through such initiatives is vital for maintaining the integrity of national assessments and fostering a robust scientific literacy among students.

Keywords: High-Stakes Testing, Educational Equity, Practical Science Assessment, Resource Distribution, ZIMSEC Science Kits

403. Promoting inclusiveness in Assessments: The Case of Candidates with Special Educational needs at the Examinations Council of Zambia.

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Abstract

The Examinations Council of Zambia (ECZ) offers assessments to both ordinary learners and learners with Special Educational needs and Disabilities (SEND). The learners with Special Educational Needs and Disabilities who write ECZ examinations include the visually impaired, hearing impaired and those in the category of health impairments.

The study aimed at examining the current assessment practices at the Examinations council of Zambia (ECZ) in respect to candidates with special educational needs and disabilities with regards to their performance at School Certificate level.The objective of the study was to find out what interventions ECZ has employed in order to promote and ensure inclusivity in the assessment methods, foucusing on Learners with Special Edicational Needs and Disabilities.

The study was a qualitative case study and it comprised of Twelve respondents drawn from ECZ, Ministry of Education, Schools and the Community from Lusaka Province in Zambia. A semi-structured interview and document review were used to collect data.

The study revealed that the Examinations written by candidates with SEN is of the same standard with that written by ordinary candidates. Therefore, the observed close relationship in performance between SEN candidates and ordinary candidates can be ascribed to the interventions that have been put in place by the Examinations Council of Zambia.

The Examinations Council of Zambia has made various provisions to cater for candidates with special educational needs and Disabilities in their assessment systems to ensure that they are given equal opportunities to demonstrate their knowledge and skills. Learners with Special Educational Needs and Disabilities were given extra writing time, modified examination papers (braille or large print), support readers or scribes and inclusive practices through training and awareness programs for teachers and examiners.

However, it was noted during the study that learners with hearing impairement still need additional support. Therefore, the study supports the use of adapted English which the ECZ is about to implement to ensure flexibility and inclusivity in assessment practices and foster an environment where every candidate has an opportunity to succeed.

Key words:

Equity, Fairness, Inclusivity, assessment systems, Ordinary learners, Physical and Cultural Differences

405. On-screen, adaptive personalised assessments: Meeting accessibility needs for learners in Wales

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Abstract:

Since 2018, Wales has implemented national on-screen adaptive assessments in reading, procedural numeracy, and numerical reasoning for children aged 7–14. These assessments, aligned with national standards, dynamically adjust the level of challenge based on each learner's response, providing a personalised experience that supports a broad spectrum of abilities. These assessments have a formative purpose and deliver actionable data to inform teaching, enhance learning outcomes, and guide learner progression.
Central to the design of these large-scale, digitalised assessments, is a strong emphasis on equity and fairness, ensuring inclusivity for all learners irrespective of socio-economic, cultural, or physical differences. Dual-language accessibility in Welsh and English, along with a comprehensive suite of tailored accessibility features, demonstrate a commitment to removing barriers and fostering participation across diverse learner populations. For instance, modified versions of the assessments accommodate learners with additional needs, while compatibility with assistive technologies and devices facilitates equitable access.
This paper will explore the design, implementation, and challenges associated with inclusivity and rolling out these assessments at scale, as well as insights gained during their ongoing administration. Some of the topics discussed will include:
'Best practice' approaches such as 'designing assessments for accessibility from the outset and 'working with experts in onscreen accessibility' are adhered to for creating inclusive assessment systems that cater to diverse learner needs.
Inclusivity and equity of access as a key part of the assessment, both in terms of Welsh and English language versions.
Assessment formats and accessibility for younger learners such as assessment controls and item design to minimise the potential 'floor effects' associated with adaptive testing approaches.
Accessibility features and modified versions of personalised assessments in supporting learners with physical or cognitive challenges including modified large print and braille assessments.
The National Personalised Assessments exemplify how education systems can successfully adopt innovative, inclusive, and formative approaches to assessment. By sharing Wales' experience, this paper aims to contribute to global discussions on advancing fairness and accessibility in education. The features and approaches detailed can help guide other education authorities who are considering the transition to online, adaptive, and inclusive assessments, demonstrating their potential to enhance learning for all learners.
Keywords: Inclusivity, adaptive assessments, equity, formative assessment, accessibility, digitalised assessments.

406. Maximising the inclusiveness of assessments in an African country seeking to embrace and uplift learners in diverse socio -economic, cultural, physical and neuro -diverse contexts

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Abstract

The South African National Qualifications Framework (NQF) frames the system for education, training and development in the country. It seeks to enhance access to and mobility within this

system. It is transparent, with information accessible to the public via the websites of the main NQF partners, and various freely available online and in -person helpdesks. It comprises three NQF Sub-Frameworks – for general, higher and vocational education – each overseen by a Quality Council and coordinated by the South African Qualifications Authority (SAQA).

SAQA is responsible fo r the NQF policy suite that includes policies for a ssessment, the regi stration of national qualifications, Recognition of Prior Learning (RPL), and Credit Accumulation and Transfer (CAT), amongst others. While the assessment policy is stand -alone, educational assessment is also an essential component of the policies for qualifications, RPL and CAT. SAQA (2024) published research into the qualities of good over-arching national assessment policy, based on an analysis of 75 assessment policies selected from high -achieving schooling systems and associated national, higher and vocational entities in 1 6 countries across all six world regions, including four from Africa . Key findings highlighted the need to enhance further, in the over-arching South African national assessment policy, inclusivity in assessment s; online assessments and using technology in assessment s; academic integrity; and providing clarity and guidance for policy users. Good practice examples were identified in specific policies from all six regions.

Further research was needed to deepen understanding s of how fairness and the use of technology were addressed for inclusive assessments across more African countries.

This paper presents research that addressed the question 'How could inclusivity be broadened and deepened in the over-arching national assessment policy of South Africa?' Attempts were made to

analyse the assessment policies of all 24 African countries using English as an official language. The study considered different ways in which the national, schooling, higher and vocational assessment policies elaborated inclusiveness in assessments. This paper provides pointers for the structures, processes, principles, technologies, qualifications and other enablers needed for maximally inclusive assessments in an African country seeking to embrace and uplift learners in diverse socio -economic, cultural, physical and neuro-diverse contexts.

Key Words

National Qualifications Framework (NQF), Inclusiveness in Assessment

407. A Differential Item Functioning Estimate of NABTEB Mathematics Objective Test Items Based on Gender Among Technical College Students in Nigeria

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ABSTRACT

Differential Item functioning (DIF) occurs when individuals from different groups (males vs females) with the same underlying ability have differing probabilities of answering an item correctly. In educational measurement fairness is a critical consideration, particularly in standardized testing. Mathematics test are widely used to evaluate students' cognitive abilities and readiness for academic advancement. Its applications permeate various aspects of daily life and are integral to the advancement of technology, science, and economic growth Mathematics is a

compulsory subject for every individual to function effectively and efficiently in today's world irrespective of one's profession. Hence scores obtained by students in this subject should reflect their true ability. Mathematics proficiency is crucial for individual success and national development, yet disparities in test performance persist. However, these tests may inadvertently favour or disadvantage certain sub-groups, leading to biased outcomes. This has become a national discourse. This study investigates the estimate of National Business Certificate (NBC) and National Technical Certificate (NTC) Mathematics objective test items based on gender administered to technical and vocational students by NABTEB. By identifying items that function differentially, this study aims to enhance the fairness of assessments and support equitable education practices. Three research questions guided this study. The study adopted a quantitative research design approach. The population comprised all students that sat for the NABTEB Certificate mathematics objective test May/June 2024. Random sample of 1000 students were selected. The responses of the students for the Mathematics objective tests were subjected to the Mantel-Haenzel procedure, Item Response Theory (IRT) and J-Matrix methods to detect DIF. SPSS Version 21 and IRT-PRO Softwares were also employed in the analysis. The results indicate slight performance differences in genders in favour of male. While some test items exhibited bias favouring specific genders, the magnitude of DIF indices was relatively small. Based on the findings of the study, the researchers recommended among others that, regular item review, inclusive test design, advanced statistical analysis, educator training, student support, and further research should be carried out. The study concludes that, implementing these recommendations can foster fairness and more valid educational assessments, ensuring equitable opportunities for all students.

KEYWORDS: Ability, differential item functioning (DIF), Mathematics objective test items, gender, test performance.

408. Assessing Gender stereotypes in Vocational Education and Training in Uganda.

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Abstract

The Technical, Vocational Education and Training (TVET) in Uganda has been constantly undergoing reforms most of which emphasize the need for training and assessment that produce graduates that are in line with the demands in the world of world. The package of reforms has also emphasised access to all (TVET Policy 2019). Despite these reforms, available statistics still indicate low numbers of enrolment of female students (UVTAB 2025).
This paper argues that despite several reforms and policies in the TVET sector aimed at access to TVET regardless of socio-cultural aspects, some fundamental factors have remained at play and require investigation.
Therefore, the objectives of the study were:
To assess gender stereotypes that affect enrolment of the girl child in vocational education and training
To establish the work place environment related factors on enrollment of girls in TVET.
Both qualitative and quantitative data were applied to select participants. Using a structured questionnaire quantitative data will be collected, while key informant interviews and focus group interviews was also applied.

The key findings indicate that the current reform strategies dot not address the training and work-related constraints that limit the girl child from joining technical and vocational education. The findings also indicate that gender stereotype factors fundamental play in a negative role in the enrolment of girls into TVET.

The study recommends the there is need to embrace interventions that aim at providing conducive training and work environment for the girl child. The training environment should be simulated to work place environment and the world of work engaged to embrace girls by removing all forms of gender stereotypes.

Such interventions will break the traditional norms that prevent more women from joining Vocational education and training.

Key words: Vocational Education, Gender stereotypes

409. The Rural-Urban Dilemma: Reconsidering the Missing Equity in School Certificate English Language Examinations in Zambia.

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ABSTRACT:

This study seeks to examine the impact of exposure to the English language by rural-urban learners on achievement in School Certificate English Language examinations in Zambia. English Language, being a compulsory subject, deserves to be assessed in a fair way to all candidates regardless of their socio-economic background, exposure to the language and other inhibiting factors. Notwithstanding this fact, the current assessment system does not take into account these differences but assesses all learners equally through the same examination. This study will therefore critically analyze the disparities in the learning and acquisition of English language, with emphasis on how contact with the language outside the classroom affects acquisition of lexical items, comprehension skills and sentence construction. It is believed that, apart from the classroom setup, learners in urban areas have more access to the English language through the media, their peers and the community, where they have multiple opportunities to converse with other people than their rural counterparts, who have limited access and experience the English language primarily in the classroom. Consequently, it cannot be denied that with the current form and format of the School Certificate English language examinations, rural learners are unfairly assessed unless the disparities alluded earlier are taken into account. The study will dwell on the stress that this oversight has so far caused to School Certificate candidates. Furthermore, the study will suggest unbiased ways of assessing the learners and propose methods of leveling the playfield between urban and rural learners if English Language is to be fairly tested. When this is done, the examining body will be urged review the assessment system for School Certificate English Language examination. Data for the study will be collected from literature on language development, selected examination past papers and examiners' reports in English Language. Interviews will also be conducted with school-leavers who have passed through these examinations in selected rural and urban schools.

Keywords: exposure, achievement, school certificate examinations, rural-urban learners, unfairly assessed.

411. Investigating factors influencing the performance of deaf candidates in mathematics and English Language : A case for the high school for the deaf in Eswatini

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Abstract

It has been noted in ECESWA Annual Eswatini General Certificate of Secondary Education (EGCSE) Results for the School for the Deaf that there is a tremendous failure of hearing-impaired students in Form Five National Examinations. A comparison was done for 3 consecutive years. Generally, the students do not do well in all the subjects but in Mathematics and English Language they underperform. Mathematics and English Language are key subjects in career development, hence compulsory in the Eswatini Secondary School Curriculum. Despite government efforts to train the teachers on how to teach deaf learners, national results statistics have shown that performance of deaf students in national examinations in Eswatini have generally been poor in the past three years. The student's performance was taken at Grade C or better. It was 25% for both Mathematics and English Language in 2022. Geography and History recorded 50% each. English Language obtained 0% and one student got a credit (100%) in Mathematics in 2023. and 0% in both English

Language and Mathematics in 2024. Evidence on why deaf students have continued to perform poorly in Mathematics and English Language in EGCSE examination has not been shown. The interest in Ma thematics and English Language was because most deaf candidates complained that they were not able to pursue courses in the STEM field as they were not doing well in English and Mathematics. The purpose of this study therefore was to investigate factors influencing performance of deaf students in Mathematics and English Language in EGCSE examination. Descriptive survey research design Will be used for this study. The study was carried out in Eswatini High School for the Deaf in the Lubombo Region. The study sample comprise d of Regional Inspectors for Special Education Needs, 1 head teacher, 5 Mathematics teachers, 6 English Language teachers, 5 students from each grade, and 10 alumni students. Data was collected by use of questionnaires, interviews and observation. It was analysed and presented using descriptive statistics such as percentages and frequency tables.

412. DEVELOPING RESPONSIVE ASSESSMENT STRATEGIES TO PROMOTE INCLUSIVE EDUCATION

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ABSTRACT

In a pursuit to have assessment systems that cater for all students irrespective of possible differences socio-economically, culturally, or physically, it is imperative that responsive assessment strategies are developed to foster inclusive education. Traditional assessment methods often fail to accommodate diverse learning needs, limiting equitable and fair access to education hence the need to provide flexible kind of assessments. Examinations Council of Eswatini (ECESWA) has reasonable means (provided in her handbook) to accommodate students with special needs, but the question stands, 'Do they have assessment systems for such students?' This study, therefore, proposes a framework that supports learners with physical challenges which supports their engagement in examinations settings. The research aimed to establish adaptable assessment strategies that align with the principles of inclusive education, ensuring equity and fairness to ensure inclusivity. The study was guided by the following questions: 1. What systems or tools are currently available at ECESWA for learners with physical differences? 2. What are the challenges with the current systems or tools used to assist learners with physical challenges? 3. What responsive assessment tools suit learners who are physically handicapped? The theoretical framework underpinning the study are the Universal Design Learning (UDL) Theory, Flexible Formats and Constructivist Learning Theory. The study employed the qualitative methods of research. Interviews and focus groups with educators and students in 4 schools with learners with special needs in the country was conducted. The Special Needs Officer at ECESWA was also interviewed. Document analysis was also used in gathering literature review relevant to the study. It is recommended that examinations should be set and administered according to individual needs for equity and fairness.

Key words: Inclusive education; traditional assessment; responsive; inclusive education principles; physical differences

413. Equity and Fairness - Inclusivity and Mitigating Biasness in Assessment for Diverse Student Population

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Abstract

The research seeks to investigate different strategies that would ensure equity and fairness in the assessment systems in education. Its focus would be mainly on creating assessment structures that would embrace every individual without favouring a particular group of people while leaving out others. Fairness in assessment necessitates the need to shift towards inclusive practices that addresses the diverse learning styles and backgrounds of all students. Therefore, it includes the development of assessments that are both valid and reliable in measuring students learning regardless of their cultural,or socio economic backgrounds. The main objective is to identify existing biases; eveluate their impact on diverse student populations and thereafter, propose some effective strstegies that would create more equittable assessment practices that would catter for all, regardless of their status in society. This would further consider implementing accomodations and modifications for learners with disabilities or other learning difficulties so that it influences opportunities for advancement and personal development. This in turn would help in proposing workable strategies to enhance fairness in assessments being advocated for.

Furthermore, once equity and fairness are embraced, all learners woulld have equal opportunities to demonstate their knowledge and skills acquired, as they would be treated the same by accessing resources, at the same platform.

The study will use different methods for adressing and examining the diverse needs of learners in socio economic, cultural and physical backgrounds. Both qualitative data analysis and quantitative interviews will be used, for smooth gathering of information from various stake holders which includes students, teachers and policy makers. Once all this is done, this study will contribute to the understanding of how assessment sysstems can be reformed in order to promote inclusivity and fairness. The anticipated outcome includes the development of guidelines for creating equitable assessment practices and recommendations for policy changes that adresses identified disparrities. Therefore, the research seeks to create a conducive environment where assessments will serve as instruments of empowerment, rather than barriers, thereby enhancing equity and fairness in education and beyond.

KEY: Assessment, Equity, Mitigation, Bias, Fairness, Inclusivity,

414. Contemporary Issues in Test Biasness In Public Examinations In Nigeria

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Abstract

Nigeria presents us with an assessment terrain characterised by diverse tribes, cultures, religious and ethnics differences, it is expected that public examinations in such a country will be faced with daunting challenges of items biasness. Test bias is when a test item or entire test causes students of similar latent abilities to perform differently due to their ethnic, cultural, religious, or gender, tribal and environmental differences.it incumbent on test constructors to ensure consideration for various variables that lead to biasness ,it is also necessary to trial test entire items before it could be administered ,for a test therefore to be valid it must follow a standardised procedures, ensure accessibility and provide clear instructions. These precautions will ensure that test items outcome is suitable for educational decision making, determines intelligent quotient of examinees, assist in nation educational planning, ensure objective placement and facilitate careers selection. This paper carefully looks at the contemporary issues of test biasness and test administration in public examinations in Nigeria; meaning, types, effects and precautionary methods to adopt in mitigating test biasness .it is therefore advisable public examination bodies to engage qualified evaluators, ensure a recruitment process that focuses on merit, widening the examination centres for ease accessibility, adopt technology driven item analyses, ensure proper monitoring of items administration, compare printed items with photo-ready items

Key Words: bias, examinees, examination, evaluator, test items, trial- testing

Theme: Equity and Fairness

415. Bridging the Gap in Promoting Equity and Fairness in Assessment

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Abstract

As education continues to evolve, assessment systems must adapt to meet the needs of all learners, especially in diverse and multicultural learning institutions. This paper shares insights from nearly a decade of teaching and from serving in a leadership role in examination administration at a Zambian international school. The institution serves learners from varied socio-economic, cultural, and linguistic backgrounds. Drawing on real classroom experiences and responsibilities in examination management, I reflect on practical steps we have taken to ensure that assessments are inclusive, fair, and responsive to every learner. These include the use of differentiated assessment strategies, the implementation of equitable exam policies, and ongoing teacher training. Together, these efforts help create systems that recognise and support each student's unique learning journey. The paper also explores how aligning internal and external assessments can promote greater equity. This is achieved through the use of clear marking rubrics, accommodations for learners with special educational needs, and consistent, constructive feedback that fosters both academic growth and learner confidence. This presentation offers honest reflections on the challenges faced and the progress made. I hope to contribute to a broader conversation on how learning institutions can develop fair and flexible assessment systems that not only measure learning accurately but also support and inspire it.

Keywords equity in assessment, fairness, inclusive education, learning institutions, student diversity, assessment practices

417. Access Arrangements for Inclusivity: The Aga Khan University Examination Board (AKU-EB) Experience

Munira Muhammad Rangwala, Naveed Yousuf, Amjad Ali Shah

Aga Khan University Examination Board

Abstract:

One of the essential aims of assessment is to assess and ensure achievement of learning outcomes by all learners. Hence, it is vital to ensure that examinations provide fair and equitable opportunities for all students including the ones with diverse needs, especially those with learning and physical disabilities.

Ensuring fairness and inclusivity is the vision of the Aga Khan University Examination Board (AKU-EB). AKU-EB recognises that students with specific needs may require additional accommodations to perform at their best during exams. Since 2016, AKU-EB has provided Access Arrangements (AAs) to the best of its resources to support students with specific needs, enabling them to demonstrate their academic abilities without undue barriers. A formalized system is in place to inform stakeholders about these provisions, including a request form available on the Board's website.

This study aims to examine the types of accommodations provided by AKU-EB in response to different disabilities and to assess how effectively these accommodations have met student needs. Furthermore, the findings are expected to facilitate the examination board to identify areas of improvement to broaden the scope of AAs.

The research involved reviewing all AA requests submitted since 2016, classifying the types of accommodations granted, analyzing stakeholder feedback, and identifying areas where the examination board's support may have fallen short.

The paper will present the findings indicating that AKU-EB's accommodations have significantly contributed to student success with diverse needs in achieving a significant milestone. However, there remains a need to increase awareness and understanding of these services among schools, students, and families. In addition, it also encourages reflection on how the existing system can be enhanced. It provides insights into potential areas of improvement, guiding AKU-EB in refining its approach to better support diverse learner needs moving forward.

Key words: High-stake Assessment, Inclusivity, Fairness

418. Title: The Decline in Male Students' Academic Performance at Junior Secondary Level: A Case of Selected Schools in Kabwe Urban (2019-2023)

Authors: Mwenzi Mponda, Audrey Muyuni

Affiliation: Mulungushi University

Abstract:

In recent years, there has been growing concern about the poor academic performance of male students at the Junior Secondary School Level in Zambia. However, little attention has been given to the specific challenges they face. This study explored the factors contributing to this decline in performance, focusing on five selected schools in Kabwe Urban District. The purpose was to understand their experiences and recommend inclusive strategies to promote fairness in teaching and assessment. The study used a qualitative research design. Data was collected mainly through semi-structured interviews. Thirty-five participants were involved: twenty-five administrative personnel and ten subject teachers. These participants were purposively selected due to their direct involvement in learner support, school management, and performance tracking. The findings revealed that male students face unique challenges that go beyond commonly shared issues like poverty. These include pressure to appear unemotional, a lack of strong male role models, early exposure to drug and substance abuse, and a growing loss of interest in school. Many also felt excluded from support programs, as most initiatives from non-governmental organizations (NGOs) and government agencies tend to focus on female students. Another key issue was the heavy reliance on written examinations, which often do not cater to all learning styles. Male students were generally more responsive to hands-on activities, group work, and practical tasks, yet these methods were rarely used in classrooms. The study recommended the adoption of inclusive assessment methods, such as oral tasks, group projects, and practical work, that accommodate various learning preferences. It also calls for targeted teacher training to help educators recognize and respond to the different needs of learners, regardless of gender or background.

Keywords: Male Academic Performance, Gender Equity, Inclusive Assessment,

419. Comparative Analysis of Pre-Moderated and Post-Moderated Scores for School-Based Projects in Food and Nutrition in Eswatini: Examining the Impact on Assessment Consistency and Fairness"

Organisation: Examination Council of Eswatini

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Abstract

This study aims to conduct a comparative analysis of pre-moderated and post-moderated scores for school-based projects in Food and Nutrition in Eswatini, focusing on examining the impact of these moderation processes on the consistency and fairness of student assessments. In educational settings, moderation is used to ensure that grading is aligned with learning outcomes, reduces bias, and maintains fairness across different evaluators. Pre-moderated scores are marks assigned by the evaluators from the centres, while Examination Council of Eswatini (ECESWA) assigns post-moderated scores. Pre-moderation and post-moderation are recognised methods to enhance the reliability and equity of assessment, limited research has explored their comparative impact within the context of Food and Nutrition education in Eswatini. This research investigates how pre-moderated and post-moderated scores vary, and how these moderation practices affect the reliability of the assessment. The study answered the following research questions: What are the differences between pre-moderated and post-moderated scores? Are there statistically significant differences between pre- and post-moderated scores? To what extent does post-moderation improve the consistency and reliability of scores compared to pre-moderation? This study adopted a quantitative, descriptive correlational research design. Purposive sampling was used to select 20 schools, 4 in each region that offer Food and Nutrition. Document analysis of existing data was used to collect data. Pre-moderated scores and post-moderated scores were taken from the double-data captured scores of end-of-year examination results from ECESWA. All scores were recorded using a standardised data collection sheet. Data was analysed using descriptive statistics, t-tests and Correlation Coefficient. The findings indicated that while both pre- and post-moderation contribute positively to assessment quality, post-moderation had a stronger impact on ensuring fairness and consistency in grading. Further analysis should continue to examine score reliability across a larger dataset and explore how evaluation practices can be standardised in the Food and Nutrition curriculum in Eswatini.

Key words: Pre-moderated Scores, Post-moderated Scores, School-Based Projects

420. Assessing the Inclusivity of Assessment Systems: Teacher Perceptions and Implications for Practice

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Abstract

The integrity of an education system is determined by assessment system. Inclusive assessments denote evaluation methods that ensure fair, equitable and accessible to all leaners regardless of

their socio-economic backgrounds. Education is but a right for all. Inclusive education approaches provide the atmosphere for presence, participation and achievement of all, academically and socially. In order to measure achievement, assessments are used by educators. Assessment systems are critical in ensuring equity and fairness in education. Nevertheless, the inclusivity of these systems remains a concern. This study explores teacher perceptions of the inclusivity of assessment systems and identifies implications for practice. Three objectives guided the study which were to investigate teacher perceptions of the inclusivity of current assessment systems, identify strategies for creating inclusive assessment practices that prioritize equity, social justice, and learner diversity. Social Constructivist theory and Universal Design for Learning theories guided the study. A mixed-methods approach was used while a sample of 50 educators. The findings of the study revealed that educators perceive current assessment systems as lacking in inclusivity, particularly for learners with diverse learning needs. The gap exists due to inadequate training of examiners and assessors, inadequate resources, and systemic predispositions engraved in negative attitudes and bad practices. The findings also revealed a worrying need for educators' professional development, socially accessible assessment practices and tools, and policy reforms to create inclusive assessment systems. The findings of this study have substantial implications for the education system as a whole, especially at the onset of the new educational curriculum framework. The findings amplify the need for policy on Inclusive Education in quest to create equity and social justice in education. The study recommends that Examination bodies at different levels of education, take care of diverse needs of learners, administer inclusive assessments which carter for all learners.

Keywords:

Inclusive assessment systems, teacher perceptions, social justice, Equity and Fairness

421. Equitable Resource Allocation and Student Achievement: A Correlational Analysis of NECO Examination Performance in Nigeria

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Abstract

Equitable distribution of school resources is fundamental to achieving fair educational outcomes, yet its impact in the Nigerian context requires further empirical investigation. The study investigates the importance of equitable school resource allocation in promoting fair educational outcomes. It will use the National Examinations Council (NECO) school accreditation reports to examine the relationship between the availability and adequacy of school resources (e.g., qualified teachers, laboratory equipment, library facilities, adequate classrooms) and students' performance in the NECO Senior School Certificate Examination (SSCE) across secondary schools in Nigeria. A correlational research design will be employed. The population for this study includes all secondary schools in Nigeria. Using stratified random sampling, we will select 30 schools from each of 6 states, ensuring one state represents each of Nigeria's geopolitical zones, for a total sample of 180 schools. Data on the availability and adequacy of school resources, including information on the number of qualified teachers, the existence and functionality of science laboratories and libraries, classrooms, examination halls, and internet access, will be collected from the 2024 NECO accreditation of schools' reports. Students' aggregate mean scores in the 2024 NECO SSCE across five core subjects will be obtained from official NECO results, linked to the participating schools. The Pearson product-moment correlation coefficient will be calculated

to determine the strength and direction of the relationship between each identified school resource variable and the schools' aggregate NECO performance. Multiple regression analysis will be conducted to assess the combined effect of multiple school resources on NECO outcomes. Control variables such as school location (urban/rural) and student-teacher ratio will be statistically controlled for. The expected results will indicate which specific school resources correlate significantly with students' performance in high-stakes national examinations. The study will provide quantitative evidence on the importance of equitable resource allocation in promoting fair educational outcomes. The study will propose actionable strategies for government agencies, policymakers and stakeholders to invest in school resources, thereby enhancing student success in NECO examinations and mitigating disparities in educational achievement.

Keywords: School Resources, Student Performance, SSCE, Equity, Fairness, School Accreditation, Educational Outcomes

423. Analysing the Cognitive Demands of EGCSE Physical Science Question Papers Using the Semantics dimension of the Legitimation Code Theory

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Lennox Nkambule, Examinations Council of Eswatini,

Abstract

Comparison of subject performances in the previous years' final examinations revealed that Physical Science is the most difficult subject among the sciences offered in the Eswatini General Certificate in Secondary Education (EGCSE). The poor performance has stimulated us to go beyond analysing the performance of each question using item response theory (IRT) into assessing cognitive demands of each question with respect to the level of abstraction. Previous research focused on examining cognitive demands of questions in summative assessments in higher education institutions but largely overlooked the same in secondary schools. The study aims to illustrate the value of analysing physical science questions using the semantics dimension of the Legitimation Code Theory to support the quantitative data from IRT. To achieve this aim, this study evaluates the cognitive demands of physical science question papers using semantic gravity (SG). A pragmatic, mixed, multi-case study design was used. Data was collected using document analysis of question papers, physical science syllabus and item analysis reports. Physical science question papers, paper 1, 2 and 4 from 2020 to 2024 were analysed using a translational device for semantic gravity. The study revealed that our question papers assessed a wide range of context-dependence, but with an underrepresentation of questions that require the integration of core concepts, and 'real-life' situations. We argue that the use of semantics gravity to analyse assessments is a convenient starting point for setting and moderation of exam papers. The study recommends the use of both semantics gravity and item analysis reports during setting and moderation processes, and further studies that will formulate a translational device for semantic density.

Key words: Cognitive demands, Semantics dimension, Legitimation Code Theory, Assessment

424. In Developing Rasch Scale Anchoring to Distinguish Test Scores Meaning

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Abstract

Scale anchoring plays a crucial role in establishing assessment standards by furnishing a framework to interpret test scores and define proficiency levels of knowledge, skills, or abilities. Through scale anchoring, test scores been given meaning and linked to specific proficiency levels on the assessment scale which benchmarks students learning outcomes. It helps ensure consistency and fairness in assessment scoring across different administrations of the test or different raters. Developing scale anchoring for a test requires significant effort from both the statistical analysts and test developers associated with the subject matter experts. Scale anchoring ensures that all test takers are evaluated under a same standard, regardless of external factors like time or location. This consistency helps uphold fairness in assessment process, as every student is judged by the same criteria and indirectly promoting equity in educational evaluation. This study aims to validate the effectiveness of a scale anchoring framework developed for a standardized Principle of Accounting test through Rasch modelling. Scale anchoring furnishes educators with valuable insights into students' strengths and areas for improvement across various accountancy proficiency levels. Overall, scale anchoring is indispensable for establishing assessment standards. It achieves this by defining students' levels of proficiency in accounting knowledge and skills, linking scores to these levels, establishing performance criteria, ensuring consistency and fairness, informing instructional practices, and facilitating data interpretation. Serving as a foundational component of the assessment process, it provides a common language for communicating about student achievement and learning outcomes in accountancy.

Keywords: Linking, Scale Anchoring, Rasch Model, Test Scores and Test Fairness.

425. An Inclusive Perspective – Incorporating South African Sign Language Home Language into The National Senior Certificate Examinations: Successes and Challenges Explored

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Abstract

This paper investigates the implementation of South African Sign Language Home Language (SASL HL) as an examinable subject in the National Senior Certificate (NSC) Examinations in South Africa. What are the successes and challenges of incorporating SASL Home Language into the NSC exams?
With the aim of fostering inclusivity and equity in education, the inclusion of SASL HL represents a significant step towards recognising and accommodating the linguistic diversity of South Africa. This paper will attempt to highlight the successes and challenges encountered in the introduction of SASL HL Examinations by focusing on the following:

Successes that include increased visibility and validation of SASL HL as a distinct language, enhanced educational opportunities for Deaf and hard of hearing learners, and the promotion of linguistic and cultural diversity within the educational landscape.
Challenges such as curriculum development, resource allocation, assessment standardisation and teacher training.
The importance of ongoing collaboration between stakeholders, targeted support mechanisms, and continuous evaluation to ensure the effective implementation and sustainability of SASL HL examinations within the NSC Examinations.
Ultimately, this paper contributes to the discourse on inclusive education and language policy, offering insights into the complexities and implications of integrating Sign Language into national examination systems.
A mixed-methods approach was employed, including interviews with stakeholders and analysis of examination performance data. The findings indicate significant successes in accessibility and representation for Deaf students, alongside challenges such as resource allocation and teacher training.
The study recommends enhanced training for educators and improved resource allocation to support the effective integration of SASL Home Language in the NSC exams.
Keywords:
South African Sign Language Home Language, inclusive education, linguistic diversity, deaf education, educational policies

501.Exploring the Impact of Artificial Intelligence on the Validity and Efficiency of Large-Scale Educational Assessments.

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Abstract

As educational systems worldwide move toward digital transformation, artificial intelligence (AI) is increasingly reshaping the landscape of large -scale assessments. This study investigates the dual impact of AI on two critical dimensions: the validity and efficiency of high -stakes examinations. Drawing from both global developments and contextual realities within national assessment bodies, the paper examines how AI tools such as automated scoring engi nes, algorithm -driven item generation, and adaptive testing platforms are redefining assessment practices. It further explores the implementation challenges specific to emerging economies, including infrastructure gaps, limited technical capacity, and regu latory uncertainty. Based on these insights, the paper proposes a responsible integration framework that emphasizes human oversight, ethical AI design, and capacity development to ensure that innovation does not compromise fairness or educational integrity. The study applies a mixed -methods approach, integrating a review of international case studies with empirical insights from stakeholders in the educational assessment sector. Findings reveal that AI enhances operational efficiency by significantly reduci ng scoring time, enabling real-time analytics, and improving scalability. However, its influence on assessment validity is more complex. While AI -driven scoring promotes consistency and objectivity, concerns remain regarding algorithmic bias, transparency, and alignment with curricular standards. It was discovered that there is an urgent need for assessment agencies to balance technological

advancement with robust validity frameworks. Based on this, the study recommends a phased adoption strategy for AI too ls, beginning with low -stakes testing environments to validate performance and minimize risk. It also advocates for the development of national AI ethics guidelines in assessment, cross -sector collaboration between technology developers and educators, and sustained investment in digital infrastructure and professional development for assessment

practitioners

Keywords:

AI in assessment, automated scoring, validity, adaptive testing, educational innovation

502. Ethical Evaluation of AI in Nigerian Educational Sector: Bridging Gaps in Fairness, security, and privacy

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Abstract

The evolution of artificial intelligence (AI) has raised pressing concerns, particularly related to fairness, privacy, security, and ethical deployment across key sectors such as education, healthcare, finance, and governance. Unethical and unregulated AI applications—including deepfakes, autonomous cyber-weapons, and mass surveillance tools—pose significant risks to societal values by amplifying algorithmic discrimination, eroding personal privacy, and increasing exposure to security threats. These technologies, when deployed without adequate oversight, often lead to algorithmic biases, data exploitation, and opaque decision-making processes that undermine trust and accountability across vital value chains. This study investigated how gaps in regulatory frameworks contribute to rights violations and ethical lapses in AI implementation, especially within critical domains. A major concern is the unilateral development and application of ethical standards, which fosters biased algorithms, limits equitable access, and facilitates emerging threats such as AI-driven cyberattacks. To examine these issues, the study adopted an interdisciplinary research design, integrating perspectives from philosophy, computer science, law, and economics. A qualitative methodology was employed, utilizing case studies, documentary reviews of EU AI Acts, OECD and UNESCO policy guidelines, and a qualitative assessment of algorithmic fairness and bias detection practices. This comprehensive approach enabled a holistic evaluation of ethical risks associated with AI systems and their broader security and regulatory implications. Findings emphasized the importance of multi-stakeholder engagement involving developers, policymakers, ethicists, and human rights organizations in designing effective governance mechanisms. Although ethical AI frameworks like the EU AI Act, OECD AI Principles, and UNESCO's recommendations provide foundational guidance, their enforcement remains limited, inconsistent, and often detached from addressing the root causes of AI-related risks. The

study recommends the development of robust ethical AI frameworks, proactive regulatory enforcement, and enhanced corporate accountability as essential strategies for promoting fairness, ensuring security, and protecting individual rights in the era of AI.

Keywords: Artificial Intelligence, AI Ethics, Algorithmic Bias, Privacy, Security.

503. The impact of formative assessment on students' self-regulation skills in mastering subject knowledge

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Abstract:

This study examines how formative assessment can support the development of students' self-regulation skills in mathematics, geography, and Kazakh language learning at the Nazarbayev Intellectual School of Physics and Mathematics in Aktobe, Kazakhstan. Developing students' self-regulation skills is important in education because a key goal of education is to help students develop the ability to direct and improve their own learning (Black & Williams, 2009). The Lesson Study presents findings from classroom observations and 65 students at the Nazarbayev Intellectual School.

Given the exploratory nature of the study, quantitative and qualitative methods were used to address the research questions and interviews, the lesson observations and student interviews were videotaped. Based on the students' responses, an inference was then made by analyzing the extent to which such experiences supported their self-regulation. Descriptive analyses were performed to investigate the occurrence of SRL strategies reported in the CP-SRLI and observed in the think-aloud protocols. In view of RO1, the presence of different SRL profiles was explored by conducting cluster analysis in SPSS 22. Following the guidelines in the literature (Gore, 2000; Hair, Anderson, Tatham, & Black, 1998), a two-step clustering method was used. The analysis revealed that the preference for metacognitive strategies by highly competent students ($M=3.88$) was reflected in their use of various self-management strategies for success, $F(1, 28)=21.35$, $p<.001$, $\eta 2=.35$, which included, among others, figuring out how to write effectively, analyzing good models, reflecting on one's strengths and weaknesses, and creating conditions for success. The results of these analyses will be presented in a full table at the poster session. In presenting the results for each formative assessment activity across the learning cycles, two main themes were explored: 1) How did the formative assessment activities provide repeated opportunities to support students in developing self-regulated learning characteristics? 2) How did the feedback from different agents (teacher, peers and students' internal feedback) resulting from formative assessment impact learning?

The study also found that feedback from different agents aimed at developing students' self-regulation skills, which contributed to students' engagement in goal setting at the process level and self-regulation, improving the quality of education in mathematics.

Key words: formative assessment, self-regulation, skills.

504.Enhancing Assessment Agility through Generative AI: Supporting Competence -Based Curriculum Implementation in Zambia

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Abstract

Zambia's shift from an Outcome -Based Curriculum (OBC) to a Competence -Based Curriculum (CBC) presents new demands on teachers to assess learners' skills, creativity, and real -world application of knowledge. However, many educators face challenges adapting traditional assessment practices to meet CBC requirements, which emphasize formative, performance -based, and learner -centered evaluation. This study explored the role of Generative Artificial Intelligence (GenAI) in supporting teachers to create competence -based assessments during this transitional period. Grounded in the Technological Pedagogical Content Knowledge (TPACK) framework and Rogers' Diffusion of Innovations theory, the study adopted a mixed -methods design to gain both breadth and depth of insigh t. Quantitative data were collected through a stru ctured survey administered to 300 primary and secondary school teachers across urban and rural regions in Zambia, capturing information on teachers' awareness, perceived usefulness, and access to GenAI tools. Qualitative data were obtained through semi -structured interviews to explore teachers' experiences, challenges, and expectations in using GenAI for assessment planning. The quantitative findings indicated that while awareness of GenAI was generally low, a significant number of teachers expressed strong interest in using the tools to generate assessment tasks, design rubrics, and align evaluation practices with CBC competencies. Qualitative data further revealed that teachers viewed GenAI as a promising so lution for improving assessment agility, especially in resource -constrained environments. However, concerns were raised regarding digital access, over-reliance on technology, and the need for localized training. The study concludes that GenAI can enhance a ssessment responsiveness by offering teachers real -time, adaptive support in designing learner -centered assessments. For effective implementation, it is essential to invest in teacher professional development, equitable access to digital tools, and clear g uidelines for ethical and pedagogical use. These findings contribute to discussions on technology integration in education and provide timely insights for policy and practice during curriculum reform in developing contexts.

Keywords

Generative AI, Assessme nt Agility, Competence -Based Curriculum, Formative Assessment,

Educational Technology

505. The Effect of Virtual Reality Meditation on Science Education Students Academic Achievement.

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ABSTRACT

The purpose of this paper is to investigate the effect of virtual reality meditation on science education undergraduate students' academic achievement. It was in two parts: it compared the impact of meditation via virtual reality against video, as accessed by students' mean scores. Secondly, the study examined the usefulness of meditation, on the overall well-being of students through video or virtual reality. All the science education undergraduate students of the University of Calabar constituted the population of the study. Two research questions and hypotheses were formulated to guide the study. The study employed a pretest–posttest design with the participants being randomly assigned to two groups. The sample size was 120. Analysis of covariance (ANCOVA) results showed that virtual reality meditation had a significantly higher benefit than video meditation. The results of the analysis also indicated that undergraduate students with both meditation techniques employed had decreased pre-exam anxiety. It was concluded that virtual reality meditation plays a major role in students' academic achievement and test anxiety levels.

Keywords: Consciousness, Meditation, Virtual reality, Anxiety, well-being, academic achievement

507. Integration of Technology in Primary Education for Global Sustainability: A Case Study in Cross River State.

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Abstract

This empirical study investigates the integration of technology in primary education as a means to enhance global sustainability awareness and practices, with a focus on Cross River State, Nigeria. Recognizing the increasing role of technology in shaping educational experiences, this research aims to assess how digital platforms, educational apps, and other technological tools are utilized in primary schools to promote environmental consciousness and sustainable behaviors among students. The methodology involves a thorough examination of technology integration initiatives in a representative sample of primary schools within Cross River State. The study explores the effectiveness of technology in delivering environmental education content, engaging students in interactive learning experiences, and fostering a sense of responsibility towards global sustainability issues. By employing a combination of surveys, interviews, and classroom observations, the research aims to provide insights into the challenges and successes associated with incorporating technology into the primary education curriculum. Additionally, the study seeks to identify best practices and lessons learned, offering recommendations for optimizing the integration of technology to achieve sustainable education outcomes. The findings from this research are expected to contribute valuable information to educators, policymakers, and

stakeholders involved in primary education in Cross River State, facilitating evidence-based decisions for the continued improvement of sustainability education programs in the region.

KEYWORDS: Technology, primary Education, global sustainability, environmental consciousness.ss

508. Artificial intelligence (AI) and academic integrity in assessments in nursing education at higher education institutions in South Africa

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Abstract

The advent of AI has resulted in significant transformation of teaching and learning revolutionising how knowledge is created, accessed, shared and assessed in higher education. While AI presents numerous advantages, ethical concerns specifically around academic integrity in assessments cannot be denied. Therefore, the integration of AI in nursing education at higher education institutions in South Africa is met with mixed emotions, with some institutions frowning upon the use of AI, while others adopt a welcoming approach. Consequently, the use of AI in nursing education assessments is often denied by students, making learning and competencies questionable. This unethical practice is further compounded by the lack of clear guidelines and declaration of AI use in nursing education.

This paper aims to explore and describe the use of AI in nursing education assessments, identifying the benefits and ethical challenges to make recommendations to foster academic integrity. AI in nursing education has the potential to improve learning, enhance analytical skills, critical thinking and clinical reasoning. Tailor made programmes can be developed based on analysis of learning trends and input from assessments making learning more student centered. Arguably, t he ethical challenges to the use of AI in assessments fosters lack of student autonomy, unfairness, biased and inaccurate information compromising patient care to the detriment of society. Furthermore, issues related to trust, privacy, responsibility and accountability may impact on communication and collaborations in the learning process and nursing practice. Nurse educators and students have a responsibility to keep pace with the technological advancements which impact healthcare landscapes. There is a need for open discussions, training and support to develop digital pedagogy, restructuring of assessments and policy formulation related to the use of AI in nursing education in South Africa. Clear and consistent policies are required to guide the ethical use of AI, delineate what constitutes academic dishonesty, describe the protocols to be followed and explain the penalties to be imposed. Furthermore, frequent emphasis on ethical behaviours is pivotal to foster academic integrity and compliance in nursing education assessments to create a culture of honesty and integrity in the development of competent, responsible nurse practitioners.

Keywords: Artificial Intelligence (AI), Academic Integrity, Assessments, Nursing Education

509. Reliability of Artificial Intelligence in Evaluating Cognitive Levels of Life Sciences Items

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Abstract

Umalusi is a quality council in South Africa responsible for setting and maintaining standards of qualifications, such as the National Senior Certificate (NSC). This is achieved through a range of quality assurance processes and empirical research, including the Post-Exam Analysis (PEA) project. The PEA uses subject experts to evaluate NSC final examination question papers from three consecutive years, focusing on cognitive and difficulty levels of items. Reliance on subject experts to rate the cognitive levels of examination items has proven effective. With the global shift towards integrating Artificial Intelligence (AI) and human collaboration in quality assurance for assessments, Umalusi recognised the need to align its processes with these innovations. This prompted an investigation into the use of AI, specifically Microsoft Copilot, to rate the cognitive levels of examination items. However, Umalusi has not yet established the reliability of Microsoft Copilot in this context. Therefore, this study evaluated the reliability of Microsoft Copilot's ratings by measuring the agreement of its ratings with those of Umalusi Life Sciences subject experts between 2020 to 2024. A quantitative, non-experimental comparative design using purposive sampling was employed. The Department of Basic Education (DBE) and section A Life Sciences Paper 1 (2020–2024) were purposely selected. Data was collected by inputting the sampled items into Microsoft Copilot, using the description of cognitive levels from the Life Sciences Curriculum Assessment Policy Statements as a prompt for rating. Additionally, cognitive ratings from Umalusi PEA experts for the selected years were extracted from the PEA Excel instrument. Data were analysed through the Statistical Package for the Social Sciences (SPSS) using the Cohen's Kappa statistic. The results revealed that the Kappa values ranged from 0.327 to 0.661 and the p-values were below 0.05. These results indicate there was no significant difference between the ratings of Microsoft Copilot and Life Sciences subject experts. Furthermore, the results show meaningful agreement in the ratings, suggesting that Microsoft Copilot could support Life Sciences evaluations with human oversight. Further studies including other subjects may be conducted to evaluate whether similar levels of reliability can be achieved in different subjects and different contexts.

Keywords

Interrater Reliability, Cognitive Demand Ratings, Microsoft Copilot, Artificial Intelligence, Exam Item Ratings, National Senior Certificate

510. Modernizing Examination Data: Namibia's OpenEMIS Exams Success Story

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Karl Turnbull, CSF

Poster Abstract

The Ministry of Education, Innovation, Youth, Sports, Arts, and Culture in Namibia, with technical and financial support from UNICEF, has successfully developed and implemented OpenEMIS Exams, a digital solution tailored to manage high-stakes examination data. Deployed in 2020, the system addresses key challenges of manual data processing, such as inefficiency, inaccuracy, and exclusion. OpenEMIS Exams automates exam workflows and integrates critical modules for candidate registration, marks processing, certificate issuance, and real-time data analytics.

A standout feature is the Item Bank Module, which enables item-level analysis crucial for diagnostic assessment. Educators can use item statistics, like difficulty and discrimination indices,

to revise weak items, identify learning gaps, and enhance teaching strategies. For example, analysis of Grade 11 Biology items showed clear insights into item quality and learners' performance trends.

The system's impact includes reduced operational costs, improved data accuracy, greater inclusion of learners with special needs, and increased decision-making capacity. With ongoing development of online services and future integration with Namibia's EMIS, OpenEMIS Exams sets a benchmark in digital transformation and education data security.

Namibia is proud that this homegrown solution has sparked international interest, with countries like the Bahamas adopting it in 2025. This project underscores the value of sustained investment in integrated, inclusive, and secure examination systems.

Keywords: Examination Data Management, Digital Transformation, Item-Level Analytics

511.Exploring advanced subsidiary teachers' experiences and perceptions on the integration of smart boards in teaching in Namibian secondary schools

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Abstract:

The interactive smart boards play a crucial role in the education system by enhancing teaching and learning, and Namibia is no exception to continue advancing in the world of information technology and communication (ICT). The study aimed at exploring teachers' experiences and perceptions of the integration of smart boards in teaching at Advanced Subsidiary (AS) level in Namibian schools. The study used a mixed method that combines quantitative and qualitative approaches and deployed survey and case study designs, respectively. The targeted population consisted of 14 regions and 107 public schools that offered AS levels. The study was conducted in seven regions, and it involved 538 participants from 27 schools across seven regions. The questionnaires and semi-structured interviews were used to collect data, and the numerical data were compiled using Statistical Package for the Social Sciences (SPSS) version 25. The interview data were transcribed verbatim using Microsoft Office 365. The results indicated that smart boards were not effectively integrated into teaching and learning at some schools due to challenges such as poor Internet connectivity, a lack of teachers' training, technical glitches, and a lack of interest and motivation. Despite these challenges, it is concluded that smart boards were believed to improve teaching and learning, instructional outcomes, and learners' achievements as compared to the traditional way of using textbooks and chalkboards. For more efficient and effective integration of smart boards in the teaching and learning process, the study recommends the provision of more smart boards, teachers' training, and strong Internet connectivity in schools. In addition, the Ministry of Education, Innovation, Youth, Sports, Arts and Culture should envisage buying smart televisions instead of smart boards for advanced and ordinary levels, invest in offline educational content to enhance the use of smart boards and televisions in schools due to poor Internet connectivity, and make Information and Communication (IC) a promotional subject.

Keywords: advanced subsidiary, integration, smart boards, experiences, internet connectivity

512. Ethical issues in AI-Driven Test Item Development: Challenges and Solutions

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Abstract

The integration of AI in test item development has transformed traditional assessment methodologies by automating question creation, refining difficulty levels based on learner performance, and analyzing large datasets for enhanced item selection. These innovations have the potential to improve the efficiency and objectivity of assessments. However, leveraging AI in this domain raises ethical concerns, particularly in relation to fairness, bias, validity, and the transparency of AI-generated content. Ethical AI use is crucial to maintaining the credibility and trustworthiness of educational assessments. This paper explores these ethical issues and proposes strategies for responsible AI use in test item development, including bias mitigation, enhancing validity and reliability, improving transparency, and ensuring data security. By implementing ethical AI practices, educators and policymakers can develop equitable, accurate, and trustworthy assessment systems. Future research should focus on refining AI-driven methodologies and establishing robust ethical frameworks to guide their responsible deployment in education.

Key words: Assessment, Test item, Test development, AI, ethics

513. Bridging global standards with local innovation: piloting a digital language proficiency platform

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Abstract

In an era of increasing globalization and digital transformation, the demand for reliable, standardized, and accessible language proficiency assessments has been on demand. For less commonly taught languages like Azerbaijani, establishing a modern, technology-enhanced certification system is essential to support international learners, academic mobility, and cross-cultural communication. This study responds to foreign students' language needs by presenting the digital assessment platform specifically designed to evaluate Azerbaijani language proficiency. This pilot project, led by the State Examination Center, has its foundation on the CEFR, which was first translated into Azerbaijani for better understanding of the related experts in the target language, published on the portal of the Council of Europe and then modified to create a national competency framework. This led to the establishment of a language a program that considers six proficiency levels (A1–C2) across the four fundamental language skills ensuring alignment with international standards while considering the linguistic characteristics of Azerbaijani.
Participants involved in this study are 600 individuals with different linguistic backgrounds. The test comprises four sessions in which test items were created by a team of linguistic experts, and piloted in pre-test phases to ensure alignment with the CEFR descriptors.
A mixed-methods approach will be employed as a research method: system data and test results will undergo a quantitative analysis, whereas post-test surveys and interviews are expected to yield qualitative insights regarding usability, fairness, and accessibility of the digital platform. The

research questions proposed include the extent to which the Azerbaijani digital assessment is effective in measuring CEFR-aligned proficiency levels and the platform is accessible and usable for diverse learners. Utilizing analogous international frameworks, such as digital language evaluations for German (TesDaf), French (DELF/DALF), and Turkish (TYS), which embody global trends elucidated by Chapelle & Voss (2016) and Alderson (2009), the Azerbaijani model is likely to enhance the overarching dialogue on multilingual certification within online contexts.

The results obtained in this study might be interesting for the countries, especially those of emerging, where building or enhancing their own language assessment systems is needed. The findings can also show how a less commonly utilized language, such as Azerbaijani, can comply with the international standards through a digital platform, offering a replicable model for assessment.

Keywords: Azerbaijani as a Foreign Language, CEFR, digital language testing, online assessment, language certification, multilingual proficiency

514. Revolutionizing Candidate Registration Support: Leveraging AI for an Optimized Public Examination Administration Processes.

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Abstract

The Zimbabwe Schools' Examination Council (ZIMSEC) administers public examinations to between 700,000 and 1 million candidates annually, spanning from primary to high school candidates who are spread over the country's 10 provinces through an estimated 8000 examination centers , of which 80 % are in the rural areas . Whilst ZIMSEC has invested in a computerized candidate registration system, there is always a support challenge in handling both technical and non -technical stakeholder queries regarding the process of candidate registration across this huge number of stakeholder s. Efforts of rural modernization , which are currently underway by the Zimbabwean Government , present opportunities of converting public examination activities to mimic private business es, which are known to provide maximum support to stakeholders by leveraging emerging technologies such as social media platforms, websites, data analytics , and AI bots offering 24/7 support. Candidate registration is a key process leading to assessment, collect ion of certification data, and revenue. This paper presents a pioneering approach to providing real -time support for candidate registration -related queries, leveraging an Agentic AI chatbot developed using Microsoft Copilot Studio. The chatbot is designed to assist exam ination centers, parents, and candidates, offering 24/7 support and significantly reducing support and travel costs across the 10 provinces of Zimbabwe. By harnessing the power of Generative AI, N atural Language Processing (NLP), and machine learning (ML), the chatbot provides instant and accurate responses to a wide range of queries from technical, fees -related, due dates, financial support, and subjects offered, amongst others, ensuring a seamless registration experience. Results from a 21 -day observation window show a stakeholder engagement of 61.8% satisfied customers with a satisfaction index of 3.6/5.0, a Total Answer Rate of 85% from a 100% knowledge source usage. The paper concludes by highlighting the benefits of integrating data analytics into the chatbot framework, enabling data -driven insights to inform decision -making at the ZIMSEC level up to the ministry level, optimiz ing support processes, and enhanc ing overall stakeholder satisfaction. The proposed solution has far -reaching implications for educational institutions, public exam boards seeking to streamline processes and provide exceptional support services.

Key words: AI, Emerging Technologies, Data - driven insights, stakeholder engagement

515. Ethical Concerns on The Use of Artificial Intelligence In The Assessment of Learners In TVET Institutions In Nigeria.

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ABSTRACT

Artificial Intelligence (AI) refers to computer system capable of performing complex tasks that only humans could do, such as reasoning, making decisions, or solving problems. The application of AI in education has featured as one of the most pivotal developments of the century. Today, the amount of data generated by both humans and machines, far outpaces humans' ability. Artificial Intelligence in Education (AIED) is the use of computer systems that can perform tasks typically requiring human intelligence to enhance learning experiences, streamline administrative processes and support educators. The advancement of Artificial Intelligence in Education (AIED) has the potential to transform the educational landscape and influence the role of all stakeholders involved. In recent years, AIED has gradually been adopted to improve our understanding of students' learning and enhance learning performances and experiences. Notwithstanding, the adoption has led to increasing ethical risks and concerns regarding issues such as personal data and learner autonomy. The debate on AIED revolves around key principles supporting ethical AIED. The purpose of this study was to ascertain the challenges and benefits of the use of AI in assessment of learners in TVET institutions in Nigeria and the need for ethical consideration, such as fairness and privacy for AI in the assessment of learners. Three research questions guided the study. Survey research design was used. The population comprised all Instructors and learners of TVET institutions in the six Geo-Political Zones in Nigeria. Simple random sampling technique was used to select eight hundred (800) instructors and One thousand, two hundred (1,200) learners. One validated instrument was use; Questionnaire on Instructors and Leaners' Awareness, Access and Utilization of Artificial Intelligence (QILAAUAI). The reliability coefficient of 0.86 was obtained with Cronbach Alpha. Data were analyzed using mean and standard deviation. Findings revealed that fairness and privacy are ensured to a low extent in AI educational decision making. It was recommended, among others, that ethical considerations should serve as a framework to inform and guide educational stakeholders in the development and deployment of ethical practices for fairness and privacy as well as catalyze future development of related studies in the field.

Keywords: artificial intelligence, AIED, ethics, assessment and TVET institutions.

516. Reorienting English Language assessment: The Role of Artificial Intelligence in instruction and assessment of English Language in Kenya

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Abstract

The swift advancement of emerging technology and its global application in education requires innovative methods and approaches in language teaching, learning and assessment in the digital age. This study examines the role of artificial intelligence in classroom instruction and assessment of the English language in Kenya. The study was based on the qualitative research method, particularly content analysis. The study involved an intensive review of the current academic literature and analysis of secondary data from Google Scholar database published from 2020 to 2024. The study involved a review of AI applications, including adaptive learning platforms, virtual tutors, speech recognition software, and conversational chatbots. These applications have been utilized to enhance different aspects of language teaching, learning and assessment, such as vocabulary expansion, pronunciation, and conversational skills. The study established that AI is a powerful tool that may be used to improve language acquisition for learners of all ages by providing personalized instruction, immediate feedback, flexibility, access to learning materials, and cost efficiency. Despite its advantages, the study revealed that AI lacks emotional intelligence, the capacity to adapt to different contexts, creativity, relationship-building, and judgment. Other challenges include the digital disparity, privacy concerns, and the necessity for educators to conform to new instructional frameworks. The study contends that the future of language education rests on a hybrid strategy that integrates the merits of traditional teaching strategies and digital tools. This balanced approach ensures that learners benefit from both human interaction and technological advancements, creating a more effective and inclusive learning experience.

Key words: innovative methods, digital age, artificial intelligence, emotional intelligence, AI applications, instruction, assessment

517. The Perception of the Primary Teachers on the use of Tablets to enhance Authentic Assessment in the Competency Based Curriculum: A Case Study in Nairobi County, Kenya.

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Abstract

The use of technology in the teaching and learning process has greatly changed the education process to integrate 21st-century skills among the new generation of learners. The government of Kenya, through the Ministry of Education, has greatly invested in the provision of tablets to public primary schools to enhance computerized instruction and assessment. The main purpose of the study was to investigate the perceptions of the primary teachers on the use of tablets to enhance authentic assessment in the Competency-Based Curriculum (CBC). The study was guided by the following objectives: 1) to find out whether the public primary schools have tablets to enhance authentic assessment in the competency-based curriculum, and 2) to establish the primary teachers' attitude toward the use of tablets in enhancing authentic assessment in the CBC. The

study adopted a descriptive research design with a target population of 230 headteachers and 4,500 primary school teachers within Nairobi County, Kenya. A sample of five (05) head teachers was selected through purposive sampling, and 230 primary teachers were selected through simple random sampling. A structured interview schedule was used to collect data from the head teachers while a structured questionnaire was used to collect information from the teachers. The collected data was analyzed using descriptive statistics and presented in the form of frequency tables, charts, and graphs. The study findings established that the majority of the public primary schools in Nairobi County have been supplied with tablets, but the tablets have been kept in the store for fear of being stolen. Further, the study found that teachers have a negative attitude towards the use of tablets to enhance authentic assessment due to inadequate retooling on how to use the tablets, a limited pedagogical approach on how to integrate the tablets in assessment, fear of embarrassment by the technology if it fails, and overcrowded learners in several grades. Therefore, there is need for more retooling of teachers on how to use tablets to enhance authentic assessment in the classroom.

Keywords: Authentic assessment, Competency Based Curriculum (CBC), Competencies, ICT integration, use of tablets

518. Optimizing Technology Tools in STEM Education: Leveraging Technological Advancements for Assessments in Zambia

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Abstract

This study investigates the integration of technology tools in optimizing assessments within the context of Science, Technology, Engineering and Mathematics (STEM) education in Zambia. The rapid advancement of educational technology offers significant opportunities to promote fairness, security, and accessibility in student assessments, particularly for learners from rural and underserved communities. Grounded in the Technology Acceptance Model (TAM) and the Universal Design for Learning (UDL) framework, this study investigated digital assessment tools' ability to enhance the quality and inclusivity of STEM education. The primary objective is to evaluate the extent to which these technologies can facilitate more accurate, equitable assessments while addressing persistent challenges related to access and security. The research employed a mixed methods research (MMR) methodology, in particular the sequential approach. It targeted 455 participants compromising STEM educators, school administrators and technology experts across both urban and rural areas of Zambia. Data collection methods were structured questionnaires, focus group discussions and observational studies. Descriptive statistics indicated that 65% of schools in urban regions have adopted digital assessment tools, compared to 38% in rural areas. Additionally, 72% of educators identified security measures, such as encryption and secure data storage, as critical components for ensuring fair assessments. Inferential statistical analysis, specifically regression analysis, demonstrated a significant positive correlation between the use of secure digital assessment platforms and enhanced student in STEM subject (R2=0.42,

β =0.55, p<0.001). The findings suggest that although digital technologies hold considerable potential for improving assessment practices, substantial barriers remain, including limited internet connectivity, insufficient teacher training and infrastructure disparities. The study recommends strategic investments in technological infrastructure, the development of teacher training programs focused on digital literacy and the formulation of supportive policies to ensure equitable access to digital assessment tools.

Key Words: Digital Assessment Tools, Technology Tools, STEM Education, Assessments, Digital Literacy

519.The validity of virtual labs for assessing science practical skills

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Abstract

There are various methods to assess science practical skills at secondary school level, each of which may have a different impact on teaching and learning. Literature has addressed the distinction between direct and indirect assessment of practical skills (Abrahams & Reiss, 2015), and questions have been raised about the validity of indirect assessment methods which could promote undesired practices such as teaching to the test.

Alternative to practical exams, where students do a written paper instead, are an option. However, such written exams do not require students to manipulate equipment and there is potential for negative washback.

Our study uses a critical literature review to explore virtual labs as a potential means to assess science practical skills. Virtual labs are a popular teaching tool, however, in assessment they have received less attention. We focused on exploring the validity of virtual labs for the summative assessment of science practical skills. Using the Crooks et al. (1996) chain model as a theoretical framework, we elucidate threats, benefits and opportunities for the validity of virtual labs in summative assessment comparing physical labs and alternative to practical exams. Our review used relevant literature obtained through database searches, screened against criteria and coded using MAXQDA.

We argue that virtual labs can potentially assess a subset of science practical skills, and because they require virtual manipulation of equipment, they represent an improvement over written examination. However, there are several threats to validity that would need to be carefully considered, including the impact on classroom practices. A key factor is the quality and design of the software, which needs to be designed to mimic physical practical assessment as closely as possible. Poor quality software design can lead to linear rather than open ended experiences, which can restrict the constructs being assessed. The impact on physical practical skills also needs considering, for example, whether the use of virtual labs in assessment would reduce the amount of real physical experimentation in the classroom. There is also the question as to whether certain practicals might be more suited to virtual labs than others, and whether this might influence the curriculum.

Keywords: Practical skills assessment, Virtual labs, Science, Secondary school, Validity

520. Challenges in Transitioning from Paper-Based to Computer-Based High-Stakes Examinations: A Pilot Study

Author(s):
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Abstract:
As education systems worldwide embrace digital transformation, the shift from traditional to computer-based assessment appears to be a natural progression. However, this transition is more complex than it may seem. This study explores the challenges of transferring paper-based high-stakes examinations to a computer-based format, based on a pilot implemented across 20 Nazarbayev Intellectual schools in Kazakhstan. The focus was on science subjects, with Paper 1 consisting from 40 multiple-choice questions.

Our initial hypothesis was that digitizing this portion of the exam would be straightforward due to the familiarity of digital tools in modern classrooms. However, the pilot revealed multiple unforeseen challenges. On the day of testing, numerous students faced difficulties logging in due to server overloads and unstable internet connections. Performance issues, such as slow data upload and platform lag, further hindered the process. Additionally, authorization problems, incomplete data saving, and infrastructural issues such as power failures disrupted the examination.

These findings demonstrate that the shift to computer-based testing requires more than digitizing content. Technical readiness, robust infrastructure, and meticulous organizational planning are essential for success. Our experience highlights the need for scalable platforms, pre-testing simulations, and contingency protocols to ensure equitable and secure testing environments.

While the transition remains a crucial goal for modern education systems, this study underscores the importance of thorough preparation. Future efforts will focus on strengthening both the technical and organizational capacities needed to ensure a seamless digital examination experience.

Keywords:
Computer-based testing, digital assessment, pilot study, high-stakes exams, educational technology, exam infrastructure

521. Impact of Integrating Ai-Powered Tools in Teaching Biology on Grade 12 Learners' Performance: A Case of Nakonde Secondary School

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Abstract

This study aimed to assess the impact of integrating AI-powered tools on Grade 12 biology students' performance at Nakonde Secondary School. Using a quasi-experimental design, the study involved an experimental group exposed to AI tools and a control group taught through traditional methods. Quantitative data were gathered from pre-test and post-test scores, while

teacher perceptions were captured through structured questionnaires and qualitative interviews. Statistical analysis, including t-tests, regression analysis, and Chi-Square tests, revealed that the experimental group significantly outperformed the control group, with a mean post-test score of 81.1 compared to 67.4 for the control group. Teacher responses indicated positive perceptions of AI tools' effectiveness in improving teaching and learning, though challenges such as limited internet connectivity, inadequate device access, and insufficient training were identified. The study concluded that AI tools enhance academic outcomes and recommended improvements in ICT infrastructure, continuous teacher training, and the development of curriculum-aligned AI content for sustainable integration in STEM education.

Keywords: AI-powered Tools, STEM Education, Student Performance, Teacher Perceptions, Educational Technology

522.Technology-Enhanced Teaching of Geometric Transformations in Selected Secondary Schools of Chama District, Zambia

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ABSTRACT

This quasi-experimental study investigated the effectiveness of technology-enhanced teaching methods for geometric transformations. The study involved 200 students and 30 teachers from two secondary schools and focused on identifying specific learning difficulties and measuring the impact of a GeoGebra-based intervention. Data were collected using questionnaires and the pre-test and post-test for the experimental and control groups. Quantitative data was analyzed using SPSS 20.0, whereas qualitative data was analyzed thematically. Findings revealed that students struggled with conceptual, procedural, and technical challenges on geometric transformations. However, the GeoGebra intervention significantly improved their understanding and reduced their challenges. A paired samples t-test showed a p-value of less than 0.001 and a Cohen's d effect size of 0.73. Students reported positive perceptions of GeoGebra, highlighting its ease of use and effectiveness, while teachers noted enhanced pedagogical skills. These results suggest that incorporating GeoGebra into the curriculum can effectively address learning difficulties and enhance student outcomes in geometric transformations.

Keywords: GeoGebra; Geometric transformations; Technology-enhanced learning; Student learning outcomes.

523. Leveraging OpenEMIS for Efficient, Fair, Secure, and Accessible Education Assessments: Pathways to Integrated National Systems

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Technology Integration

Abstract

Education systems worldwide are under increasing pressure to deliver assessments, which measure the educational achievement and progress, while remaining efficient, equitable and secure, and ensuring alignment with national education goals. As countries advance their digital infrastructure, the integration of assessment systems within broader Education Management

Information Systems (EMIS) becomes not only desirable but essential. Traditionally, EMIS and examination systems are separate due to concerns over data, privacy and security especially for high stakes, national examinations. In most cases, these EMIS and examination systems are not integrated. This often creates a situation where data is duplicated and inconsistent and where schools need to use multiple systems.

This paper explores how OpenEMIS1—an open-source suite of tools designed to support education planning and management—can be leveraged to create, manage and administer integrated national assessments that address these imperatives.

Drawing on experiences from multiple country contexts, the paper presents concrete examples of how OpenEMIS has been deployed to support diverse assessment needs. Through modular design and interoperability features, OpenEMIS enables education stakeholders to collect, analyze, and act on assessment data in real time, linking student performance to school profiles, teacher data, and policy planning frameworks.

The paper proposes clear pathways for Ministries of Education and education partners to adopt and adapt OpenEMIS for assessment purposes, including implementation strategies, system architecture considerations, data security protocols, and approaches to institution strengthening. It also outlines options to integrate examination systems with EMIS, increasing efficiencies and facilitating opportunities for deeper insights into student learning and achievement.

Particular attention will be given to the generalized and highly configurable OpenEMIS software, ensuring Ministries require little to low software coding. Moreover, the paper discusses how OpenEMIS can serve as a vehicle for increasing transparency and stakeholder trust in national assessment processes through open data standards and clear pathways for dissemination of education data.

Ultimately, this paper argues that leveraging open-source technology like OpenEMIS can democratize access to high-quality assessment systems, reduce dependency on proprietary platforms, and empower governments to build resilient, data-driven education systems.

Keywords

OpenEMIS, Education Assessment, Education Management Information Systems (EMIS), Open Source Technology, EdTech, Fair and Inclusive Assessments, Digital Assessment Integration, Data-Driven Education, National Education Systems, Assessment Accessibility, Education Data Security, Formative and Summative Assessment, Real-Time Data Analytics

524. Optimizing Technology Tools: Leveraging technological advancements for fair, secure, and accessible assessments

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Abstract

Education systems worldwide undergo rapid transformation, the agility to adapt assessment practices becomes critical. This session delves into how technology tools can be strategically optimized to ensure assessments remain fair, secure, and accessible amid constant change. The demand for fair, secure and reliable online assessment solutions continue to grow, advancements in technology have paved the way for innovative approaches with growing trends of Artificial Intelligence (AI). The focal point of our investigation is to Leveraging Technological Advancements for Fair, Secure, and Accessible Assessments. This was done by evaluating the following overall objective, The overall objective of the study is to develop and promote a comprehensive, technology -driven framework that ensures fair, secure, and reliable in

assessment systems by integrating modern innovations and best practices across all stages of the assessment lifecycle . Traditional assessment methods often struggle to meet the evolving demands of fairness, security, and accessibility in today's diverse and technology -driven environments. Many current systems are vulnerable to academic dishonesty, fail to accommodate learners with varying needs, and perpetuate biases du e to rigid, one -size-fits-all approaches.

Despite rapid advancements in educational technology, there is a lack of integrated, evidence -based frameworks that harness these innovations holistically across the entire assessment process. The integration of technology into assessments not only streamlined grading but also provided more accurate insights into learner performance. This gap hinders institutions from implementing scalable, inclusive, and secure evaluation systems. Regardless of these technological advances, the fundamental concerns with assessment remain the same. It is critical to ensure that the use of technologies in testing adds value through more accurate, accessible, engaging, fair, and secure assessments; wi thout introducing new irrelevant variance in scores or unintended consequences. The study also highlights best practices and ethical considerations to ensure tec hnology -driven assessments remain inclusive and trustworthy. Through a comprehensive evaluation of current tools and future possibilities, this paper aims to provide a strategic framework for implementing fair, secure, and accessible assessments in educational and professional contexts.

Keywords: AI artificial intelligence, Assessments, Technolog y, Systems, Technology -

Driven, Framework

525.The Relationship between Teachers' AI-Readiness and their Use of CBA-Aligned Assessment Methods in Public Junior Schools in Kajiado North Sub-County, Kajiado County, Kenya

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Abstract

This paper examines teachers' preparedness to use Artificial Intelligence in developing and conducting school-based assessments in Public Junior Schools in Kajiado North Sub-County, Kajiado County, Kenya. The study was guided by Gardner's theory of Multiple Intelligences and adopted the cross-sectional survey design of quantitative research. The target population comprised 15 schools and 80 teachers. Seven Headteachers were selected by stratified and simple random sampling, and 26 Teachers were purposively sampled. Data collection tools were Questionnaires and document analysis guides. The instruments' content and construct validity were established through a critique by experts. Criterion validity was established by revision after piloting. The tools were subjected to Cronbach's Alpha reliability test at a threshold of 0.7 coefficient and accepted having attained an average Alpha reliability coefficient of 0.911, and the trustworthiness of the qualitative aspects of the instruments was verified for appropriateness. Data was analyzed using SPSS version 23 statistical packages, while the qualitative aspects of the data were coded and analyzed thematically as per the research questions. Data was presented in charts and narrative form. Descriptive statistics were used to analyze and explain the uptake of AI among teachers. Chi-square statistics were used to test the hypotheses. The findings revealed that teachers were not ready to fully embrace AI in assessment, and assessments were not frequently conducted. At the same time, written tests were a more favored mode, and they mostly thought that AI would promote malpractice in the conduct of assessments. Teachers faced limitations in computer literacy and access to internet connectivity. The study recommended intensified provision of ICT

facilities in public junior schools, continuous teacher training and development in computer-based teaching and assessment, and improved access to Wi-Fi and internet connectivity in schools.

Key terms: AI, Teachers' AI-Readiness, CBA-Aligned Assessment Methods.

526.Enhancing Civic Education through Generative AI: A Case of Selected Higher Learning Institutions in Zambia

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Abstract

This study explored how generative Artificial Intelligence (AI) can improve the teaching of civic education in higher learning institutions in Zambia. Civic education, which is important for preparing students to become active and responsible citizens, oft en faces problems such as old -fashioned teaching methods, low student interest, and a lack of cultural relevance. To respond to these challenges, the study examined how generative AI could make civic education more accessible, interactive, and meaningful. The research was guided by the Technological Pedagogical Content Knowledge (TPACK) framework, which looks at how technology, teaching methods, and subject content work together in education. The study used a qualitative case study approach. Data were coll ected through semi -structured interviews with educators, students, and program coordinators from two selected higher learning institutions. Participants were chosen through purposive sampling to ensure a variety of views. Thematic analysis of the data showed that using generative AI helped improve teaching methods (pedagogy), made the civic education curriculum more relevant and engaging (content), and introduced flexible, adaptive tools (technology). Students who engaged with AI -driven activities, such as civic simulations and scenario -based learning, showed stronger critical thinking skills, greater motivation, and higher levels of civic participation. Educators also reported that AI made it easier and faster to prepare teaching materials and allowed them to adjust their lessons to better meet the needs of different student groups. However, the study also found that the use of AI must be handled carefully. Ethical concerns such as protecting student privacy, avoiding bias, and respecting cultural differences were raised. The study recommended the creation of clear ethical guidelines and the introduction of professional development programs to help educators build the TPACK skills needed to use AI effectively and responsibly. The study showed that generative AI has great potential to improve civic education by making it more engaging and relevant. However, success depends on balancing technology use with good teaching practices and strong ethical standards.

Keywords

Civic education, generative AI, higher learning institutions, TPACK, technology integration,

ethical AI

527.Secure Design for Computer -Based Assessment Systems in Tanzanian Teacher Education Colleges

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Abstract

The adoption of computer -based assessment (CBA) in Tanzanian teacher education colleges remains at an early stage, primarily limited to learner registration without full implementation of secure, scalable digital assessment systems. This study addresses the critical gap by proposing and evaluating a secure CBA system architecture design that integrates Role -Based Access Control (RBAC) and facial recognition biometric authentication to mitigate unau thorized access, impersonation, and data privacy concerns. A mixed -methods research design was employed involving 400 purposively sampled learners from six teacher education colleges representing diverse geographic locations and ICT infrastructure levels. Participants were evenly divided into an experimental group, which used the developed secure CBA prototype, and a control group, which used a standard CBA platform without enhanced security features. The controlled experiment included pre -assessment orient ation, user registration (with biometric data collection for the experimental group), authentication, supervised assessment administration, and post -assessment surveys.

Quantitative data collected comprised authentication success rates, security incident logs, assessment completion times, and system usability scores measured by the standardized System Usability Scale (SUS). Authentication attempts and security incidents were automatically logged by the system. Assessment completion times were calculated by recording start and end times per participant, with mean completion times compared between groups using independent samples t -tests to determine statistical significance. Qualitative data were gathered via structured questionnaires and focus group discuss ions with a purposive subset of 24 participants to explore user perceptions of security, privacy, usability, and infrastructural challenges. Results demonstrated a statistically significant improvement in authentication accuracy in the experimental group (96%) compared to the control group (87%) with $p < 0.01$. The secure system effectively prevented all impersonation attempts, while user trust and satisfaction increased despite concerns regarding biometric data privacy and infrastructural limitations. The study contributes a scalable, context -sensitive model for secure digital assessment tailored to low -resource educational settings, providing valuable insights to support Tanzania's national digital education strategy and similar contexts globally.

Keywords: Computer -based assessment, Role -based access control, Facial recognition,

Teacher education colleges, e-assessment

528. A Human-AI Collaboration Model for Post-Examination Analysis

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Abstract:
Post-examination analysis (PEA) plays a pivotal role in providing evidence on the quality and fairness of high-stakes examinations, focusing on factors such as compliance with assessment policies, cognitive challenges, the difficulty of question items, and the comparability of examination standards across years. However, traditional methods of conducting PEA are resource-intensive and time-consuming, requiring extensive teamwork and expert judgment. It is also observed that integrating Artificial Intelligence (AI) in educational assessment presents significant opportunities to enhance efficiency, accuracy, and reliability. While AI can enhance efficiency, its application in educational assessments raises concerns about bias, explainability, and decision-making authority. This study proposes a novel, structured Four-Phase Human-AI Collaboration Model, designed to optimise the process and enhance the efficiency of item analysis in educational assessments. By integrating Mintzberg's coordination mechanisms with the Human-AI model, this research explores how a hybrid approach, combining AI's data-processing power with human expertise, can improve the overall effectiveness of post-exam evaluations. The study outlines a qualitative, conceptual mapping approach, presenting four key phases: (1) Agenda setting and AI-assisted initial screening, (2) human-AI joint review, (3) AI-driven efficiency enhancement, and (4) final human-led validation. Through these phases, the research explores how coordination mechanisms such as mutual adjustment, direct supervision, and standardisation can be strategically implemented to ensure fairness, transparency, and accountability. Findings suggest that AI augments human judgment rather than replacing it, offering significant improvements in scalability and accuracy while preserving the human-centred integrity of the evaluation process. This study's contributions include practical recommendations for embedding AI literacy programs, designing ethical AI frameworks, and scaling the AI-human collaboration model across educational assessments. By institutionalising these practices, educational bodies can foster responsible AI use, driving innovation in assessment analytics while maintaining high standards of quality and fairness.

Keywords: Human-AI collaboration, post-examination analysis, educational assessments, Mintzberg's coordination mechanisms, AI integration.

529.Harnessing Ethical AI in Student Academic Performance Prediction: A Machine Learning Perspective

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Abstract

As artificial intelligence (AI) becomes increasingly embedded in educational systems, its application in student assessment and performance prediction presents both opportunities and ethical concerns. This paper explores the deployment of traditional and deep learning machine

learning models to predict student academic performance using an open-source educational dataset (xAPI-Edu-Data). While the integration of AI into assessment practices can enhance precision, early intervention, and resource allocation, it also raises critical questions around fairness, explainability, and algorithmic bias. The study compares models such as Logistic Regression, Random Forest, Support Vector Machines, Artificial Neural Networks, and Long Short-Term Memory networks. Through rigorous preprocessing, training, and evaluation, the models were assessed based on accuracy, F1-score, ROC-AUC, and interpretability using SHAP (Shapley Additive Explanations) and LIME (Local Interpretable Model-agnostic Explanations). The results reveal that although deep learning models provide superior accuracy, ensemble traditional models offer greater transparency and computational efficiency. Ethical implications are discussed, focusing on how demographic features (e.g., gender, nationality) influence predictions, highlighting the risk of reinforcing systemic biases. The paper underscores the importance of embedding fairness-aware mechanisms and stakeholder involvement in the deployment of AI-based assessments. It argues for the development of contextually relevant policies that uphold data privacy, equity, and explainability in line with emerging global standards. This work contributes to the assessment discourse by emphasising that while AI can augment educational evaluation, its ethical deployment must be guided by inclusive, transparent, and accountable practices. This paper concludes with recommendations for educational bodies and examination councils to adopt AI responsibly within a regulatory framework that safeguards student welfare and institutional integrity.

Keywords: Artificial Intelligence, Student Assessment, Machine Learning, Ethical Evaluation, Algorithmic Fairness

530. Leveraging AI and Real-Time Analytics for Transparent and Secure Public Examinations: The SSC Digital Transformation Model

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Abstract

The Staff Selection Commission (SSC), India's largest recruitment agency, conducts computer-based e-assessments for over 2.5 crore candidates annually, delivering question papers in 15 languages across 135 cities and 280 centers. With nearly 3 lakh candidates and around 20,000 exam functionaries involved in a day, SSC faces the monumental task of ensuring examination integrity at scale. To meet this challenge, SSC has adopted a robust, AI-driven technological framework designed to uphold fairness, transparency, and ethical standards. The process begins with live-photo candidate registration through a mobile app, combined with a One-Time Registration (OTR) system for scribes of Person with Disabilities (PwD) candidates. AI and ML technologies flag anomalies in applications and detect impersonation.

On exam day, AI-powered facial matching checks are conducted for candidates to detect attempt of impersonation. Biometric thumbprint verification at entry and exit points ensures identity consistency throughout the test. Computer-Based Test (CBT) labs are monitored through CCTV, supplemented with AI-driven video analytics that provide real-time alerts for suspicious behaviour. The examination software logs all activities of candidate, which are analysed by

behaviour and pattern detection algorithms to flag potential malpractice. These cases are further examined via CCTV footage for confirmation.

To further enhance trust, SSC has digitized the dossier forwarding process. Using a secure e-dossier module managed by nodal officers, final candidate records are shared with user departments in a tamper-proof manner. Through responsible and ethical use of AI and digital technologies, SSC provides a scalable and privacy-conscious model for secure public examination administration, serving as a benchmark for examination bodies worldwide demonstrating the effectiveness of AI systems in real-world conditions. This paper presents specific case studies of attempted exam malpractices and how they were successfully detected and contained—demonstrating the effectiveness of AI systems in real-world conditions.

Keywords

Artificial Intelligence, Public Examinations, Biometric Verification, Digital Ethics, Facial

Recognition, Machine Learning, CBT Monitoring, e-Dossier, SSC India

531. From Disruption to Continuity: Building Resilient Digital Assessment Systems in the Caribbean

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Abstract:

The Caribbean is a collection of Small Island Developing States that must manage and overcome vulnerability across dimensions: economic, climate and environmental, governance and capacity, social, and financial (Department for Environment, Food & Rural Affairs, 2023). Against this backdrop of inherent vulnerability, the Caribbean educational landscape faces a unique combination of vulnerabilities stemming from both climate -related disasters and increasing cyber threats, posing significant risks to the continuity and integrity of educational assessments. This paper proposes that the effective integration of technology for assessments in the region must continue its trajectory beyond considerations of fairness, security, and accessibility under normal conditions with a sustained emphasis on proactively addressing these pervasive risks. Informed by the principles of the International Organization for Standardization risk management framework (ISO) 31000:2018, this paper explores strategies for building digital resilience into assessment systems and processes. It examines key areas of integration, including ongoing effor ts to build digital resilience for fairness and accessibility during power outages and internet disruptions through offline alternatives, flexible scheduling, low-bandwidth solutions, and equitable access to backup resources. Furthermore, it addresses the critical need for security and data integrity in a vulnerable environment by advocating for secure cloud -based platforms, robust data backup and recovery systems, and stringent cybersecurity protocols tailored for assessment platforms (Jawaid, 2022). While the stringent security requirements of high -stakes examination bodies may necessitate a cautious approach to the direct adoption of unvetted open -source solutions for core assessment functions, the principles of exploring well -vetted, community -supported open -source tools and cost -effective alternatives could offer significa nt benefits for other educational institutions in the Caribbean with different operational scales and risk tolerances. Therefore, while the specific context of an examination body demands the utmost security vigilance, the strategic exploration of diversified, cost -conscious (including carefully vetted open -source), and resilient

technologies holds promise for enhancing the sustainability and robustness of assessment ecosystems across the wider Caribbean educational landscape. By considering both proactive planning and reactive measures, this paper aims to provide actionable insights for educators and policymakers in the Caribbean seeking to develop digital assessment systems that can withstand disruptions and ensure equitable a nd reliable evaluation of student learning.

Keywords: Digital Resilience, Educational Assessment, Caribbean, Climate Change, Cyber

Security, Technology Integration, Business Continuity, Risk Management

532.Security measures implemented in the development, electronic administration, and processing of examination materials at the State Examination Centre of the Republic of Azerbaijan.

Rahman Mehralıyev – Head of the Item Bank unit
Tural Dunyamalıyev – Head of the unit for Technological support of assessments and interviews

Abstract:

Focusing on technological integration and security standards, this paper seeks to investigate the systems and tools the State Examination Center (SEC) of the Republic of Azerbaijan uses to administer tests. It aims to examine the procedures involved in electronic exam administration, exam booklet production, random secure item selection, item bank building and the assessment of different task types employed in them.

The research method used in this work is characterized by a descriptive approach which is grounded on the methodical examination of the SEC's operating processes and technical papers. The study intends to provide a thorough picture of the software used, security protocols (e.g., operations in restricted-access rooms, identity verification systems, software monitoring) and the technological platforms employed for scoring, including those used for the evaluation of open-ended responses through expert judgment.

The paper initially describes the establishment of the item bank, including the formation of an expert pool, item ordering and approval processes, item review procedures and the security measures taken throughout these stages. Then discussed are the administration of the existing item bank and the development of technical specifications for future tests depending on statistical indications. The study also aims to investigate the specifics of both physical and software-based security measures implemented during the closed preparation process, as well as the arrangement of secure work spaces and answers to physical security issues. It also clarifies the last editing and compilation process for producing examination booklets created from random item combinations according to pre-defined technical criteria. Exam formats, administration practices, software used and steps taken to guarantee openness are also included in this work since electronic tests are a major focus of this research.

Results show that consistent technical criteria and strong security measures applied across all phases—from test design to result distribution—is probably going to guarantee great dependability and openness. Especially the software and scoring mechanisms employed in electronic tests greatly improve objectivity and public confidence. Since the integration of security and digital techniques plays a major role in advancing contemporary evaluation frameworks, this study could act as a guide for other examination authorities seeking to create technology-based assessment systems.

533. Data Mining and Machine Learning to Determine Learner Performance In School Assessments

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Abstract

Data mining and Machine learning techniques extract valuable patterns and insights in large educational datasets comprising learner performance records, demographic information, and educational background and gain insights into student performance, identify at-risk students, and personalize learning. The study aims to address research questions related to the factors impacting learner performance and the effectiveness of data mining and machine learning algorithms in predicting performance.

The research methodology activities included collecting data on factors known to affect learner performance from selected schools and preprocessing such data in terms of missing values and outliers handling. Model feature selection utilized domain knowledge and critical component analysis techniques to identify relevant predictors of learner performance. It is worth highlighting that three machine learning models were trained and evaluated using appropriate evaluation metrics.

The literature review included similar works from 2008 to 2021 on data mining and machine learning applications in education assessments. A total of fifty publications of similar studies selected from standard academic databases. The majority studies were conducted in colleges and universities of first and second-world countries. The notable studies of the African context were from South Africa, Nigeria, and Kenya, highlighting a lead in applying data mining and machine learning techniques to determine learner performance in Sub-Saharan education systems. However, the lack of readily available datasets in many education systems remains challenging for conducting research in this area.

The literature emphasized the usage of context-based student features to gain insights into the factors influencing learner performance. The proposed predictive model aims to assist educators and policymakers in identifying at-risk students and implementing targeted interventions to improve educational outcomes as well as the potential of data mining and machine learning techniques in education assessments analysis.

Key Words

Education Data Mining, Machine Learning, Information Communication Technologies

534.Extent of Technological Resource Utilization in Preparation for WAEC Computer-Based Examinations in Nigerian Secondary Schools.

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Abstract

In recent times, the trend in assessment has shifted from paper-and-pencil-based to computer-based assessments. In many developed and developing countries, there has been a shift in the ways candidates are assessed. The popularity of computer-based assessments necessitates aligning teaching methods for effective learning and fairness. For instance, in Nigeria, the West African Examinations Council (WAEC) took a bold step in adopting computer-based examinations, necessitating schools to integrate technological resources into their teaching and learning processes. This research investigated the utilization of technological resources in Nigerian secondary schools preparing for the West African Examinations Council (WAEC) computer-based examination. This study also examined the availability, accessibility, utilization, benefits and challenges of technology integration in Nigerian schools, focusing on disparities between urban and rural areas, as well as public and private institutions. A descriptive survey research design was used for the study. Using a mixed-method approach, the study utilized surveys, checklists, classroom observations, and interviews with teachers, students, and administrators for data collection. The study population comprised of all WAEC-registered secondary schools across the six geopolitical zones in Nigeria. A multi-stage sampling technique selected 144 schools across 18 states, yielding a sample of 2,880 students and 576 teachers/administrators. Data were collected using the Teachers/Principals Technology Utilization Questionnaire (TPTUQ) and the Student Technological Resource Questionnaire (STRQ). Descriptive statistics (frequencies, percentages) and independent T-tests were used for analysis of data. Findings indicate a higher level of technological resource utilization among teachers and students in private schools compared to public schools. Similarly, urban-based teachers and students demonstrate greater technology utilization than their rural counterparts. This study sought to provide a comprehensive analysis of the current state of technological resource utilization in preparation for the WAEC Computer-Based Examination in Nigerian secondary schools, highlighting disparities based on school type and location. It concluded with evidence-based recommendations to enhance the integration and utilization of technological resources within the Nigerian secondary education system.

Keywords: ICT, students, technology, teachers, utilization

535.Enhancing Exam Integrity through Aadhaar: Addressing Malpractices & Impersonation in SSC Exams

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Abstract:

The Staff Selection Commission (SSC) is one of the largest recruitment agencies under the Government of India, processing over 2.45 crore applicants annually for multiple Group B and Group C positions. The recruitment process spans several digitally controlled stages from One-Time Registration (OTR) to onboarding. However, despite digitization, the SSC exam process faces persistent challenges, primarily around candidate impersonation, identity duplication, and document forgery.

Historically, candidates have exploited system gaps by registering multiple times with minor modifications or deploying impersonators to take exams on their behalf using forged IDs. These malpractices compromise the credibility and fairness of the selection process. The presentation highlights real-world scenarios depicting such vulnerabilities and the limitations of manual identity verification at exam centers.

To address these systemic issues, Aadhaar-based biometric and facial authentication has emerged as a robust solution. By integrating Aadhaar's e-KYC and 1:1 biometric validation at critical touchpoints—registration, exam entry, and document verification—SSC can ensure the uniqueness of each candidate and prevent identity fraud. The implementation of Aadhaar-enabled digital gates and real-time authentication with UIDAI databases effectively stops unauthorized entries and ensures that only the genuine applicant proceeds through each stage.

Additionally, Aadhaar authentication extends to scribes and exam functionaries, enhancing transparency and accountability throughout the examination lifecycle. This data integration enables authorities to trace impersonators, file FIRs against known identities, and eliminate the "unknown offender" loophole. Furthermore, insights from Aadhaar data help monitor scribe usage and educational qualifications to curb misuse.

This Aadhaar-integrated framework not only deters malpractice but also strengthens trust in public examinations. The approach demonstrates a scalable model for leveraging digital identity to uphold integrity in high-stakes recruitment processes.

Keywords:
SSC, Aadhaar, biometric authentication, exam integrity, impersonation, digital governance

536. An Innovative Approach to Evaluating Student Success

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Abstract

Creating successful learners is a significant challenge for educational institutions. Typically, student learning performance is evaluated using tests and exams. However, the data from these assessments is often analyzed inadequately, leading to incorrect conclusions about student progress and misleading recommendations for improving the learning process.

Traditionally, student proficiency is assessed by simply summing or averaging raw exam scores. In some cases, these scores are adjusted with subjectively assigned weights. Unfortunately, this approach does not account for objective differences in the difficulty of exam questions, interdependencies among those questions, or variations in student abilities.

In this paper, we show how to analyze exam data using the Polytomous Rasch Measurement Model combined with the Relational Bayesian Networks methodology. The proposed approach estimates the difficulty of the exam questions, the interdependencies among the questions, and the ability of the students. We demonstrate that assessing students' proficiency using these methods is realistic and reliable and can accurately predict success in the course. At the same time, we show that the traditional assessment approach can produce misleading results.

Our proposed approach to assessment is key to creating a Success Profile for each course. These profiles pinpoint common strengths and gaps, providing effective and actionable recommendations to address shortcomings in student education. Ultimately, this approach helps

educational institutions develop better and more successful learners, proactively identify and resolve issues in the educational process before they escalate, and significantly reduce student attrition.

Keywords: Polytomous Rasch Measurement Model, Relational Bayesian Networks, Student Success Profile, Item Characteristic Curve, Exam/Test Assessments, Students Ability, Questions Difficulty

537.Bridging the Digital Divide through online authoring: Drivers, Impacts and Challenges

Shaun Crowley, AQA Global Assessment Services,

Sid Spalding, AQA Global Assessment Services,

Abstract: (350 words)

As educational models evolve, the integration of technology into assessment practices has been widely adopted as a tool to improve fairness, security, and accessibility. This paper explores how an example of one of these tools, GradeMaker Pro, a digital exam authoring platform, has been tested in the assessment development processes of Ministries of Education in different contexts in Africa and Europe. We will look at the impact of these tools on high stakes authoring cycles, whether the desired improvements have been realised, and whether technical barriers in implementation have been faced.

In African examination organisations, improving the reputation and integrity of certifications is one of the highest priorities. However, paper-based development processes which can be vulnerable to security breaches are still commonplace. It is for this reason that the organisation we have studied here, Botswana Examinations Council, moved to online exam authoring in 2020.

In the European context, enhanced efficiency is of high importance. Initiatives to streamline processes are considered critical to ensuring a high level of quality can be maintained. This was the case in 2019 when AQA, the UK's largest exam publisher, also moved to digital authoring, which proved vital during the covid-19 pandemic.

The Zimbabwe School Examinations Council (ZIMSEC) has been using online authoring technology to further their security aims. However, with long-term use comes changes to personnel and processes. To address this challenge, ZIMSEC staff completed a refresher in-person training course to ensure staff can use the technology efficiently and effectively.

From our experience in working with ministries and institutions from around the globe we will delve into the detail of the various drivers, impacts and challenges organisations can face when transitioning to online authoring. As education continues to embrace digital solutions, technological integration becomes instrumental in leveraging technological advancements for fair, secure and accessible assessments.

Keywords: Accessibility, Integrity, Fairness, Security, Technology, Online, Authoring

538. Mobile-Based Adaptive Assessment for Student Selection

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Admission into tertiary institutions in Malawi is very competitive considering the limited capacity of higher education institutions (HEI). Admission procedures vary by institution; some offer entrance examinations, while others do not. Nevertheless, entrance examinations provide a standardised and objective measure of students' academic level from diverse educational backgrounds and boost a high predictive validity of student's success in college. In Malawi, the institutions that administer entrance examinations use paper-based tests, which have limited reliability, among other challenges. On the other hand, adaptive testing offers a changed approach and has practical advantages that could be leveraged to overcome the difficulties of paper-based tests. Previous studies have reached different conclusions when comparing the scores from mobile-based tests to paper-based tests. Hence, this research assessed the reliability of mobile adaptive tests as an alternative to paper-based tests. The study took a quantitative approach with a quasi-experimental design. An item response theory (IRT) framework was used to inform the data analysis of this study. The results indicate that paper-based entrance exams are of moderate quality. Mobile-based assessment score estimates are more precise than paper-based tests. With a correlation statistic of 0.717, the scores of the two assessment modes have a strong positive relationship. The findings suggest that test delivery methods in entrance examinations affect the college selection process. Furthermore, mobile-based adaptive assessments provide precise estimates of examinees' abilities. Hence, HEIs can utilise adaptive assessment benefits without sacrificing the purpose of admitting outstanding students.

Mobile adaptive assessment; Test delivery mode; Item response theory; admission criteria.

539.Promoting Excellence through Self-Evaluation: Implementing the IAEA Standards in Technology-Based Assessment

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Abstract

In the age of digital transformation, educational assessment organizations face increasing pressure to align their operational processes with international best practices. This abstract presents the rationale, structure, and intended piloting of the International Standards for Educational Assessment Organisations (IAEA Standards), with a focus on supporting technology-driven modernization and institutional self-evaluation. The IAEA Standards provide a structured, self-paced implementation process centered on reflection, feedback, and continuous improvement. Organized into four sections (1) measurement standards (validity, reliability, fairness), (2) organizational standards (structure, staff competencies), (3) operational standards (test development, administration, scoring, reporting), and (4) scenario-based questions for reflective review and peer evaluation, they guide institutions from initial self-evaluation to team-based reflection and external review. Building on global feedback from the pre-pilot and pilot phases involving institutions such as the CXC, IEB, and SECA, this submission outlines plans to pilot the IAEA Standards within Vretta, a global edtech organization. The pilot aims to assess institutional readiness, strengthen quality assurance mechanisms, and document the applicability of the Standards within a technology provider context. Key areas of focus will include the integration of IT infrastructure, data privacy, secure digital delivery, and organizational competencies for

sustaining fairness and validity in technology-based assessments. This initiative reinforces the role of structured benchmarking in fostering a culture of transparency, collaboration, and institutional maturity. By presenting the outcomes of the Vretta pilot at a future conference, this project seeks to contribute to the growing evidence base supporting the practical implementation of international standards in digital assessment environments.

Keywords: self-evaluation, educational standards, digital assessment, institutional readiness, IAEA Standards, quality assurance, benchmarking

540. CXC's Approach to Artificial Intelligence use in Assessment for the Secondary School

System in the Caribbean: Policy and Standards

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Abstract

In an era of rapid technological advancement and the explosion of Artificial Intelligence (AI), the Caribbean Examinations Council (CXC®) strives to stay at the forefront of developments to ensure psychometric principles of validity, reliability, and fairness are upheld, maintaining confidence in examination results. CXC® has finalized the establishment of a Policy Framework for the Caribbean region on the ethical incorporation of AI in education, alongside standards and guidelines for AI use in assessments . This paper explores the multifaceted process of developing the regional policy framework and CXC® standards and guidelines for AI use in assessments. It outlines the consultative approach taken by CXC®, involving representatives from all stakeholder groups, including parents, teachers, principals, employers, Ministry of Education officials, and other regional and international partners.

CXC® advocates for and emphasizes the ethical and responsible use of AI, focusing on nine elements of the policy framework: Preserving Academic Integrity, Ethical and Inclusive AI Education, Curriculum Integration, Teacher Training and Development, Fairness and Bias Mitigation, Data Privacy and Security, AI Infrastructure and Resources, Human

Oversight/Involvement, and Psychosocial Impact. Additionally, five broad areas for which standards and guidelines were identified in line with the approved policy framework were developed: Ethical Use of AI and Academic Integrity, Data Privacy and Security, Designing Assessments, Evaluating Assessment Processes and Products, and Maintaining Measurement Principles in Assessment Development.

This paper explores each of the nine elements of the policy framework as well as the five standards with associated guidelines that were developed. Further, it elaborates on the lessons learned from the development process and the implications for adopting comprehensive, flexible and responsible policies and standards related to AI use. It explores challenges encountered and opportunities for strengthening the regional secondary education system through the careful embrace of AI technologies. Finally, the paper calls for a proactive and inclus ive approach to developing AI policy and standards, emphasizing the importance of ongoing dialogue and collaboration among all stakeholders to ensure AI technologies are harnessed for the benefit of all, while mitigating potential risks and ensuring ethical and responsible use in assessments.

Keywords

Artificial Intelligence, AI, Caribbean, Policy, Standards, Guidelines , CXC

541. Harnessing AI for Equity and Excellence in High-Stakes Assessment

Amanda B. Jewell

Abstract

Join us for a presentation to discuss how organizations worldwide meet the challenges of maintaining assessment best practices while implementing AI practices in high-stakes testing. Actionable insights, ethical considerations, and real-world strategies for promoting equity across diverse populations with a special focus on the transformative role of AI will be discussed.

The session will begin by examining the global landscape of credentialing and assessment, spotlighting the industry's evolution from theoretical discussions to the tangible implementation of AI solutions. The opportunities and hurdles faced during the integration of AI into the various activities in testing will be detailed.

Attendees will gain valuable perspective on the application of AI throughout the assessment lifecycle — from Job Task Analysis (JTA) and test specification development, to item writing, peer review, form construction, test administration, and scoring. This comprehensive exploration will shed light on the practical steps organizations are taking to ensure that each phase maintains the highest standards of quality, security, and inclusiveness. Additionally, real-world examples will demonstrate how AI-enabled innovations are enhancing workflow efficiency, increasing accuracy, and broadening the reach of assessment programs while ensuring fairness and accessibility remain paramount.

601.Modelling the Failure and Success Rates of Selected University Courses from Public University in Kitwe District of Zambia.

1. Alex Samuel Mungo 2. Joseph Mwape

1. Mukuba University, School of Mathematics and Natural Sciences, Department of Mathematics and Statistics .

2. Mukuba University, Department of Education, Department of Education Psychology .

Abstract

Quality Assurance (QA) is one of the keys emphasized measure of effective learning processes in Institutions of higher education like Universities. This comes as a measure of whether the trained prospective graduate has been molded into the expected professional in the specified knowledge body. This study aimed at developing a statistical model which would provide proper insights in QA by utilizing the historical failure and success rates by applying statistical modelling. The model was developed from the historical trends of the scores in a particular program and reviewed detailed patterns of the key variables which would determine improvement, static and dwindling of specific trends. Hence, we model the failure and success rates as poi son process es to further understand the distribution of examination candidates. Furthermore, the model provided the institutions with proper variables of concern which would dete rmine the academic outputs from the in puts. The analysis explores ways managers, pol icy makers and other stake holders would consider as recommendations. We conclude that fail ure and pass rates are an alyzed effectively through statistical modelling.

Key words: Failure, Success, Rate, Statistical Model

603.Investigating Candidates' Performance in English Language Papers in West African Senior School Certificate Examination for School Candidates 2022- 2024 in Lagos State, Nigeria for Decision-making and Accountability

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ABSTRACT

The study investigated candidates' performance in English Language papers in West African Senior School Certificate Examination for School Candidates (WASSCE (SC)) 2022- 2024 in Lagos State, Nigeria for decision-making. To achieve this purpose, three research hypotheses were formulated. Ex-post facto research design was adopted. The census study comprised all English Language WASSCE(SC) 2022–2024 candidates in Lagos State. A proforma used to collect the candidates' raw scores from the Information and Communications Technology Division (ICTD) of the West African Examinations Council (WAEC). Data were analysed using Pearson Product-Moment Correlation Coefficient and independent t-test. Results revealed, among others, that there was a significant positive relationship between candidates' performance in English Language papers in WASSCE(SC) 2022-2024 in Lagos State (r=.249, .501, .245 p=.000) in 2022; (r=.310, .552, .258 p=.000) in 2023; and (r=.352, .551, .265 p=.000) in 2024. Also, there was significant difference in candidates' performance in the English Language papers in terms of gender. The mean score for males was 60.07 (SD = 10.979), 51.51 (SD = 11.437), and 55.56 (SD=12.771) for paper 1; and 46.39 (SD=8.427), 41.10 (SD=9.097), and 41.89 (SD=11.390) for paper 3 in 2022, 2023, and 2024 respectively. The mean score for females revealed 59.32 (SD = 10.935), 50.74 (SD = 11.547), and 55.38 (12.512) for paper 1, and 46.02 (8.418), 40.32 (9.336), and 41.28 (11.404) for paper 3 in 2022, 2023, and 2024 respectively. These imply that males outperformed the females in English Language papers 1 and 3 in WASSCE (SC) 2022-2024. However, the females performed better than males in paper 2 in all the years. Hence, the study concluded that gender had a significant effect on the candidates' academic performance in the English Language papers in

WASSCE (SC). It was therefore recommended that English Language teachers in secondary schools in Lagos State should pay attention to girls while teaching topics associated with English Language papers 1 and 3, and to the boys during instructions involving paper 2.

Keywords: Accountability, candidates' performance, English language papers, WASSCE

604.Exploring the Principals' Perspectives on the enablers and barriers of Teachers' implementation of the National assessment feedback

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Examinations Council of Lesotho

ABSTRACT

The primary goal of assessment feedback is to provide data on performance of teaching and learning. Principals' leadership styles and support to teachers play a critical role in shaping learners' achievement. Dissemination of feedback on in-depth analysis of performance after release of the national examination results to stakeholders, feedback on performance of education systems of countries. Examinations council of Lesotho like other assessment bodies, engages in forums sharing in-depth analysis of learners' strengths and weaknesses in the LGCSE examination. It is in these forums that participants, principals included, have the opportunity to have a comprehensive understanding of what was expected of the learners, their achievements and weaknesses. The principals' perspectives on the effectiveness of use of the feedback from the dissemination meetings is crucial for improvement of instruction. Through the lens of realism, this qualitative study explores the principals' perspectives of effective assessment feedback, enablers and barriers for effective use of the LGCSE feedback Data was generated using online Open-ended Questionnaires from 10 purposively and conveniently selected principals from the ten secondary schools from a target population of 350 principals in the secondary schools in Lesotho. Content analysis is used to analyse data. The findings demonstrated that principals perceive assessment feedback as a critical component enabling a reflection on performance and revealing of learners' strengths and weaknesses that teachers need to attend to thereby enhancing teachers' knowledge of assessment practises. Principals further perceive regular engagement of exam boards with teachers as enabler for successful implementation of recommendations. However, Principals further perceive limited access to internet and digital resources by some secondary schools as barriers to effective access and implementation of recommendations from dissemination meetings and provision of data and gadgets to teachers as enablers for use of the feedback from the dissemination meetings. Stakeholders' reluctancy to rapid changes in the education system was also considered as the barrier to effective implementation of assessment feedback. The study recommends support of schools with data and gadgets for engagement of teachers in feedback meetings. The study also recommends further research unpacking the enablers and barriers on a larger scale across the country.

Keywords: Principals' perspectives; assessment feedback; learners' performance; teachers' empowerment.

605. Cultivating a mindset for inclusive assessment: System -level solutions for educator assessment literacy in practice

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Abstract

The turn of the century marked a monumental shift in the assessment landscape from a culture of performance to a culture of learning. Twenty-five years in, educational systems across the world are grappling with how to enhance educational assessment to be responsive to the desire to move away from rote learning to deep learning. Amidst criticisms of standardized assessments are pragmatic arguments in favor of their use and the need for socioculturally responsive practices (Sireci, 2020; Bennett et al., 2025). The paper will focus on how local educational systems can create structures to support educators' assessment literacy with a focus on cultivating their mindset for inclusive assessment. Using assessment literacy frameworks (e.g., Xu & Brown, 2016) and data from two studies conducted by the author in the United States with public school K-12 educators, the paper will present key strategies to support system-level shifts in assessment.
The first study was conducted in 2021 and offers a glimpse into assessment practices of a wide range of ~600 teachers across a mid-Atlantic state in the USA. Relying on an instrument measuring the use of Assessment of Learning and Assessment for Learning strategies, the studies indicate that teachers use a wide range of assessment with a predominant use of data from standardized academic assessments; we contrast that with their perceived usefulness of the various assessments (Varier et al, 2024). The second study was conducted between 2022-2025 with mathematics educators in a rural public school district. Five surveys from approximately 40 mathematics teachers yielded information on the variety of assessment strategies they used across the school years. Findings show notable stability and shifts based on local assessment policy. Based on the two studies and the extant literature on assessment and equity (e.g., Kanjee et al., 2022; Ratnam, 2020), the paper will present key strategies for educational systems that include 1) assessing educator readiness and needs for desirable assessment practices, 2) building capacity to implement desirable assessment practices by leveraging partnerships with schools, universities, and educators; and 3) conceptualizing assessment literacy with the aim of fostering equity and inclusion.

Keywords: assessment for learning; assessment of learning; assessment literacy; inclusive

assessment; system -level solutions

606.Assessing stakeholders' information needs and perceptions on assessment results regarding national examinations in Malawi.

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Abstract

Effective communication of national examination results is critical for transparency, accountability, and informed decision-making among education stakeholders. In Malawi, the Malawi National Examinations Board (MANEB) has improved its press releases between 2022 and

2024 by including more detailed information on candidates' performance. However, the extent to which information in these communications are utilized to meet stakeholders' needs remains underexplored. This study assessed stakeholders' perceptions, information needs, and preferred communication methods regarding national examinations results to promote comprehensive understanding and utilization of assessment results. Using a qualitative cross-sectional design, data were collected from students, parents, teachers, education officials, and civil society actors across Malawi's three regions through focus group discussions, key informant interviews, and online questionnaires. Findings revealed that press release information is timely and communicated to the general public using mass and social media platforms to reach everyone. Furthermore, the assessment results information is widely used for advising underperforming schools, evaluating institutional performance, motivating learners, guiding candidates' school choice, promoting gender-focused interventions, and rewarding outstanding teachers. Stakeholders expressed dissatisfaction with certain aspects of the current information, such as the inclusion of absentee candidates in pass rate calculations and the lack of detailed district-level school rankings. They recommended additional information including top and bottom performing schools by district, data on districts with high transition rates to national secondary schools, performance comparison in science subjects by gender across years, and the most improved schools by performance in relation to past examination results. The study concludes that while current assessment results information and communication efforts by MANEB are valuable, there is a need for more granular, context-sensitive, and accessible information dissemination. The findings provide actionable insights for MANEB to develop more inclusive, transparent, and stakeholder-responsive communication strategies to effectively enhance utilization of assessment results information.

Keywords: Assessment Literacy, Assessment Results Utilization, Stakeholders Assessment Needs

607.A Study of Formative and Summative Assessment Practices in Kenyan Junior Schools.

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ABSTRACT

Kenya's education system is undergoing a significant shift from the traditional knowledge-based curriculum to a Competency-Based Curriculum (CBC) so as to have learners acquire talents and abilities. This transformation demands an agile and adaptive approach to assessment which Kenya has anchored it in the Competency-Based Assessment Framework (CBAF). The framework encourages the use of various assessment types, methods, and tools to evaluate learner's progress and mastery of competencies so as to meet Kenya's context of Vision 2030, global trends and 21st century skills. This study aimed at establishing how competency-based assessment improves the accountability of quality of education in Kenya. The study objectives included: Establishing mechanisms of addressing the alignment of assessments with the changing educational content, methodologies and learning outcomes in Kenyan Junior Schools? And finding out how the assessment information can be used to inform the quality of learning in Kenyan Junior Schools? The study utilized a qualitative research method with the generalizability of quantitative research. The research instruments used were document analysis, key informant interviews and focus group discussions. The study targeted a total of four teachers in twelve (16.7%) Junior Schools from a population of 72 schools within Langata Sub County in Nairobi County. Mixed methods involving qualitative and quantitative techniques were used to analyze the data. The major finding of the study included the need to capacity build teachers and education leaders on Competency Based

Assessment; establishing mechanisms of how to integrate technology for real – time feedback and learner tracking; a need to establish policy coherence and stakeholder engagements when introducing reforms in the education sector. The study recommended the need of strengthening national frameworks to support effective implementation of CBA; the Ministry of Education to provide more resources and invest in assessment infrastructure (digital, human, policy) and KNEC to provide timely innovation and assessment, feedback, to improve instructional improvement.

Key Words: Assessment Agility; Competency; Competency Based Assessment; Formative Assessment; Quality of Education; Summative Assessments.

608.Assessing the Readiness of Candidates in Accelerated and Standard Programmes for the Eswatini General Certificate of Secondary Education

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Abstract

In 2022, Eswatini piloted a four-year secondary education model in 32 schools, where students were required to sit the school-leaving certificate examination known as the Eswatini General Certificate of Secondary Education (EGCSE). After obtaining this qualification, students had the option to pursue either a one-year Advanced Subsidiary (AS) qualification or a two-year Advanced Level (A Level) programme. As a result, by 2025, two different cohorts were sitting for the same school-leaving examination. The pilot cohort will complete the lower secondary in two years and senior secondary in two years, whereas the non-pilot cohort followed the traditional route of three years in lower secondary and two years in senior secondary education.

It is not clear to many stakeholders how well these two cohorts are prepared for the EGCSE.

The main objective of the study was to compare the academic readiness of the two groups, focusing particularly on Mathematics and English Language, which are considered essential for literacy and numeracy development. The Input-Process-Output (IPO) model served as the conceptual framework of the study. This model explained student performance through inputs (such as teaching time, curriculum content, and learning resources), processes (including teaching methods and classroom support), and outputs (such as examination results and demonstrated skills). By applying this model, the study aimed to uncover not only the examination outcomes but also the underlying factors influencing them.

To evaluate the cohorts' performance, first-year examination scores were collected from eight schools out of the 32 involved in the pilot. Additionally, teachers, and school principals were interviewed. The selected schools represented different regions across Eswatini, encompassing both rural and urban contexts. The findings were expected to inform the Ministry of Education and Training about the relative performance of the two cohorts, thereby supporting decision-making regarding the future of the new curriculum model. The recommendations were intended to benefit both the Ministry and the 32 participating schools.

Key words: Cohort readiness, Comparative Evaluation, IPO framework

609. A Compromise Too Far? Exploring Practical Limits for Grade Reliability in National Examinations

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Abstract

Qualification grades can significantly impact young people's lives, potentially blocking desired career paths. Ensuring high reliability in examination outcomes is crucial, with a general consensus that 95% of grades should fall within one grade above or below the student's "true grade" (Cresswell, 1986). However, there are calls in England for grades to be "100% reliable" (Sherwood, 2020). This paper explores why grades cannot be completely reliable, methods to improve grade reliability, and their impact and desirability.We use the classical approach where every score (the 'observed score') is the sum of a 'true score' and measurement error, assuming the latter has a normal distribution. As more items are added to an assessment, errors tend to cancel out, making the observed score closer to the true score. A student's true grade aligns with their observed grade if both fall within the same grade interval. For example, if the pass boundary is 60, both candidates with true scores of 63 would pass if their observed scores are 61 and 64 respectively. The likelihood of a mismatch increases as the observed score nears the grade boundary. To illustrate, we simulate an assessment with 10,000 students taking five twenty-mark questions, generating both true scores and normally distributed errors for observed scores, and placing grade boundaries at evenly distributed intervals. We then evaluate grade reliability and model the impact of various approaches to enhance it. Approach 1 involves increasing the number of items, which raises the assessment burden. Approach 2 reduces the range of 'legitimate' marks, potentially decreasing marking variability but requiring changes to the assessment construct and increasing marking workload. Approach 3 combines the previous two, limiting question tariffs, but potentially restricting deeper thinking skills assessment.
In conclusion, maintaining grades at 95% reliability is pragmatic and sensible. While improved reliability is desirable, the necessary compromises often outweigh the benefits, making the current system a reasonable balance.
Keywords: national examinations; validity; reliability

610. Psychometric Quality of Literature-in-English Assessments Using the 3PL IRT Model: Evidence from West African Senior School Certificate Examination 2019-2023 MCQ in Ghana

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Abstract

This study employed the Three-Parameter Logistics (3PL) Item Response Theory (IRT) model to evaluate the psychometric quality of WASSCE Literature-in-English Paper 1 multiple-choice questions (MCQs) administered between 2019 and 2023. A validation study design was adopted using secondary data comprising the responses of 30,247 examinees (2019), 30,979 (2020), 53,422 (2021), 27,548 (2022), and 23,576 (2023), respectively in Ghana. Data were analysed using

the R and STATA statistical software to fit the Three-Parameter Logistic (3PL) model and conduct one-way ANOVA tests respectively. The 3PL model was selected due to its capacity to account for item difficulty (b), discrimination (a), and guessing (c), making it suitable for analysing multiple-choice questions. The b-parameter estimates across the five years ranged from very easy ($b < -2$) to very difficult ($b > +2$), with most items classified as moderately difficult (b between -2 and +2), indicating appropriate targeting of the examinee population. The a-parameters revealed items with low ($a < 0.65$), moderate ($0.65 \leq a \leq 1.34$), and high ($a > 1.34$) discrimination, with each year featuring a strong presence of high-discrimination items, reflecting the test's strong ability to differentiate among examinees of varying ability levels. Most c-parameter values fell within negligible to plausible guessing ranges ($c \leq 0.25$); however, a few items per year demonstrated suspiciously high guessing values ($c > 0.25$), signalling possible distractor weaknesses. One-way ANOVA results indicated no statistically significant differences in the mean a, b, or c-parameters across the years under review, suggesting that item difficulty, discrimination, and guessing behaviour did not change systematically over time. These findings indicate strong alignment between test development practices, curriculum content, and psychometric quality assurance in the WASSCE Literature-in-English assessment over time. the study recommends, among others: (a) the integration of regular IRT-based psychometric evaluations in test development cycles to detect and address item anomalies early; (b) targeted improvement of distractor quality for items prone to guessing; (c) capacity-building initiatives for item writers and reviewers on effective distractor construction; (d) pre-testing and revision of items with high difficulty, low discrimination, or suspiciously high guessing before reuse.

Keywords: Literature-in-English, WASSCE, Item Response Theory (IRT), Three-Parameter Logistic Model (3PL), item difficulty, item discrimination, guessing parameter, ANOVA in educational assessment, Ghana

611. Assessment Stakeholders Workshops in Edo State Nigeria: Process, Prospects and Problems

By

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Abstract

Assessment Stakeholders workshops were held In Edo state of Nigeria in three Senatorial districts of the state with the aim of sensitizing the stakeholders of the Council's activities and to get a feedback from the products of the Council assessments over the years. The selected towns were auchi in the north, Irrua in the central and Benin City in the southern senatorial districts. Three resource persons were engaged from the Council. The impressive attendance was complimented by the quality of the feedbacks received .the workshop affords the organisation the opportunity to expound the relevance of the assessment results and the need to collect the certificate therein .The responses from the participants stem from the usage to which results obtained by their wards: securing admission, getting jobs with it, engaging in political activities ;for schools' owners the assessment outcome had accorded their schools a new status in the society, increase their school intake ,promote education for all in their localities , linking them with the education national grid plus increment in their investment proceeds more so they succinctly admonished the council on areas that need improvement in the council's service delivery.it is recommended that periodic staging of these stakeholders workshop across the nation will enhance the usage of assessment

outcome in our country. This paper gives detail of the process, personalities, pattern, prospects and problems of staging educational stakeholders Workshops in Edo state Nigeria

Key words: education, council, feedback, sensitisation, stakholders, workshop,

612. Navigating Rapid Educational Transformation through Assessment Agility and Evaluation

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Abstract:

The paper intends to correlate facts that, a combination of navigative rapid educational inputs that are a catalyst to rapid educational transformation are action research, agile assessment that transform education for a more broader adherence to trends and transformation indexes for the knowledge-based society. Navigative and rapid educational transformation strengthens and gets progressive through harnessing the ability to satisfactory, fulfilling the mandate of helping learning's acquire the knowledge relevant to emerging context through a check and balance known as assessment agility. Thus; the main objective of the study is to qualify that; action research as a pedagogy combined with quality and agile assessment and evaluation at a junior segment of education is appropriate to re-imagine, reshape, revolutionize, and transform our education to serve us better in our effort to create sustainable, knowledge-based society. All stakeholders inclusive of educators, educational administrators needs to conduct action research as a way of frequently informing their decisions. A complementary effort will be quality agile assessment and evaluation to measure the desired outcomes through navigating rapid educational transformation. Such; Policy makers should consider ways of strengthening action research and agile assessment for all. This paper takes a deep look into the inputs (navigating rapid educational transformation through assessment agility and evaluation) of a teacher who conducted action research at classroom level, merged it with agile assessment practices and proved such do bring a rigorous desired output relevant for rapid educational transformation. For us to transform our education rapidly, there need to be comprehensive agility to assessment, which will in turn give way to a 21st century education, that is compatible with socioeconomic, political and or environmental sustenance. Only with such will ensure especially Africa matches with the rest of the world in addressing 21st century problems and their relevant progressive solutions.

Keywords:

Educational assessment literacy, agility, action research, evaluation, navigation, rapid trans formative education

613.Cluster Analysis of School Performance in Primary School Leaving Examinations in Compulsory Taught and Non-Taught Subjects: A Case of Lusaka District.

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Organisation: Examinations Council of Zambia

Abstract

This study applies cluster analysis to examine primary school performance in both compulsory taught subjects (English, Social Studies, Mathematics, Integrated Science and Creative and Technology studies) and non-taught subjects (Special Paper 1 and Special Paper 2) in three distinct Primary School Leaving Examination Sessions using average standardised marks across all schools that presented candidates for final examinations in Lusaka District. By applying the KMeans clustering algorithm for unsupervised Machine Learning and Principal Component Analysis on taught subjects, the study groups schools based on performance similarities to uncover patterns in academic achievement across different subject categories.

The analysis reveals a predictable trend in taught subjects where private schools consistently dominate the higher-performing clusters. This could be attributed to better access to stronger instructional support, learning resources and overall learning environments which are expected to influence outcomes. Further, the analysis reveals an unexpected dominance of private schools in non-taught subjects' assessments designed to test natural aptitude and intelligence, which are not formally taught in schools. In principle, non-taught subjects should reflect a more balanced representation of private and government schools, as they are not influenced by classroom instruction. However, the observed clustering pattern suggests the possibility of indirect coaching or resource-based advantages that favor private school.

The study used average standardised marks per subject per school to provide a quantifiable and comparable measure of performance. Cluster analysis enabled the identification of high, average, and low-performing school groupings without prior labeling, offering an unbiased look at the academic landscape.

These findings are critical for promoting assessment literacy among educational stakeholders. By equipping policymakers, school administrators, and educators with a clearer understanding of how schools are performing across different subject categories, the study supports more informed decision-making. It also underscores the importance of fairness and integrity of assessment in both taught and non-taught subjects.

The results suggest further investigation into educational equity and the mechanisms that contribute to consistent performance advantages. Ultimately, this study contributes to the broader goal of enhancing data interpretation skills and fostering a culture of evidence-based planning and evaluation within Zambia's education sector.

Keywords

Cluster Analysis; School Performance; Taught Subjects; Non-Taught Subjects; KMeans; Principal Component Analysis; Educational Assessment; Private and Government Schools; Assessment Literacy; Examination Data

614. Zambian Educators' Lived Experiences with Big Data and Assessment Interpretation for Personalized Learning.

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Abstract

This qualitative study investigates the lived experiences of Zambian educators in interpreting and utilizing assessment data to support personalized learning in their classrooms. Situated within contemporary debates on the role of big data in education, the study examines how teachers engage with assessment information to inform learner-centered instruction, without relying on statistical or quantitative analysis. The research adopts a phenomenological approach to capture the depth and nuance of educators' experiences, prioritizing their voices and perspectives in navigating increasingly data-rich educational environments. Data were collected through semi-structured interviews and focus group discussions, enabling both individual and collective reflections on assessment practices. Document analysis of national policy frameworks and curriculum guidelines provided additional contextual grounding. In this study, "big data" refers to the growing volume and complexity of educational information available to teachers, including learner performance records, continuous assessments, and digital data from learning platforms. The research explores how educators conceptualize personalized learning within the Zambian cultural and educational context and how they perceive the influence of data-driven practices on their teaching strategies and classroom decisions. Thematic analysis was employed to identify recurring patterns and emerging themes across the qualitative data. Preliminary findings suggest that while educators recognize the value of assessment data in supporting learner needs, they face challenges related to data accessibility, limited professional development, and systemic constraints. At the same time, teachers demonstrate adaptive strategies and localized understandings of personalized learning that align with their classroom realities. The study offers context-specific recommendations to enhance assessment literacy, professional training, and pedagogical support for personalized learning in Zambia. The study foregrounding the voices of educators contributes to a deeper understanding of the role of teacher agency in shaping the implementation of big data and personalized learning within resource-constrained educational systems.

Keywords: Lived experiences; Zambian educators; Big data; Assessment interpretation; Personalized learning; Teacher agency

615.Strengthening Assessment Literacy in Emerging Education Systems: Insights from LaNA and the IEA Analyzer

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Abstract

LaNA is a new international large-scale assessment that supports education systems seeking targeted insights into emerging literacy and numeracy outcomes. It monitors reading and mathematics skills typically expected at the end of primary school. Drawing on IEA's TIMSS and PIRLS frameworks, LaNA provides a contextually appropriate, resource-sensitive option—

particularly for low- and middle-income countries—aiming to strengthen learning and broaden participation in global monitoring.

In 2023, LaNA was implemented in six countries—Burkina Faso, Egypt, Nigeria, Pakistan, Palestinian National Authority, and Senegal—as part of the LaNA Linking Study. By employing an equivalent group design, LaNA was successfully aligned with the TIMSS and PIRLS scales, enabling participating countries to report results on SDG 4.1b using internationally recognized benchmarks.

Beyond providing reliable, internationally comparable, and policy-relevant data, LaNA promotes capacity development in participating systems. National teams received training to conduct secondary analyses using the IEA IDB Analyzer, a free and user-friendly statistical tool originally developed for TIMSS and PIRLS but now adapted for a wide range of assessments, including LaNA. The IDB Analyzer facilitates complex data analysis—such as mean comparisons, regressions, and benchmark analyses—without requiring advanced programming skills. In doing so, it supports national stakeholders in interpreting their own data, deriving insights, and applying findings to improve education policy.

This presentation highlights how the IEA IDB Analyzer enables users to move from basic disaggregation of LaNA achievement data to more advanced analyses that explore relationships between student outcomes and contextual factors, as demonstrated through an analysis of student motivation. Drawing on examples from LaNA 2023 as well as TIMSS and PIRLS, it illustrates how the IDB Analyzer as a tailored software solution can enhance assessment literacy, foster meaningful data use, and ultimately strengthen national accountability systems.

In addition to the IDB Analyzer, IEA offers a suite of resources that could serve as an example and inspiration for data use, including Compass Briefs, Teacher Snippets, Infographics, and the Research for Educators series—that translate complex findings into accessible formats for additional data users (as policy makers, school administrators, and educators).

Keywords

LaNA (Literacy and Numeracy Assessment), International large-scale assessment, reading, mathematics, IDB Analyzer

616.Evaluating the Impact of NIPUN Bharat on Foundational Numeracy in India: Insights from National Assessments

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Abstract

The National Initiative for Proficiency in Reading with Understanding and Numeracy (NIPUN Bharat), launched in 2021 by the Ministry of Education, aims to ensure that all children in India acquire foundational literacy and numeracy (FLN) skills by the year 2026–27. The objective is to develop the foundational skills defined under the NIPUN Bharat Mission in literacy and numeracy. In the domain of foundational numeracy, these skills include the ability to understand and apply basic mathematical concepts such as number sense, operations, measurement, and patterns. These skills not only support future learning but also help prevent the learning gaps in higher grades. Various states across India are actively working towards achieving foundational literacy and

numeracy (FLN) skills. The National Assessment Centre, PARAKH has undertaken periodic system level evaluations, large scale achievement surveys, to assess progress made in this direction, the unit of sampling being State.

Since the launch of the NIPUN Bharat Mission, PARAKH-NCERT has conducted three major large-scale surveys: the National Achievement Survey (NAS) 2021, the Foundational Learning Study (FLS) 2022, and the PARAKH Rashtriya Sarvekshan (PRS) 2024. Each of these assessments included items specifically designed to measure learners' achievements at Grade 3, in foundational numeracy skills. This study examines the overall effectiveness of the programs implemented in the States, to meet the objectives of the NIPUN Bharat Mission, particularly in enhancing foundational numeracy. It draws on data from the above-mentioned national-level assessments, the data were analyzed to provide a comprehensive overview of students' proficiency in numeracy, the learning environments, and the systemic implementation of FLN initiatives.

Findings from the analysis indicate improvements in foundational numeracy outcomes. Several key factors emerged as contributors to this progress such as continuous teacher training, regular formative assessments, the availability of structured learning-teaching materials, and consistent support and supervision at both school and system levels. Furthermore, effective stakeholder engagement including parents and community members involvement played a significant role in reinforcing numeracy learning beyond the classroom. Despite these encouraging developments, the study also highlights some challenges. These include resource availability, teacher preparedness, and use of assessment data effectively for planning interventions.

Keywords:

NEP 2020, NIPUN Bharat Mission, Foundational Numeracy, National Achievement Survey (NAS), Foundational Learning Study (FLS), PARAKH Rashtriya Sarvekshan (PRS)

618. Conceptions of Assessment among In-service UB Teachers in Education Programme: Implications for Practice and Professional Development

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Abstract

Assessment practices remain essential to modern teaching. Assessment practices depend on teachers' professional development to encourage critical reflection on the effectiveness of their assessment strategies, considering how these practices influence teaching and student learning. Such reflection is influenced by teachers' conceptions of the purpose and role of assessment, demonstrating increasing evidence on assessment practices. This study explores the conceptions of assessment among in-service teachers participating in education programmes, aiming to understand how teachers perceive and implement assessment practices in their teaching. A quantitative approach will be employed, using an adapted 27-Conceptions Assessment III Abridged survey Likert-type scale of the 100 in-service teachers enrolled at the University of Botswana (UB) in degree programmes. The survey data analysis using descriptive statistics and

correlation techniques will reveal that teachers predominantly understand assessment as a tool for evaluating the improvement of teaching and learning, school accountability, student accountability, or treating assessment as irrelevant. The findings will be discussed, and implications for practice and professional development will be drawn.

Key Words:

Conception of Assessment, Assessment Practices, Teacher Professional Development

Conference Sub-theme: 6 Assessment Literacy

619. Effective Assessment & Data Interpretation in Primary and Secondary Schools: Towards Improved Learning Outcomes and Instructional Strategies in Zambia

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Abstract

This study explores dynamics of data interpretation skills among educators in primary and secondary schools in Zambia and their impact on scaffolding instructional strategies and learning outcomes. This comes at a time when there is a growing emphasis being placed on data-driven education reform, the capability of teachers to make prudent use of assessment data accurately has become key in identifying learning gaps, distinguishing instruction and informing curriculum planning. This mixed methods research study used the Data-Driven Decision Making (DDDM) Theory and an embedded research approach to explore how assessment data is collected, analyzed and utilized by school staff across selected urban and rural districts in Zambia. A total of 520 respondents, consisting of teachers, school administrators and education officers, took part in the study. Data was collected through an eQuestionnaire, focus groups and document analysis. Descriptive statistics shows that although 72% of primary school teachers often collect student performance data, only 41% revealed using the data to inform schools' lesson planning initiatives and targets at the same time aid in the provision of deliberately designed remediation. In secondary schools, 68% of the teachers were cognizant of various data tools (i.e. learner profiles, performance trajectory), but only 36% had undergone formal training in data interpretation. Inferential statistics derived from regression analysis indicated a substantial positive relationship between professional development in data literacy and effective instructional adjustments ($R^2 = 0.38$, $\beta = 0.52$, $p < 0.001$). The study further revealed the following significant impediments: limited access to digital data platforms, time restraints inadequate institutional provision. Participants recognized the significance of employing basic data tools, continuing capacity-building activities and mixing data-use subject components in teacher training institutions. The study recommends a national framework for teacher data literacy, promotion of SDG 4, development of user-friendly school-level data consoles, data visualization tools and augmented partnership between the Ministry of Education and teacher training institutions to promote a culture of evidence-based teaching aimed at escalating student learning outcomes in primary and secondary schools in Zambia.

Key Words: Assessment, Data Interpretation, Data Literacy, Learning Outcomes, Primary School, Secondary School

620.Validation of West African Senior School Certificate Examination for School Candidates' 2022 Literature-in-English Objective Test Items: Insights from Item Response Theory

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Abstract

This study validated the 2022 Literature-in-English paper 1 test items using IRT. The validation study design was adopted for this study. The population for study comprised all Literature-in-English candidates who sat WASSCE (SC) in 2022. A total of 27,548 candidates' responses were obtained through the census approach. A proforma was used to extract the 2022 Literature-in-English test data. Data were analysed using SPSS and R Package to conduct the confirmatory factor analysis, scree plot and latent trait models. The study revealed that the 2022 Literature-in-English test data met the IRT assumptions of unidimensionality and local independence. Moreover, the 3PL model was identified as the best-fitting model for the 2022 Literature-in-English test data. The b-parameter estimates of the test data ranged from very easy to very difficult test items; the a-parameter estimates spanned from non-discriminating to very high discriminating. In addition, only one item was susceptible to c-parameter. The study recommended that both CTT and IRT should be applied by WAEC to estimate item parameters of trial test items for the Literature-in-English test to have a nuanced insight to ensure that quality items are selected and compiled for the final test paper.

Keywords: Literature-in-English, item response theory, candidates, difficulty, discrimination, guessing, WASSCE, Ghana

621. Title: Building assessment into the heart of teaching: ASER tests in Zambia's Catch Up Program

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Abstract

In 2005, Pratham launched a large-scale citizen assessment to measure children's basic reading and arithmetic skills in rural India called the Annual Status of Education Report (ASER). ASER was designed to be quick and easy to administer. Because of its simplicity ASER is now used across many countries and is a core part of the Teaching at the Right Level (TaRL) methodology.

In Zambia, TaRL (called *Catch Up)* is led by the Ministry of Education. Developed in 2016, the remedial program now reaches over 6000 schools in 9/10 provinces across grades 3-5. Catch Up makes use of a contextualised ASER test to identify each child's current level in literacy and

numeracy and is translated into 7 local languages. Using ASER results, teachers place learners into targeted learning groups and provide instruction tailored to specific learning needs, with children progressing into more advanced groups as they improve.

The ASER assessment demonstrates unique positive elements which this session will explore:

1. **FLN Focus:** ASER zeroes in on the most essential literacy and numeracy competencies offering a clear snapshot of what learners can do rather than what the curriculum expects.
2. **Accessibility:** ASER assessments are simple, oral, one-on-one, take a few minutes per child, making them user-friendly in low-resource, low-capacity settings.
3. **Instant, Actionable Results:** Teachers receive results on the spot so children can be grouped, taught based on real-time data, leading to effective targeted instruction.

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4	Kunda Kuku	Transport & Logistics
5	Honester Kabanda	Publicity
6	Ian Chirambo	Protocol
6	Christine Simfukwe	Entertainment
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8	Martha P. Chileshe	Transport & Logistics
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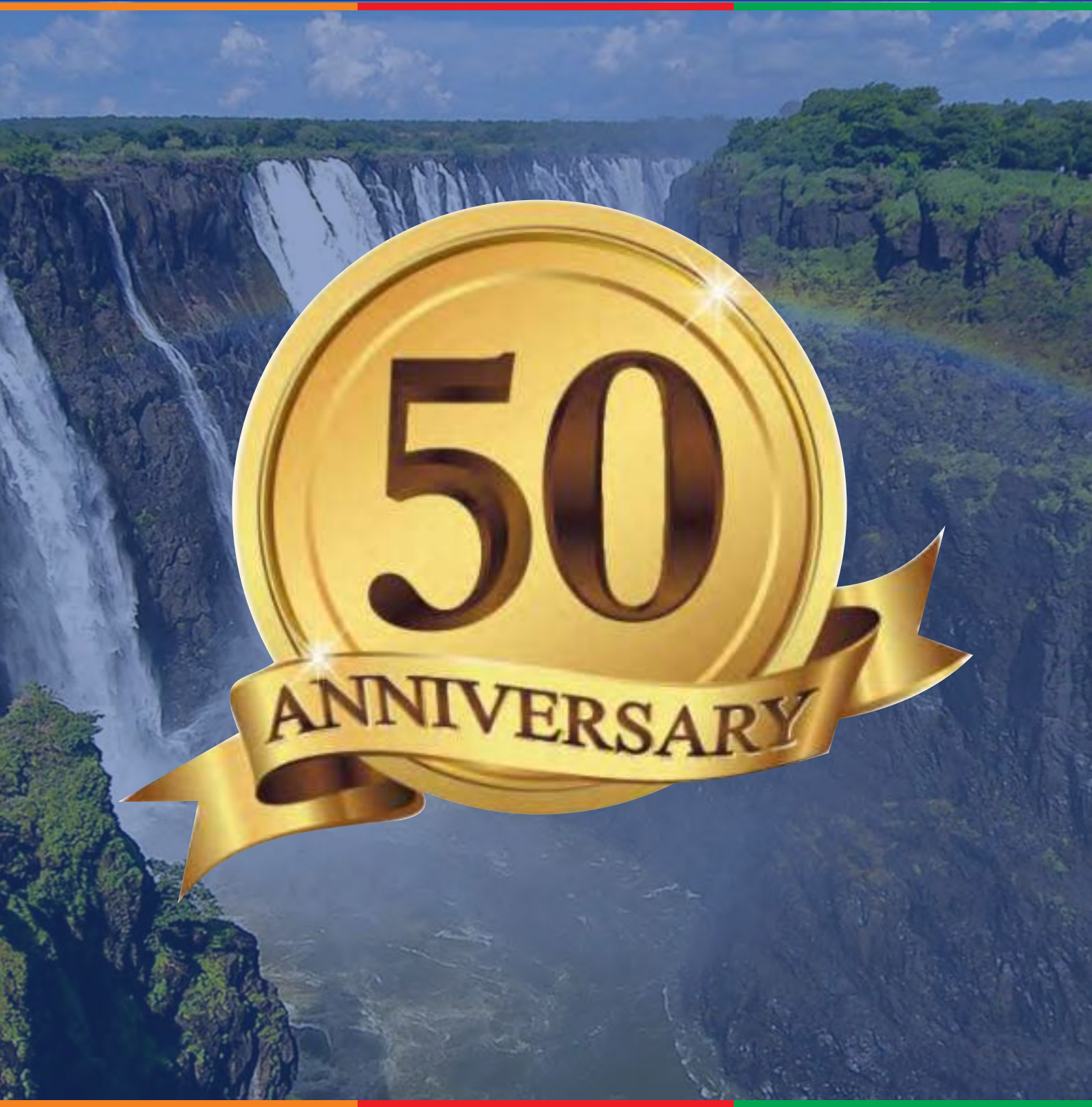
10	Nicholas Nkhuwa	Publicity
11	Akakulubelwa A. Nalishuwa	Secretariat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