



INDIGENOUS KNOWLEDGE AND SUSTAINABLE DEVELOPMENT



Editors:
Tom Kwanya, Peter Matu

INDIGENOUS KNOWLEDGE AND SUSTAINABLE DEVELOPMENT

Editors:

Tom Kwanya, Peter Matu

The Technical University of Kenya • Nairobi, Kenya

ISBN 978-9914-764-15-4



9 789914 764154

©2024 The Technical University of Kenya

All rights reserved. No part of this book may be reproduced in any form by any electronic or mechanical means (including photocopying, recording, or information storage and retrieval) without permission in writing from the publisher.

International Conference on Information and Knowledge Management (3rd : 2024 : Nairobi, Kenya)

Indigenous Knowledge and Sustainable Development/editors: Tom Kwanya, Peter Matu, The Technical University of Kenya.

x, 674 pages ; 17.6 * 25.0 cm.

978-9914-764-15-4

1. Indigenous knowledge. 2. Sustainable development. 3. Traditional medicine. 4. Indigenous languages. 5. Indigenous arts 6. Indigenous ethics. I. Kwanya, Tom. II. Matu, Peter. III. Title.

Z666.5.I58 2024.

This manuscript was subjected to rigorous two-step double-blind peer review prior to publication.

Design and Production: Lucy Kibe, Alexander Wamonje

Cover image: Pixabay, used under Creative Commons Zero (CC0) License.

Printed in Nairobi, Kenya



Film Kenya... Capture Africa!

CONTENTS

Acknowledgements	viii
Preface	ix
Foreword	x
Section One: Traditional Medicine and Healthcare	1
1. Application of traditional medicine to mitigate diseases and ailments in Elgeyo Marakwet County, Kenya <i>Moses Kiprono Bullut*</i> ; <i>Christine Cberono Tuitok**</i> ; <i>Tom Kwanya***</i>	2
2. Evaluating the Efficacy of Traditional Family Planning Practices among the Kipsigis Community in Kericho County, Kenya <i>Janet Chepkoech*</i> ; <i>Hesbon O. Nyagoma**</i> ; <i>Ashab Owano***</i>	18
3. Indigenous Knowledge on Herbal Treatment of Pediatric Illnesses Among the Luo Community in Kenya <i>Rachel Adhiambo Otieno*</i> ; <i>Ashab Owano**</i>	31
4. Indigenous Medical Repository System of The Luo Community: A Prototype <i>Ochieng Bostone</i>	41
5. Nurturing Traditional Medicine and Healthcare Amongst Kalenjin Community in Kenya <i>Hosea K. Chumba</i>	54
6. Rediscovering Traditional Medicinal Herbs Used by Kikuyu Community in Kiambu County, Kenya <i>Lorna Wairimu Mungai*</i> ; <i>Ashab Owano**</i>	66
Section Two: Indigenous Knowledge and Intellectual Property Rights.....	79
7. Cultural Recognition and Intellectual Property Rights for Ohangla Dance and Music in Kenya <i>Afline Susan Annor*</i> ; <i>Ashab Owano**</i>	80
8. Indigenous knowledge and intellectual property research in Africa: a bibliometric study <i>Angella Kogos</i>	89
9. Indigenous Knowledge and Intellectual Property Rights: A Reasoned Discussion <i>David M. Nguru*</i> ; <i>Wambui Njonge**</i>	102
Section Three: Indigenous Knowledge and Education	116
10. Historical Interventions on the Psychological Well-being of Adolescents in Uganda using a Socio-Cultural Approach <i>Masitula Namugenyi*</i> ; <i>Anne Ampaire**</i>	117
11. Indigenous Knowledge and Education in Uganda: Drawing from the Curriculum Dilemmas at Education Transitional Levels <i>Anne Ampaire*</i> ; <i>Alice Merab Kagoda**</i> ; <i>Masitula Namugenyi***</i>	131

12. Initiation and Health Education: The Feasibility of Message Delivery Through a Traditional Cultural Channel <i>Donna Pido</i>	142
13. Role of Indigenous knowledge in formal education: A case study of the Ateso Community <i>Nderitu James Ndegwa</i>	151
14. The Role of Indigenous Knowledge on Curriculum Development in Kenya: The Competence-Based Curriculum <i>Erick Odhiambo Ogolla</i>	163
Section Four: Indigenous Languages and Communication	172
15. An Analysis of Scientific and Technical Terminologies in Indigenous Language Television: A Case Study of the Program “Penj Laktar” <i>Gladys Akelo Otieno</i>	173
16. Collaborating with native Lubukusu language speakers in CBC Education in Kenya for maintenance and preservation of Indigenous Languages <i>Ann Lusike Wafula*</i> ; <i>Teresa Atieno Otieno**</i> ; <i>Damien Abong’o***</i>	182
17. Multimodal constructions: WhatsApp memes and indigenous language use <i>Damien Clement Abong’o</i>	191
18. Promoting indigenous languages: code-switching and code-mixing in political discourse in Dholuo <i>Damien Clement Abong’o*</i> ; <i>Teresa Atieno Otieno**</i> ; <i>Ann Wafula***</i>	201
19. The Importance of Indigenous Language in The Curation and Preservation of Indigenous Knowledge <i>Teresa Atieno Otieno*</i> ; <i>Ann Lusike Wafula**</i> ; <i>Damien Clement Abong’o***</i>	211
Section Five: Indigenous Knowledge and Food Security	223
20. Effective Communication Strategies for Dissemination of Integrated Soil Fertility Management Practices Among Smallholder Farmers in Makueni County, Kenya <i>Daniel Otieno Adero*</i> ; <i>Naomi Mwai**</i>	224
21. Integrating Artificial Intelligence with Indigenous Knowledge in Food Security Practices within Kenya Women in Parliament Association (KEWOPA) <i>Odini Larissa</i>	240
22. Research Productivity and Trends on Indigenous Kalenjin Cuisines <i>Jennifer Barmosbo*</i> ; <i>Tom Kwanya**</i> ; <i>Hesbon Nyagowa***</i>	253
23. The Role of Indigenous Knowledge of Dietary Foods in Enhancing Food Security in Kenya <i>Ashab Owano*</i> ; <i>Ruth Adeka**</i>	265
Section Six: Indigenous Knowledge, Environmental Conservation and Climate Change	275
24. Application of Indigenous Knowledge in Climate Change Mitigation by Small-Scale Farmers in Nyeri County, Kenya <i>John N. Gitau*</i> ; <i>Edith M. Gitau**</i> ; <i>Grace N. Kamau***</i>	276
25. Indigenous Rainmaking Practices and Their Impact on Climate Change in Western	

Kenya	
<i>Bilba Atieno Omubambe*</i> ; <i>Tom Kwanya**</i> ; <i>Ashab Owano***</i>	284
26. Integrating Indigenous Knowledge in Climate Change Adaptation Strategies: A Literature Review	
<i>Carolyn Nyaboke Museme*</i> ; <i>James Onyango**</i>	295
27. The Role of Indigenous Knowledge on Plastic Waste Management in Nigeria	
<i>Aliyu Mamman*</i> ; <i>Musa Gambo K.K. FNIMN, FRP4**</i>	305
Section Seven: Indigenous Knowledge, Agriculture and Sustainable Development 315	
28. Akan Indigenous Farming and Sustainable Development Goals	
<i>Edwina Apaw*</i> ; <i>Yinshan Tang**</i>	316
29. The Role of Indigenous Knowledge in Agriculture: A Case Study of Kesses Sub County, Uasin Gishu County	
<i>Zipporah Rop*</i> ; <i>Alfred Masai**</i>	325
30. Uncodified but Diffused: Mainstreaming indigenous irrigation practices for sustainable agriculture in Kenya	
<i>Irene Adhiambo Oburu*</i> ; <i>Jairus Imbenzi Serede**</i> ; <i>Tom Kwanya***</i>	335
31. Promoting Indigenous Knowledge for Sustainable Development in Africa: A Meta-analysis	
<i>Lucy Kibe*</i> ; <i>Tom Kwanya**</i> ; <i>Hesbon Nyagova***</i> ; <i>Benson Ateng****</i>	343
Section Eight: Curation and Preservation of Indigenous Knowledge 359	
32. Acquisition, Preservation and Accessibility of Indigenous Knowledge in University Libraries in South East Nigeria	
<i>Ilo Promise I.*</i> ; <i>Madumere Chika P.**</i> ; <i>Iwundu Nkeiruka E.***</i> ; <i>Ezech Godwin S.****</i>	360
33. Adoption and Domestication of Metadata Aggregation for Effective Information Retrieval Services in African Indigenous Libraries	
<i>Anwalu Dansale Yabaya</i>	374
34. Awareness, Accessibility and Preservation of Indigenous Knowledge for the Sustainable Development of Public Libraries in North Western States of Nigeria	
<i>Hindatu Salisu Abubakar</i>	386
35. Mainstreaming Digital Platforms in Curating Indigenous Knowledge for Sustainable Development in Kenya	
<i>Sally Chepchirchir*</i> ; <i>Rachel Kagoiya**</i>	396
36. Popularising Traditional Games and Sports Amongst the Luo Youth to Preserve Indigenous Knowledge	
<i>Michael Onyango Okech*</i> ; <i>Henry Ogada Hongo**</i>	411
37. Promoting the Potentials of Participative Management: A Catalyst for Regulating Indigenous Libraries in Africa	
<i>Hadiza Umar</i>	421
38. Protection of the Luo settlement patterns as a form of cultural heritage at Thimlich Ohinga Archaeological site	
<i>Villary Abok</i>	429
39. Publishing Trends on Indigenous Knowledge Research in Kenya (2000 – 2023): A Bibliometric analysis	

<i>Joel Nakitare*</i> ; <i>Grace Wambui Kamau**</i>	440
40. Roles of Public Libraries in the Preservation of Indigenous Knowledge of Artisans for Sustainable Development in Kano State, Nigeria <i>Hauma Sani Ahmad</i>	451
41. Strategies for disseminating indigenous knowledge in museums for sustainable development: a meta-analysis <i>Irene Ongalo Ayako*</i> ; <i>Tom Kwanya**</i> ; <i>Naomi Mwai***</i>	461
42. Strategies for Preserving Traditional Knowledge in Public Libraries in Kenya <i>Azenath Ateka*</i> ; <i>Tom Kwanya**</i>	477
43. The curation of indigenous knowledge for conserving cultural heritage <i>Daniel Rankadi Mosako*</i> ; <i>Villary Atieno Abok**</i>	488
44. The Role of Public Libraries in Preserving and Promoting Accessibility to Indigenous Knowledge and Culture <i>Ibrahim Idi Ahmad*</i> ; <i>Sirajo Abubakar Danzangi*</i>	499
45. Use of Information Communication Technologies in managing and preservation of Bukusu indigenous knowledge <i>Florence N. Weng'ua</i>	509
Section Nine: Indigenous Knowledge and Gender Equality.....	517
46. Commercialising Indigenous Pottery Industry to Support Economic Empowerment among Indigenous Akamba Women <i>Pascaline Ndila</i>	518
47. Suba Women Success and Traditional Beliefs <i>Judith Abongo*</i> ; <i>Ashab Owano**</i>	528
48. The bumpy road to gender equality, women empowerment and girls' education in Malawi: Insights from Chichewa proverbs as wisdom of the people <i>Juliet C. Kamwendo</i>	538
49. The Impact of Globalisation on Culture among the Indigenous Women Entrepreneurs in Africa <i>Esther Kathure Mwiti*</i> ; <i>Peter M. Matu**</i>	547
Section Ten: Indigenous Arts, Music, Drama, Theatre and Societal Transformation..	555
50. A Portuguese Soldier in Kondo, Tanzania <i>Donna Pido</i>	556
51. A Review of Intangible Cultural Heritage Elements of Isukuti Artefact and Ritual among the Isukha Community, Kakamega, Kenya <i>Elphas Muruli*</i> ; <i>Ashab Owano**</i> ; <i>Lilian Oyieke***</i>	570
52. Indigenous Art: Paintings in the Lodwar Cathedral <i>Lydia Muthuma</i>	581
53. Indigenous Arts: Significance of Indigenous Knowledge Art Form <i>Jacqueline Okeyo</i>	591
54. Making Up Maasai Culture: The Turtle Fakes <i>Donna Pido</i>	603

16. Collaborating with native Lubukusu language speakers in CBC Education in Kenya for maintenance and preservation of Indigenous Languages

Ann Lusike Wafula*; Teresa Atieno Otieno**; Damien Abong'o***

The Technical University of Kenya

**lusikeluvafu69@gmail.com*

***teresaotieno@gmail.com*

****damienclement53@gmail.com*

Abstract

The purpose of the study was to identify strategies for indigenous language preservation and to investigate how the use of Lubukusu native language resource persons in CBC education can be integrated into the formal curriculum development process for indigenous languages. The study adopted a qualitative descriptive research design because it intended to describe the phenomenon of the use of resource persons alongside classroom teachers. The respondents were pre-primary and lower primary teachers and key informants comprising Native Language Resource Persons. A purposive sampling technique was used to sample respondents based on two criteria: early education teachers stationed in the South Kulisiru Ward of Bungoma County and Lubukusu language resource persons based on prior classroom experience with these teachers in lesson delivery. Two research instruments were telephone interviews with key informants and open-ended questionnaires with the teachers, respectively. The authors concluded that awareness of the role of indigenous languages in education, the campaign against negative perceptions amongst parents, and an explicit policy framework would eventually provide the necessary curriculum infrastructure for the preservation of indigenous languages.

Keywords: *Competency-based curriculum, native Lubukusu language resource persons*

1 Background information

The Competency-based Curriculum (CBC) system of education, rolled out in Kenya in January 2018, seeks to equip learners with skills and competencies through practical and real-life experiences and collaborative learning. This curriculum not only re-emphasises the use of indigenous languages as Language of Instruction (LOI) at pre-primary and lower primary education, just like previous systems, but also proposes indigenous language as one of the subjects to be taught alongside English, Kiswahili, Arabic, French, German and Mandarin, (RoK, 2017; 2023). By inference, therefore, unlike in the previous systems of education in Kenya, the 2-7-6-3 and the 8-4-4, the 2-6-3-3-3 CBC education implementation is collaborative. Apart from teachers, there are also other players: parents, guardians, resource persons and immediate community members who are called upon to help contextualise knowledge and skills learning. Collaborative learning applies to all proposed learning areas, namely language activities, psychomotor and creative activities, environmental, religious education for pre-primary, literacy and indigenous languages, English, Kiswahili, mathematical activities, environmental activities, hygiene, religious education and movement and creative activities in lower primary (Mandillah, 2019). Several authors, including Kaviti (2018), Shizha (2013), and Ondari and Michieka (2014), do acknowledge CBC's undisputed purpose to ignite a change in social, intellectual and psychological attitudes in the Kenyan populace. This goal is to be achieved through carrying out specific activities and interacting with resource persons to foster

speaking of mother tongue and LOI inside and outside the classroom. The benefits that accrue from this practice include the conservation of ethnic language, maintenance of one's identity and learning from folklore stories that could be unique to their culture (Waithaka, 2017).

Kenya is a multilingual state and boasts of the co-existence of over forty ethnic tribes, each distinguished by Mother Tongue spoken within a specific cultural context, an assertion confirmed by KNBS (2019) and Mose (2017). Kenyan Mother Tongues, also known as indigenous languages, are generally grouped into three linguistic families: Bantus, Cushites and Nilotes. The author observes that language identity in Kenya is region-based, generally oral, and preserved by its native and non-native speakers. These languages, however, need more intergenerational transmission, as evidenced by diminishing fluency and literacy, which is likely to result in potential abandonment in favour of dominant English and Kiswahili (Waithaka, 2017). This scenario is a result of a number of factors, first due to globalisation and modernisation, which continue to enhance the spread of the English language, particularly among the Kenyan elites. Secondly, the extensive influence of mass media, radio and Television, social media, and the use of cell phones as learning tools, not to mention personal use and/or addiction. Socialisation agents such as the church, which is equally a behavior-modeling agent, have elevated English to unprecedented status. Besides English, there is Kiswahili, which is not only a national language but also an inter-ethnic lingua franca spoken across the country, not to mention the fact that it is also the second language of instruction.

Furthermore, for the youthful Kenyans, Sheng' is an identity language maintained both by texting via social media platforms and through oral interactions. These factors threaten the very survival of indigenous languages, not to mention the pressure from foreign languages. According to Mose and Kaschula (2019), successive Education Commissions and Task Forces since 1976 have stressed mother tongue instruction in pre-primary and lower primary schools but still need more stakeholders' support. Although Kaviti (2018), Chepkuto and Saina (2015), and Piper et al. (2016) do support Mother Tongue Instruction in CBC education, they are equally apprehensive that history could repeat itself due to a lack of adequate literature. Other impediments include lack of terminology, lack of standard orthography and particularly teachers' assignment policy, which stipulates that teachers can be deployed to work in any region in the country irrespective of Mother Tongue capability,

However, the CBC curriculum designs for pre-primary and lower primary propose a collaborative approach for teaching knowledge content as well as Mother Tongues (KICD, 2017). This curriculum design instructs the teacher to consider the use of 'resource persons' in various teaching areas to complement the teachers in lesson delivery in class and/or outside of the classroom. For lesson delivery of 'Literacy and Indigenous language activities', the resource person to be considered by our inference is not only a proficient speaker of the target language of the catchment area but also a relevant knowledge holder in terms of cultural heritage and traditions. Authority and responsibility for the choice of the resource person are delegated to the individual teacher. Here below is a citation from the pre-primary curriculum design:

"Organise a storytelling session with a resource person and encourage learners to participate in the story narrated. Selected learners could also wear appropriate attire/ costumes for the story being narrated" (RoK, 2017, p. 7).

According to the above directive, the teacher and the resource person control, in part, the pedagogical contract to deliver content to learners as per the particular learning activity proposed. Desmoulins et al. (2019) acknowledge this approach as sub-immersion language

learning through the use of native speakers' modelling of language discourse, including accompanying gestural and non-verbal communication unique to the language. This collaborative engagement is planned for and deliberate rather than an impromptu ice-breaking session. For the study, we adopted the use of the expression 'Native Lubukusu Language Resource Person' to replace the general term resource person. The curriculum design proposes the use of people familiar to the children, selected from the immediate linguistic community, targeting parents, guardians, teachers, the elderly, pastors and priests. In this study, the terms mother tongue and indigenous language have been used interchangeably.

2 Problem statement and justification

Collaborative engagement of Native Lubukusu Language Resource Persons in the Competency-Based Curriculum (CBC) education is a reality in South Kulisiru Ward of Bungoma County, where Lubukusu Mother Tongue Instruction for pre-primary and lower primary classes has been implemented. While its focus is competencies acquisition, it is also intended to revitalise indigenous languages whose implementation as LOI in early education has been elusive since independence because dominant English and Kiswahili languages threaten its maintenance. Secondly, the collaborative teacher-Native Lubukusu Language Resource Persons productions are primarily oral presentations and participative skill demonstrations. However, this collaboration is informed by individual teachers' discretion, rendering the practice haphazard and lacking in guidelines for replication and mass diffusion of indigenous knowledge born thereof. The objectives of this study were to identify strategies for Mother Tongue preservation and, secondly, to investigate modalities of integrating Native Lubukusu Language Resource Persons in the formal CBC curriculum development process for posterity of indigenous languages.

The findings of this study are helpful to the Kenyan government that commits through the Kenyan Constitution 2010 to promote and protect the diverse Kenyan indigenous languages as part of the national heritage and a fundamental human right (RoK, 2010 article 7(3); Njoroge & Gathigia, 2017). In the study, the revitalisation and preservation of indigenous languages is adopted to mean Mother Tongue's protection. Secondly, cultural tourism is an economic asset and a foreign exchange earner to the nation. It is, therefore, in the interest of the government to protect and preserve Mother tongues for posterity just as it is a right of the citizenry to express themselves in their mother tongues. Thirdly, universities whose principal mandate is academia and research will benefit from this study as a reference document for further research in curriculum development as well as for linguistic analysis in matters of Mother Tongue education. Finally, the findings will contribute to community awareness regarding the loss of indigenous languages and the need to take corrective action.

3 Theoretical framework

The study was guided by Albert Bandura's Social Cognitive Learning Theory of language acquisition, which posits that children and adults can learn new information and skills by watching and imitating models (Nabavi, 2012). According to Bandura, the proponent of this theory, individuals learn both behaviour and cognitive strategies by observing others. Secondly, learning is an internal process, and finally, learning can also take place by observation without necessarily imitating the model. By observing a stimulus or a model, the observer codes ideas that serve to guide the next course of action in the learning process. During observation, the observer pays attention and focuses on the model's behaviour, which helps in the cognitive processing of the target behaviour. The observer will rely on this information to reproduce

the behaviour when called upon. Motivation to reproduce the desired behaviour can be either intrinsic by personal interest or extrinsically influenced by positive and/or negative reinforcement (Ilmiani et al., 2021). This theory applies to our study in the sense that CBC education is generally collaborative in regard to the considered use of various stakeholders. The use of Native Lubukusu Language Resource Persons to tell stories in a language class or listen to podcasts in class serves not only as stimuli but also as models for Mother Tongue discourse. Lexical borrowing and adaptation from CBC curriculum terminologies such as “strand and sub strand” used instead of ‘topic and sub-topic’ as well as novel assessment rubrics; ‘exceeding expectation’, ‘approaching expectation’, ‘meets expectation’ ‘below expectation’ will help enrich and further develop Mother Tongue instruction thus contribute to preservation efforts.

4 Literature review

A literature review was done in line with the two study objectives: to identify strategies for indigenous languages’ preservation and secondly to identify modalities for the integration of Native Lubukusu language Resource Persons into the curriculum development process. Incidents of diminishing language use for whatever reason pose a risk of language endangerment with a resultant lack of intergenerational inheritance. Chen and Huang (2019), in reference to multilingual Taiwan, observe that Hakka, a heritage language of a minority group in the country, was at risk of survival and eminent loss. In a bid to preserve this language, the government launched a campaign called Family Language Policy (FLP) to harmonise Hakka language preservation efforts, mainly targeting the family. Its approach was to create awareness of the need to preserve the endangered heritage language and, secondly, action tribal members and their families to deliberately enforce speaking heritage language in their homes by providing real-life contexts for their children to learn from. For instance, families were obligated to organise social functions and invite speakers of the heritage language. During such functions, deliberate effort is to be made to speak, watch and /or listen to heritage language through face-to-face conversations or via media such as Television or radio under family supervision. The policy also proposed the inception of the Hakka language dictionary as a reference document for Hakka language orthography as well as adherence to child-oriented bilingual conversation strategies in the family.

Similarly, in South Africa, according to Ngulube (2012), two marginalised indigenous languages, Khoe and San, were at risk of loss and extinction. To revitalise them, the government embarked on a campaign for multiculturalism where all indigenous languages receive the opportunity to be showcased on an equal platform. Secondly, speakers of the marginalised language were encouraged to seek literacy and write in their language. Ngulube observes that publishers are capable of extracting pertinent information from a variety of write-ups of any kind, such as biographies, diaries, poems, and memoirs, and they are able to repackage them in an acceptable format for publishing and onward transmission.

In Canada, according to Desmoulins et al. (2019), Algonquin indigenous languages were facing declining use due to the dominance of English and French in media and technology. However, the revitalisation of Ojibway, Oji-Cree and Cree, to mention a few of these languages, was targeted via instruction within schools because there was a demand from the public to learn indigenous languages as a second language. This was because the government recognised indigenous languages as legitimate subject content to be taught and learned in schools, a move that helped shape younger peoples’ mindset towards these languages. Since then, indigenous language instruction has taken on various approaches. First, through ‘language Nests’, a

strategy where young children are instructed through interaction with proficient speakers on a regular basis. This immersion strategy was rated most efficient because of its native language speakers' modelling component. The second approach is through 'book learning', where the indigenous language instructor uses decontextualised flash cards to stimulate vocabulary learning and facilitate both speech and writing. Finally, the authors describe an approach called 'memorised performance', which is achieved through self-instruction. However, the learner has the opportunity to demonstrate learning at organised events during which the audience's feedback publicly confirms learning. The authors, however, caution that this approach limits the candidates' potential to mere memorised performance.

In the United States of America, according to Leonard (2021), Myaamia, also an Algonquin language spoken in Kansas and Oklahoma states, went out of use and was declared extinct in the 1960s. Its reclamation took the community's collaboration with various actors. These included Miami tribal members, non-indigenous researchers in linguistic analysis comparing this language with other Algonquin languages, educators, and information and archival managers. These efforts culminated in the production of a dictionary of the Myaamia language to help standardise lexicon and orthography, the development of a curriculum for teaching the language, and finally, embarking on a community empowerment campaign to support the reclamation efforts.

The literature shows that the decline in the presence of indigenous languages is a global phenomenon, thus necessitating strategies for their preservation and maintenance. These efforts are majorly collaborative, with the two principal actors being the government and the tribal members of the source language. However, these strategies need to address technological innovations and indigenous language evolution. Incorporating Native Lubukusu Language Speakers into formal CBC curriculum development will fill this gap because a teaching-learning Curriculum is futuristic and transformational in response to societal trends and developments.

5 Study methodology

This study adopted a qualitative research methodology and a descriptive research design, which, according to Kothari and Garg (2004), is ideal for a description of an existing phenomenon. The study sought to describe the collaborative use of Native Lubukusu Language Resource Persons in Curriculum Competency Based Curriculum as a strategy for Mother Tongue preservation and maintenance. The study was conducted to identify strategies for indigenous language maintenance and preservation and, secondly, to assess collaborative modalities of formally integrating resource persons into the CBC curriculum development process. The respondents were early education teachers and critical informants, head teachers, and resource persons. A purposive sampling technique was used to sample two head teachers based on the criterion that their school has implemented Mother Tongue Instruction. Secondly, the head teachers used snowballing to identify other schools that have implemented Mother Tongue Instruction and early education educators in their Schools within South Kulisiru Ward. Finally, Native Lubukusu, Language Resource Persons, comprised people who have collaborated with these teachers in lesson delivery at least twice. Data was collected via telephone interviews with head teachers and resource persons, while an open-ended questionnaire was used to collect data from teachers. The question items focused on strategies for promoting mother tongue use and, secondly, how to incorporate resource persons in the formal curriculum process. The data collected was analysed and commented on in line with the two research objectives.

6 Presentation of findings

A total number of 45 teachers and 6 Native Lubukusu Language Resource Persons participated in the study. Of these, 24 were pre-primary teachers, of which 21 were native speakers of Lubukusu, while three declined to disclose their native language identity. Twenty of them were female, and four were male. The average age of pre-primary teachers was 30-39 years, and all of them were trained as follows: 15 had certificates, 8 had diplomas, and 1 was a degree holder, respectively. Secondly, 21 were lower primary teachers; 6 of them were male, and 14 were female. Three declined to disclose their training; 9 were certificates, 8 were Diplomas, and 2 were Degree holders, respectively. The average age of lower primary teachers was 40-49 years old.

The results confirmed that 64.5% of teachers collaborate with resource persons in lesson delivery as suggested in curriculum designs, while the remaining 35.5% expressed interest. The results were as follows:

Table 1: Collaboration between teachers and resource persons

	Pre-Primary	Primary	Total	%
Have collaborated	17	12	29	64.5
Intents to collaborate	7	9	16	35.5
Never collaborated and did not intent	0	0	0	0
Total	2	22	45	100

The result shows 100% commitment to collaboration with resource persons, delayed implementation notwithstanding. The reason given for this enthusiasm is that it is a source of motivation to learners because it breaks the rigid teacher-centred conventional classroom practices and gives an opportunity for active learner involvement in learning. Regarding Lubukusu Language preservation and maintenance, the results reveal two strategies: the creation of awareness with stakeholders on the benefits of knowledge of the indigenous language as well on the role of a child's immediate family and community in maintenance. Regarding the integration of native Lubukusu language resource persons into curriculum development, the results reveal that this is feasible only through an explicit policy framework with affiliate institutions of the Ministry of Education.

7 Discussion of findings

The findings presented above and discussed hereunder according to the objectives of the research study:

7.1 Benefits of Mother Tongue

Findings revealed that classrooms in South Kulisiru Ward can be described as consisting of 90% homogenous speakers of the Lubukusu language, a principal contributor to the successful implementation of Mother Tongue Instruction. In general, results revealed heightened motivation amongst pupils due to the use of children's first language in initial instruction. This confirms the assertion of (Mose & Kaschula, 2019), who observe that new knowledge is best taught in the language the child already understands and through which he has already framed the image of the world. This crucial aspect of learning cannot be replaced by the use of simple English words, even when accompanied by illustrations and gestures, mainly when introducing new knowledge. The authors further observe that the pupil's linguistic maturity in the native language contributes to the success of learning a second language, a truth that cognitive constructivism theorists support. Knowledge of an indigenous language, therefore,

is not only an identity and a cultural heritage right but also an essential tool in academic progress and a personal identity that shapes personality for life survival.

7.2 Awareness campaign against negative perception of indigenous languages

When questioned on modalities of enhancing Mother Instruction, findings revealed negative perceptions of parents towards its use in school and particularly in instruction. The following response explicitly captures one teacher's opinion.

“Sensitise parents to change their attitude about mother tongue and encourage them to speak with their children at home in their mother tongue to foster their identity”. Respondent 1

Negative perception towards language manifests through absolute avoidance of language and/ or deliberate controls of which language a child ought to express himself, a phenomenon referred to as motivated behaviour (Mose & Kaschula, 2019). According to Chen and Huang (2019), the negative perception of parents towards language denies the child the rich home context to acquire language, which they interpret to mean ignore it. Kenya's multilingual context is similar to multilingual Taiwan, where the very actors holding negative perceptions are used to lobby and campaign for the contrary effect. The Family Language Policy (FLP) in Taiwan, for instance, increased parents' awareness of language preservation. Parents have a significant influence on their children and can consciously promote language use at home and in social gatherings that they attend with their children if they are sensitised to its value. This will help overcome their negative attitude towards their mother tongue as well as reduce pressure born out of the dominant use of English and Kiswahili languages. Mose and Kaschula (2019) describe Kenyans' perception of indigenous language as hypocritical. For instance, Kenyans love to sing traditional songs in churches and ceremonies, dirges at funerals, converse in their mother tongue and listen to radio stations but despise the same indigenous languages for school instruction. This indecision of the true meaning and value of indigenous languages is a challenge that tribal members should urgently address.

7.3 Policy framework

Education in Kenya is systematic and policy-controlled in terms of teacher training, teacher deployment, and permissible pedagogical support. While the LOI policy in CBC proposes Mother tongue instruction, inherent challenges still need to be solved. When questioned if Native Lubukusu Language Resource Persons can be integrated into the curriculum development process, teachers' response was a resounding 'yes' but quickly followed this response by suggesting that relevant policy review by the Ministry of Education (MOE) as well as review of the mandate of affiliate institutions was necessary. We captured one teacher's response as follows:

“KICD, which is responsible for curriculum development, should allow the Teachers Service Commission (TSC) and the county governments to deploy mother tongue teachers in regions where they can teach in their native mother tongues”. Respondent 2

While affiliate institutions of MOE are autonomous in mandate, successful implementation of education policies requires prompt systematic complementarity. Kaviti (2018), Chepkuto and Saina (2015), and Piper et al. (2016) observe that Mother tongue Instruction has suffered drawbacks due to a lack of timely harmonisation between teachers' assignment policy and curriculum guidelines. Novel introductions of resource persons as pedagogical aids to the teachers require explicit policy guidelines. Another teacher suggested that the best strategy to harness adequate knowledge from resource persons is to designate these people as Mother Tongue educators and/or consultants for content development in collaboration with teachers

and KICD. We captured the responses as follows:

“Make it a career so that there is sufficient research in the roles assigned and with proper. We are planning to document it for a radio session”, “Respondent 3

Also;

“Train them in research so that the Ministry of Education can employ them on a need basis”. Respondent 4

While the curriculum development process in Kenya is the responsibility of KICD, research with non-educators for content creation and documentation is equally feasible. According to Leonard (2021), collaborative research efforts with educators, non-educators, and information and archival managers culminated in the production of a dictionary of the Myaamia language to help standardise lexicon and orthography and develop a curriculum for the teaching Myaamia language. Such efforts can be replicated in Kenya as well.

8 Conclusion

The authors concluded that raising awareness of the role of indigenous languages in education, conducting awareness campaigns against negative perceptions of indigenous languages among parents, and developing an explicit policy framework for the integration of resource persons in the curriculum development process would eventually provide the necessary infrastructure for the preservation of indigenous languages.

9 Recommendations

- Formation of indigenous language resource persons research committees to work in collaboration with Universities, KICD, information and archival managers and publishing houses in order to develop adequate literature for Mother tongue instruction.
- Sensitise people on ‘Mother Tongue Day’. This can be celebrated nationally and regionally alongside Utamaduni Day, where families and communities are called upon to speak their mother tongue exclusively.
- Collect and create resources for Lubukusu textbooks, dictionary and/or glossary, and animated digital materials for the CBC curriculum.
- Sensitise tribal leaders at the local levels to expand current annual cultural festivals to include storytelling, poems and or spoken word, ceremonies and exhibitions to showcase indigenous languages as a heritage identity.
- Native Lubukusu Language Resource Persons to form an association that will champion and protect their interests. In collaboration with others, they can organise language classes for interested persons tailored for specific purposes such as cultural cuisine or fashion trends.

References

- Chen, Y. L., & Huang, C. H. (2019). Influence of a heritage language preservation family program on parents’ awareness and action. *International Journal of Education and Research*, pp. 7, 12.
- Chepkuto, P. K., & Saina, S. K. (2015). The role of the mother tongue as a medium of instruction in Kenya.
- Desmoulins, L., Oskineegish, M., & Jaggard, K. (2019). Imagining university/community collab-

- orations as third spaces to support Indigenous language revitalisation. *Language and Literacy*, 21(4), 45–67.
- Ilimiani, A. M. M., Wahdah, N., & Mubarak, M. R. (2021). The Application of Albert Bandura's Social Cognitive Theory: A Process in Learning Speaking Skill. *Talim al-'Arabiyah: jurnal pedidikan Bahasa Arab & Kebahasaaraban* 5(2) 180-192
- Kaviti, L. (2018). The New Curriculum of Education in Kenya: A Linguistic and Education Paradigm Shift. University of Nairobi.
- KNBS. (2019). Kenya Population and Housing Census Volume I: Population By County and Sub-County. *Vol. 1, 2019*.
- Kothari, C. R., & Garg, G. (2004). *Research Methodology, Methods and Techniques* New Age. *New Delhi*.
- Leonard, W. Y. (2021). Centering Indigenous ways of knowing in collaborative language work. *Sustaining Indigenous languages: Connecting communities, teachers, and scholars*, pp. 21–33.
- Mandillah, L. (2019). Kenyan curriculum reforms and mother tongue education: Issues, challenges and implementation strategies. *Education as Change*, 23(1), 1-18.
- Mose, P. N. (2017). Language-in-education policy in Kenya: Intention, interpretation, implementation. *Nordic Journal of African Studies*, 26(3), 16–16.
- Mose, P. N., & Kaschula, R. H. (2019). Developing mother tongues as academic languages in primary schools in Kenya: exploring extent and indispensability. *Journal of Language, Identity & Education*, 18(5), 329-342.
- Nabavi, R. T. (2012). Bandura's Social Learning Theory & Social Cognitive Learning Theory. *Theory of Developmental Psychology*, 1(1), 1-24.
- Ngulube, P. (2012). Revitalising and preserving endangered indigenous languages in South Africa through writing and publishing. *South African journal of libraries and information science*, 78(1), 11–24.
- Njoroge, M. C., & Gathigia, M. G. (2017). The treatment of Indigenous Languages in Kenya's Pre-and Post-independent Education Commissions and the Constitution of 2010. *Advances in Language and Literary Studies*, 8(6), 76-82.
- Ondari, H. K., & Michieka, M. M. (2014). Kenyan indigenous languages in education: A world of potential benefits. *Journal of Language, Technology & Entrepreneurship in Africa*, 5(1), 1-17.
- Piper, B., Zuilkowski, S. S., & Ong'ele, S. (2016). Implementing mother tongue instruction in the real world: Results from a medium-scale randomised controlled trial in Kenya. *Comparative Education Review*, 60(4), 776-807.
- Republic of Kenya (2010). The Constitution of Kenya 2010. The National Council for Law Reporting Republic of Kenya, (2017). Basic Education Curriculum Framework for Pre-Primary. Kenya Institute of Curriculum Development.
- Republic of Kenya, (2017). Pre-primary One Curriculum Designs, Kenya Institute of Curriculum Development (KICD), p.7.
- Shizha, E. (2013). Reclaiming our indigenous voices: The problem with postcolonial Sub-Saharan African school curriculum.
- Waithaka, E. N. (2017). Choice of the Medium of Instruction in Kenyan Preschools: Averting Xenocentrism. *Journal of Education and Practice*, 8(9), 210–216.