



Integrating Tshivenda proverbs in digital education platforms: Enhancing Indigenous language learning through technology

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ABSTRACT

African Indigenous languages, such as Tshivenda, have been marginalized in formal education institutions, which has reduced their visibility in online learning environments. When thoughtfully included in technologically enhanced learning environments, proverbs, which serve as stores of collective wisdom, moral reasoning, and linguistic diversity, have pedagogical promise. To improve Indigenous language instruction and cultural literacy in primary and secondary schools, this study investigated the effective integration of Tshivenda proverbs into digital learning environments. It examined the language growth and engagement of learners when proverbs are presented through interactive and multimedia resources. The study used two rural schools in the province of Limpopo as part of a qualitative case study design. In collaboration with language teachers, digital learning interventions were created using interactive tablet proverb tests, voice recordings, and animated films. Data were collected through classroom observations, learner focus groups, and teacher interviews. Data were analyzed using thematic content analysis, with a focus on learner participation, comprehension, and cultural expression. NVivo software was used to manage qualitative coding and pattern identification. The findings reveal that learners responded enthusiastically to digital content incorporating Tshivenda proverbs. The integration of audio and visual representations of proverbs improved comprehension, language retention, and cultural connection. Teachers also reported increased classroom participation and contextual understanding among students. Digitally integrating Tshivenda proverbs into educational platforms not only revitalizes Indigenous language use but also provides a culturally grounded, learner-centred approach. The study recommends the greater adoption of such digital interventions to support inclusive education in South Africa.

Keywords: Digital Education, Indigenous Language Learning, Educational Technology, Cultural Literacy, Multilingual Education.

INTRODUCTION

Despite their expressive depth and cultural richness, African Indigenous languages such as Tshivenda are increasingly marginalized in both digital and educational spheres. In Tshivenda, proverbs form a crucial part of oral tradition, serving as vessels of moral instruction, social norms, and linguistic

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PUBLICATION HISTORY - Received : 4th July, 2025 | Accepted: 9th April, 2026 | Published: 21st May, 2026.

TO CITE THIS ARTICLE – Makhado, Avhatakali Jonathan, Raphalalani Tshinetise David and Mathabi Mashudu. "Integrating Tshivenda proverbs in Digital education platforms: Enhancing Indigenous language learning through technology." *Journal of Education and Learning Technology* 7, no.4 (2026): 444 - 456. <https://doi.org/10.38159/jelt.2026748>

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creativity. However, scholars such as Finnegan and Amuzu argue that due to urbanization, globalization, and the dominance of English in formal education, the use of proverbs has declined, with their transmission to younger generations at risk.¹ English increasingly dominates both home and school environments, becoming the primary language even in domestic spaces, thereby displacing Indigenous linguistic and cultural practices.

In the context of South Africa's bilingual education system, the inclusion of Indigenous languages and content in digital curricula is becoming increasingly urgent. Digital education platforms offer an opportunity to bridge this gap through multimedia, interactive learning, and learner-centred pedagogy.² These platforms have taken centre stage in learning.

Promoting linguistic diversity and cultural sustainability requires the intentional integration of Indigenous languages into digital learning systems. Msila emphasizes that incorporating of marginalized languages into digital education enables learners to reconnect with their cultural heritage in transformative ways.³ Similarly, Skutnabb-Kangas and Phillipson contend that the global preference for dominant languages leads to the marginalization of Indigenous knowledge systems, a trend that can be reversed through culturally responsive digital education.⁴ Including Indigenous epistemologies in digital curricula not only contributes to global knowledge diversity but also affirms learners' identities and validates their linguistic heritage.

Moreover, integrating Indigenous languages and content into digital platforms helps address educational inequities by making learning more accessible and relevant, particularly for underserved communities. Research indicates that instruction in learners' mother tongues significantly improves cognitive development and academic achievement.⁵ Localizing educational technologies to reflect Indigenous knowledge also facilitates intergenerational knowledge transfer and fosters greater community involvement in education.⁶ For digital education to be genuinely inclusive and sustainable, it must not simply include Indigenous languages but centre them as foundational to teaching and learning.

This study is grounded in the framework of culturally responsive pedagogy, which supports academic performance and language revitalization when integrated with educational technology. As Gay asserts, teaching that draws on the cultural backgrounds of learners improves cognitive engagement and moral development.⁷ Accordingly, this article treats Tshivenda proverbs not only as linguistic expressions but as instruments of intellectual development and ethical reasoning, capable of transforming digital education into a culturally affirming and pedagogically effective practice. Therefore, it seeks to explore how Tshivenda proverbs can be effectively integrated into digital education platforms to enhance Indigenous language teaching and cultural literacy in primary and secondary schools.

LITERATURE REVIEW

Indigenous Languages in South African Education

The role of Indigenous languages in South African education remains a contentious and evolving issue. Despite the country's progressive language-in-education policy, which recognizes 11 official languages, including Tshivenda, implementation at the school level often privileges English and Afrikaans due to their perceived economic utility and availability of teaching resources.⁸ Indigenous languages are

¹ R. Finnegan, *Oral Literature in Africa* (Cambridge: Open Book Publishers, 2012); Delali Amuzu, "Decolonizing African Development Education Through Indigenous Knowledge," in *Reimagining Development Education in Africa* (Cham: Springer International Publishing, 2022), 39–54, https://doi.org/10.1007/978-3-030-96001-8_3.

² Munyaradzi Mawere, "Indigenous Knowledge and Public Education in Sub-Saharan Africa," *Africa Spectrum* 50, no. 2 (2015): 57–71; Hloniphani Ndebele, "Exploring the Challenges of Information and Communication Technology Localization in South African Higher Education: A Language Management Approach," *International Journal of Multilingualism* 19, no. 3 (2022): 368–82.

³ Vuyisile Msila, "Bringing Africa into New Epistemologies: Rethinking the University in Africa," *Journal of Educational Research and Reviews* 10, no. 3 (2022): 29–37.

⁴ Tove Skutnabb-Kangas and Robert Phillipson, "Linguistic Human Rights," *Berlin: Mouton de Gruyter*, 1995.

⁵ Birgit Brock-Utne, "Education for All-in Whose Language?," *Oxford Review of Education* 27, no. 1 (2001): 115–34.

⁶ Stephen Carney, *Reimagining Our Futures Together: A New Social Contract for Education: By UNESCO, Paris, UNESCO, 2021, 186 Pages, ISBN 978-92-3-100478-0*, vol. 58 (Taylor & Francis, 2022).

⁷ Geneva Gay, *Culturally Responsive Teaching: Theory, Research, and Practice* (teachers college press, 2018).

⁸ Finex Ndhlovu and Leketi Makalela, *Decolonising Multilingualism in Africa: Recentring Silenced Voices from the*

typically relegated to early-grade instruction or treated as subjects rather than mediums of instruction. This results in the underdevelopment of the cognitive and academic potential of learners in their mother tongues.⁹ In many rural areas, learners experience a linguistic disjuncture between their home languages and the languages of teaching and learning (LoLT), which undermines both their cultural identity and academic performance.¹⁰ This disconnect is further exacerbated in digital spaces, where Indigenous languages are barely represented in educational apps, websites, and platforms. Tshivenda, like many African languages, suffers from a lack of digitized educational content, which places its speakers at a disadvantage in the technologically mediated classroom.¹¹ The marginalization of these languages in the digital era requires intentional efforts to revalorize and integrate them into contemporary learning ecosystems.

There are obstacles to promoting Indigenous languages such as Tshivenda in both public perception and policy implementation. According to Probyn, even in cases where policy allows it, parents and educators tend to see English as a means of achieving socioeconomic success, which results in a decrease in support for mother-tongue instruction.¹² As a result, there is a growing demand for education in English, which further reduces funding for Indigenous language resources such as curriculum development and teacher training. Furthermore, a major obstacle is still teacher preparation; many teachers lack the necessary training to instruct in Indigenous languages, and there are not enough resources available in languages like Tshivenda that are in line with the national curriculum.¹³ Indigenous language training runs the risk of continuing to be superficial rather than transformative if these structural problems are not addressed. Therefore, it is imperative to consider addressing these structural problems.

A concerted national effort is needed to digitize Indigenous languages and meaningfully integrate them into the classroom and e-learning technology to buck the current trends. Strategic investment in language technology can help close the gaps in equality and access, according to successful models from nations such as Ethiopia and Kenya that have used localized digital platforms for mother-tongue instruction.¹⁴ Collaborations among South African institutions, edtech firms, and local language boards may make it easier to create online courses, multilingual applications, and AI-enabled resources that support Tshivenda and related languages. Additionally, community-level language activism can support intergenerational transmission and language pride through initiatives such as youth digital media, Indigenous language radio, and storytelling programs.¹⁵ Elevating indigenous languages in both formal and informal educational spaces is essential to respect linguistic rights and to achieve inclusive education. Informal education involves even those who are illiterate but have indigenous knowledge to impart to those learning.

Proverbs as Pedagogical Tools

Proverbs occupy a central position in African oral traditions and serve as powerful pedagogical instruments. Amuzu postulates that they encapsulate collective wisdom, moral instruction, and culturally specific knowledge in concise and memorable forms.¹⁶ In the context of Tshivenda culture, proverbs are used not only to transmit values but also to refine linguistic skills, build reasoning capacity, and stimulate critical thinking. Scholars such as Makhado have argued that proverbs can enrich learners' understanding of metaphor, syntax, and semantics when incorporated into formal language

Global South, vol. 26 (Multilingual Matters, 2021).

⁹ Deborah Seddon, "Written out, Writing in: Orature in the South African Literary Canon," *English in Africa* 35, no. 1 (2008): 133–50.

¹⁰ A. Bamgbose, "Language and Exclusion: The Consequences of Language Policies in Africa." (Münster: LIT Verlag, 2000).

¹¹ Thapelo J Otlogetswe, "Regenerating African Languages and Cultures through Information Technology Strategies," in *The Palgrave Handbook of Everyday Digital Life* (Springer, 2024), 363–77.

¹² Margie Probyn, "Language and Learning Science in South Africa," *Language and Education* 20, no. 5 (2006): 391–414.

¹³ Stella Granville et al., "English with or without g (u) Ilt: A Position Paper on Language in Education Policy for South Africa," *Language and Education* 12, no. 4 (1998): 254–72.

¹⁴ B. Trudell, "The Impact of Language Policy and Practice on Children's Learning: Evidence from Eastern and Southern Africa." (Paris: UNESCO, 2016).

¹⁵ Tintswalo V Manyike and Soul Shava, "The Decolonial Role of African Indigenous Languages and Indigenous Knowledges in Formal Education Processes," *Indilinga African Journal of Indigenous Knowledge Systems* 17, no. 1 (2018): 36–52.

¹⁶ Amuzu, "Decolonizing African Development Education Through Indigenous Knowledge."

instruction.¹⁷ For instance, proverbs that deal with social conduct, such as “*Nwana u litshiswa mbaḁo, lufhanga u litsha nga ethe*” (A child must be warned against an axe; for the knife he stops on his own), reflect core ethical principles and offer entry points for value-based learning. According to Finnegan, the use of culturally grounded content in the classroom provides learners with familiar reference points that facilitate comprehension and participation.¹⁸ However, in many formal education systems, proverbs are undervalued and excluded from textbooks and assessments, particularly in digital contexts. This neglect is a missed opportunity to align curricula with Indigenous epistemologies and to promote a deeper, culturally resonant form of literacy.

In addition to their moral and linguistic functions, proverbs support cognitive development by encouraging learners to interpret abstract ideas and draw inferences. The layered meanings of many proverbs require interpretation, comparison, and contextual understanding, that is, skills central to higher-order thinking. For instance, learners must consider not only the literal meaning of a proverb but also its symbolic and situational relevance. This process aligns with Vygotskian theories of cognitive development, which emphasize the role of cultural tools in shaping thought.¹⁹ Proverbs, as cultural artifacts, act as scaffolds for cognitive and social learning. According to Mogra, integrating proverbs into classroom dialogue encourages dialogic learning, where students engage with peers and teachers in unpacking deeper meanings.²⁰ Such engagement nurtures metacognition and active learning, both critical to learner autonomy and academic success.

Despite these advantages, several structural and pedagogical barriers hinder the effective integration of proverbs into formal curricula. These include rigid syllabus designs, an overemphasis on standardized assessment, and a lack of teacher training in Indigenous knowledge systems. Moreover, as Stilwell argues, in digital and urban learning environments, younger generations are increasingly distanced from oral traditions, making intentional inclusion even more urgent.²¹ The challenge is not merely to insert proverbs as decorative elements in lessons, but to weave them meaningfully into lesson plans, discussions, and assessment tools. As Nyota and Mapara advocate, a decolonized curriculum must elevate Indigenous epistemologies to the same status as Eurocentric models, ensuring cultural relevance and pedagogical equity.²² Addressing these systemic gaps is essential to building inclusive educational models that reflect the lived experiences and cognitive frameworks of African learners.

Educational Technology and Indigenous Knowledge

Educational technology has revolutionized learning globally, but its benefits have not been equitably distributed across linguistic and cultural communities. Although technology-based learning has expanded access and improved outcomes in many regions, it has also reinforced the dominance of English and other global languages.²³ In African contexts, there is growing awareness that digital platforms must reflect Indigenous knowledge systems to be inclusive and culturally responsive. Ndebele asserts that integrating Indigenous knowledge, such as oral histories, proverbs, and folktales into digital formats can preserve endangered languages and empower marginalized communities.²⁴ Furthermore, Mawere insists that research has shown that when learners encounter familiar cultural content in digital learning environments, they exhibit increased motivation, identity affirmation, and

¹⁷ Avhatakali Makhado, “Reconsideration of Tshivenḁa Proverbs in Preserving Tshivenḁa Language and Culture,” *Southern African Journal for Folklore Studies* 34, no. 2 (2025): 17-pages.

¹⁸ Finnegan, *Oral Literature in Africa*.

¹⁹ L. S. Vygotsky, *Mind in Society: The Development of Higher Psychological Processes* (Harvard University Press, 1978).

²⁰ Imran Mogra, “Developing Essential Values through Traditional Tales: Voices of Malawian Primary School Teachers,” *The Bloomsbury Handbook of Religious Education in the Global South*, 2022, 273.

²¹ Christine Stilwell, “Understanding Indigenous Knowledge: Bridging the Knowledge Gap through a Knowledge Creation Model for Agricultural Development,” *South African Journal of Information Management* 12, no. 1 (2010): 1–8.

²² Shumirai Nyota and Jacob Mapara, “Shona Traditional Children’s Games and Play: Songs as Indigenous Ways of Knowing,” *Journal of Pan African Studies* 2, no. 4 (2008).

²³ Robert Chirima, “Harnessing Digital Technologies to Preserve and Promote Indigenous Knowledge Systems in Africa,” *International Journal of Innovative Science and Research Technology*, June 12, 2025, 4411–16, <https://doi.org/10.38124/ijisrt/25may1906>.

²⁴ Ndebele, “Exploring the Challenges of Information and Communication Technology Localization in South African Higher Education: A Language Management Approach.”

academic engagement.²⁵ This is especially relevant in rural and low-resource schools, where conventional instructional materials often do not reflect lived experiences of learners. The creation of apps, videos, and games that feature local languages and narratives can bridge the gap between home and school cultures. However, despite this potential, there is still a shortage of Indigenous-language educational content in digital formats, including Tshivenda. Addressing this shortfall requires collaboration between educators, software developers, and Indigenous communities to co-create culturally rooted digital learning tools.

One effective strategy for integrating Indigenous knowledge into digital education is the use of participatory design approaches, in which community members, especially elders and language experts, are involved in content development. This ensures authenticity, cultural accuracy, and community ownership of the material. For instance, community-driven platforms like African Storybook and the South African e'Pap Digital Library have shown how localized content can be developed collaboratively and used effectively in multilingual classrooms.²⁶ These initiatives demonstrate that educational technology can serve not just as a transmission tool, but as a means of cultural preservation and revitalization. Incorporating Tshivenda proverbs, for example, into digital storytelling apps or interactive quizzes can both preserve linguistic nuances and make learning engaging and contextually grounded.

Nevertheless, systemic barriers continue to inhibit the meaningful digitization of Indigenous knowledge. These include limited internet access in rural areas, underfunded education sectors, and a lack of policy frameworks that prioritize linguistic diversity and Indigenous content creation. According to Heugh, language policy in many African countries still marginalizes local languages in favour of international ones, making it difficult to justify investment in localized digital content.²⁷ Furthermore, educational technology companies often prioritize scalability and commercial viability, overlooking the unique needs of small language groups such as Tshivenda speakers. Overcoming these challenges requires a shift in both policy and funding models to prioritize inclusivity, sustainability, and the recognition of Indigenous epistemologies as valuable knowledge systems in their own right.

Toward a Digitally Inclusive and Culturally Sustaining Pedagogy

A conscious transition from content replication to cultural integration is necessary to develop a pedagogy that is both digitally inclusive and culturally sustainable. Ndlovu and Makalela maintain that a lot of digital learning resources in African contexts still emphasize standardized content that has little bearing on the cultural contexts of learners, mirroring colonial educational methods.²⁸ In addition to supporting the incorporation of Indigenous knowledge systems, a culturally sustaining approach emphasizes their importance in influencing digital content, methodology, and evaluation. This requires acknowledging proverbs as tools for identity development, ethical reflection, and critical thinking rather than just as language artifacts. Gay, supported by Otlogetswe, asserts that proverbs become more than just ornaments when placed in digital contexts; they become tools for empowerment that validate learners' cultural history and give learning greater significance.²⁹ Learners even enjoy using digital contexts in their learning.

Equitable access to the resources, training, and infrastructure teachers and learners need to interact with culturally appropriate content is another aspect of digital inclusion. For instance, rural schools need open-source educational software, offline-capable equipment, and training that enables instructors to select and co-create local content.³⁰ The incorporation of Tshivenda proverbs or other comparable cultural aspects runs the risk of remaining symbolic rather than systemic in the absence of

²⁵ Mawere, "Indigenous Knowledge and Public Education in Sub-Saharan Africa."

²⁶ Eduardo Enrique Sandoval-Obando et al., "Pedagogical Strategies to Promote Mediated Learning Experiences in Vulnerable Contexts," *Universitas Psychologica* 17, no. 5 (2018): 1–13.

²⁷ Kathleen Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections," *Annual Review of Applied Linguistics* 33 (March 29, 2013): 215–37, <https://doi.org/10.1017/S0267190513000135>.

²⁸ Ndlovu and Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*.

²⁹ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*; Otlogetswe, "Regenerating African Languages and Cultures through Information Technology Strategies."

³⁰ Sandoval-Obando et al., "Pedagogical Strategies to Promote Mediated Learning Experiences in Vulnerable Contexts."

these facilitators. To prevent local languages from being marginalized in favour of prevailing linguistic and cultural norms, policymakers must also encourage the creation and financing of multilingual, Indigenous-focused edtech projects.³¹ Without financial support, the recognition of Indigenous knowledge becomes difficult.

Lastly, a pedagogy that is both culturally sustainable and inclusive of digital technology is inherently participative. It bridges generational and technical gaps by presenting learners, teachers, elders, and technologists as co-constructors of knowledge. As explained by Ndebele, with the use of digital tools and cultural awareness gained by young people, this participatory strategy promotes reciprocal learning and builds mutual respect and a sense of purpose.³² Learners are more likely to feel inspired and validated when they see their languages, narratives, and worldviews represented in their digital classes; this promotes better learning outcomes and greater cultural continuity. Therefore, rethinking education from the perspectives of equality, Indigenous agency, and cultural relevance is the way forward, rather than just digitizing it.

The Gap in Existing Research

There is a significant lack of research explicitly addressing the incorporation of African proverbs into digital learning settings, although many studies have examined the function of digital technology in language instruction. Most current research ignores the epistemic relevance of Indigenous oral traditions as teaching aids and is based on Western e-learning paradigms.³³ Additionally, according to Ndebele, studies on digital tools in African education frequently focus on English or other dominant languages, paying little attention to how digital pedagogies can leverage culturally entrenched features such as proverbs.³⁴ It is high time that these digital pedagogic uses indigenous languages. Given the established advantages of culturally relevant content in improving learner engagement, comprehension, and identity development, this mistake is noteworthy.³⁵ English is a colonial language; therefore, it needs to be replaced by languages known by native speakers.

There is a dearth of empirical data on learners' reactions to digital content that integrates Indigenous languages and cultural expressions, despite the continent's increasing access to digital technologies, even in remote regions. No thorough research has examined the digitization of proverbs as a way to enhance language training and advance cultural education in the particular context of Tshivenda. By examining the application of Tshivenda proverbs in multimedia formats to provide meaningful learning experiences, enhance linguistic comprehension, and validate learners' cultural identities, this study aims to close that gap.

The integration of proverbs into digital learning environments is supported by several educational theories that emphasize the importance of context, identity, and prior knowledge in effective pedagogy. Bruner contends that constructivist frameworks, for example, posit that learners build new knowledge by connecting it to existing cultural and experiential frameworks.³⁶ Proverbs, as culturally situated expressions of collective wisdom, serve as ideal anchors for such connections. Furthermore, as Gay stated, culturally responsive pedagogy underscores the importance of integrating cultural references of learners in all aspects of learning.³⁷ When proverbs are digitized and presented through multimedia formats such as videos, animations, or interactive storytelling, they not only convey language skills but also embed cultural logic, moral reasoning, and social values. This aligns with Freire's concept of

³¹ Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections."

³² Ndebele, "Exploring the Challenges of Information and Communication Technology Localization in South African Higher Education: A Language Management Approach."

³³ Seddon, "Written out, Writing in: Orature in the South African Literary Canon"; Ndhlovu and Makalela, *Decolonising Multilingualism in Africa: Recentring Silenced Voices from the Global South*.

³⁴ Ndebele, "Exploring the Challenges of Information and Communication Technology Localization in South African Higher Education: A Language Management Approach."

³⁵ Mawere, "Indigenous Knowledge and Public Education in Sub-Saharan Africa."

³⁶ Jerome Bruner, "What We Have Learned about Early Learning," *European Early Childhood Education Research Journal* 4, no. 1 (January 1996): 5–16, <https://doi.org/10.1080/13502939685207811>.

³⁷ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

“dialogical learning,” where learners learn best when their worldviews are validated and explored in the learning process.³⁸

A multi-stakeholder strategy is necessary to guarantee the successful digitization and pedagogical use of Tshivenda proverbs. To guarantee pedagogical relevance, language authenticity, and cultural accuracy, curriculum designers, software developers, educators, and community elders must work together. Native speakers' audio pronunciations, elders' contextual explanations, and interactive tests that test students' ability to apply proverbs to actual situations are a few examples of digital content. To reach students in underserved locations, these platforms also need to be made available offline and on devices with limited bandwidth. These tools can be further improved through user testing and pilot projects based on feedback from instructors and students. In the end, the goal is to make Indigenous knowledge a viable, useful component of modern education in addition to preserving it by enhancing both language acquisition and cultural fluency in a digital age.

METHODOLOGY

This study employed a qualitative case study design, focusing on two rural primary schools in the Vhembe District, Limpopo Province. The research aimed to understand how Tshivenda proverbs can be used in digital formats to enhance learning and identity among Grade 5 and Grade 6 learners. To ensure the credibility and trustworthiness of the study, multiple validation strategies were incorporated throughout the research process.

Participants

The study involved 66 participants, purposefully selected to provide rich insights into the integration of Tshivenda proverbs in digital education contexts. Participants included four Tshivenda teachers, sixty primary school learners aged 11 to 13, and two curriculum specialists. Triangulation was used by gathering data from multiple sources, that is, teachers, learners, and curriculum specialists, to improve the reliability of findings.

Tshivenda language educators were sampled because all of them had prior experience using digital tools in the classroom and were actively involved in the delivery of the proverb-based digital lessons. The member checks were conducted with these teachers to validate the interpretation of the qualitative data and ensure that their perspectives were accurately represented.

Learners were drawn from two intermediate-phase classrooms. These learners had varying levels of proficiency in Tshivenda and were regularly exposed to bilingual instruction. To support the confirmability of the data, learner responses were cross-referenced with classroom observations and teacher feedback.

Two curriculum specialists were needed to provide expert input on the alignment of the digital content with national curriculum standards and culturally responsive teaching principles. Inclusion of these specialists also served as expert validation, confirming the educational relevance and cultural relevance of the digital interventions.

For all participants, purposeful sampling was used to ensure that they met the basic technical requirements of the study. Specifically, participants were drawn from schools with access to functional tablets and school-based Wi-Fi to facilitate the smooth integration of digital learning activities. The sample was also selected to represent a rural–peri-urban mix, allowing for an exploration of how context influences learners' interaction with digital content rooted in Indigenous knowledge systems. An audit trail was maintained to document the decision-making process throughout participant selection and data collection, further enhancing the dependability of the study.

Data Collection

Data for this study was collected over a period of eight weeks, designed to capture qualitative case study insights. The aim was to explore the integration of Tshivenda proverbs in digital education

³⁸ P. Freire, *Pedagogy of the Oppressed* (New York: Herter and Herter, 1970).

platforms and assess their impact on learner engagement, cultural understanding, and language development.

The following four data collection methods were used:

- Observations in the Classroom were done where real-time classroom settings were used to monitor digital lessons that integrated Tshivenda proverbs. During these sessions, researchers were able to observe how students interacted with digital content, how engaged they were, and how teachers employed instructional tactics in proverb-based classes.
- Focus Group Discussions were involved to encourage reflection on their experiences. Learners who took part in the online courses were divided into small focus groups. The conversations examined how the learners viewed the courses, how well they understood the proverbs, and how the material connected to their linguistic and cultural identities.
- Semi-structured Interviews with Teachers were conducted to learn more about their experiences, difficulties, and opinions on the educational usefulness of incorporating Tshivenda proverbs into technology-enhanced learning. Teachers who were involved in the execution of the digital lessons were interviewed.
- Evaluation of Quiz Results and Learner Digital Activities were also part of the data collection. Here, interactive tests and online exercises incorporated into the course material were used to gather information on student performance. To gauge understanding and involvement, this involved monitoring completion rates, accuracy, and the kinds of answers students provided.

Together, these methods provided a comprehensive view of how culturally grounded content can enhance digital education practices and support Indigenous language learning.

Data Analysis

Data was analyzed using thematic analysis. Codes were developed around learner engagement, comprehension, cultural expression, and teacher perceptions. NVivo 12 software was used for qualitative coding and analysis.

PRESENTATION OF FINDINGS AND DISCUSSION

Enhanced Learner Engagement

Learner engagement was greatly increased in all the classrooms that were observed when Tshivenda proverbs were incorporated into digital learning resources. Particularly successful in holding learners' attention were multimedia elements, including interactive quizzes with cultural themes, audio narrations by local elders, and animated proverb explanations. Compared to regular digital content sessions, teachers consistently indicated that learners showed higher levels of attentiveness, involvement, and enthusiasm during classes that used proverbs.

According to observation notes, learners reacted favourably to the familiarity and cultural resonance of the materials. “*Ndo tou pfa u nga ndi hayani vhunga makhulu wanga vha tshi khou talutshedza zwiṭori*” (It felt like home, like how my grandmother tells stories,) a learner said in one focus group. In addition to increasing motivation, this emotional and cultural bond also appeared to lessen classroom anxiety, particularly for students who usually had trouble understanding English in classes that were dominated by it.

These results corroborate Ndebele's claim that learner motivation and engagement are increased by digital content with a cultural foundation. Learners are more likely to view learning as relevant and empowering when instructional materials take into account their linguistic identities and life experiences.³⁹ This result also supports Gay's notion of culturally responsive education, which highlights how important cultural familiarity is for maintaining learner attention and raising academic achievement.⁴⁰

³⁹ Ndebele, “Exploring the Challenges of Information and Communication Technology Localization in South African Higher Education: A Language Management Approach.”

⁴⁰ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

Improved Language Comprehension

When proverbs were included in relevant, contextualized digital lessons, learners' comprehension of Tshivenda vocabulary and syntactic structures significantly improved. For instance, the adage "*Nwana hu la a lilaho*" (It is the child who cries who eats) was skilfully included in a digital lecture on food security, allowing learners to relate the proverb's linguistic and abstract moral components to concrete, everyday situations. Complex grammatical patterns and subtle language that could otherwise remain abstract or challenging to understand in isolation were demythologized thanks to this contextualization.

Compared to traditional language activities, an analysis of learner quiz results revealed improved accuracy in vocabulary recognition and sentence construction pertaining to proverb-based content. These results support Makhado's claim that proverbs offer rich linguistic information to investigate syntax, semantics, and metaphor in Indigenous languages. By engaging several learning modalities, the dynamic digital presentation that combined interactive text, audio, and visuals, further reinforced language acquisition.⁴¹

Further evidence that the digital integration of these ancient forms goes beyond rote learning comes from learners' capacity to understand proverbs in larger social and ethical settings. It supports the growth of critical thinking abilities and language proficiency by promoting deeper cognitive processing. This supports the idea put forth by Amuzu that proverbs are effective teaching tools that foster reflective thinking and improve linguistic proficiency.⁴²

Cultural Identity and Expression

When they heard and saw their mother tongue language and cultural heritage portrayed in the digital learning resources, learners often experienced a great sense of pride and affirmation. By incorporating Tshivenda proverbs into multimedia formats, the instructional material became more relatable to learners and helped them develop a stronger bond with their cultural identities. Several learners mentioned in focus group discussions how the lessons helped them feel appreciated and acknowledged in the school setting, which frequently gives preference to dominant languages and cultures.

This result supports the claim made by Gay that culturally relevant pedagogy strengthens learners' cultural identification and self-esteem in addition to improving cognitive engagement.⁴³ Learners' lived experiences are validated and a positive self-concept is fostered when they witness their languages and traditions being meaningfully incorporated into formal schooling. Furthermore, in linguistically and culturally diverse classrooms, alienation and disengagement are frequent problems that can be prevented by this cultural affirmation.

In addition to encouraging conversations about their origins and values, the display of Tshivenda proverbs helped to foster a classroom culture that honours Indigenous knowledge systems. Skutnabb-Kangas and Phillipson's claim that maintaining Indigenous languages via education is essential to protecting cultural identities and empowering marginalized groups is supported by this experience validation.⁴⁴ In the end, incorporating cultural expression into online learning environments has the potential to revolutionize the development of academic achievement and linguistic pride.

Teacher Reflections

Teachers stated that their ability to provide value-based instruction was greatly improved by incorporating Tshivenda proverbs into digital lectures. They found that when proverbs were included in multimedia formats, they served as useful starting points for talking about difficult moral and societal ideas that students occasionally found difficult or abstract in traditional instructional formats. Through interactive exercises, narrated stories, and animations, the digital presentations gave teachers flexible tools to contextualize and explain these concepts, encouraging deeper student thought and discussion.

Several teachers stressed that the proverb-based material encouraged critical thinking skills by allowing learners to examine the underlying ideas and connect them to their own experiences as well

⁴¹ Makhado, "Reconsideration of Tshivenda Proverbs in Preserving Tshivenda Language and Culture."

⁴² Amuzu, "Decolonizing African Development Education Through Indigenous Knowledge."

⁴³ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

⁴⁴ Skutnabb-Kangas and Phillipson, "Linguistic Human Rights."

as those of their communities. This supports Amuzu's claim that proverbs are educational tools that foster ethical consciousness and reasoning in addition to being linguistic artifacts.⁴⁵ The more learner involvement and the simplicity with which digital platforms enabled differentiated instruction to meet a range of learning needs and preferences were also valued by teachers.

Teachers also emphasized how the inclusion of culturally recognized proverbs helped close the generational divide because the elders' words in the audio clips reaffirmed the value of Indigenous knowledge. This method validates learners' cultural backgrounds and improves teacher-learner connections, which fosters the development of culturally responsive teaching as promoted by Gay.⁴⁶ The digital incorporation of Tshivenda proverbs was generally seen by teachers as a useful educational innovation that enhances language training and fosters the holistic development of learners.

RECOMMENDATIONS

Based on the findings and discussion, it is recommended that:

- Curriculum designers should embed Indigenous proverbs in digital teaching resources to support culturally responsive learning.
- Government and NGOs should fund the development of language-specific educational apps incorporating oral traditions.
- Teachers should be trained to create multimedia content that leverages local linguistic and cultural assets.
- Researchers should further explore the impact of proverbs on learning outcomes in multilingual, digitally connected classrooms.

CONCLUSION

This study has investigated the effective integration of Tshivenda proverbs into digital learning environments. This study has revealed that the integration of Tshivenda proverbs into digital education platforms improves learner engagement, language development, and cultural pride. By harnessing multimedia tools and culturally grounded pedagogy, teachers can promote inclusive, relevant, and effective Indigenous language learning. This approach aligns with South Africa's goals of decolonizing education while embracing the affordances of educational technology.

BIBLIOGRAPHY

- Amuzu, Delali. "Decolonizing African Development Education Through Indigenous Knowledge." In *Reimagining Development Education in Africa*, 39–54. Cham: Springer International Publishing, 2022. https://doi.org/10.1007/978-3-030-96001-8_3.
- Bamgbose, A. "Language and Exclusion: The Consequences of Language Policies in Africa. ." Münster: LIT Verlag, 2000.
- Brock-Utne, Birgit. "Education for All-in Whose Language?" *Oxford Review of Education* 27, no. 1 (2001): 115–34.
- Bruner, Jerome. "What We Have Learned about Early Learning." *European Early Childhood Education Research Journal* 4, no. 1 (January 1996): 5–16. <https://doi.org/10.1080/13502939685207811>.
- Carney, Stephen. *Reimagining Our Futures Together: A New Social Contract for Education: By UNESCO, Paris, UNESCO, 2021, 186 Pages, ISBN 978-92-3-100478-0*. Vol. 58. Taylor & Francis, 2022.
- Chirima, Robert. "Harnessing Digital Technologies to Preserve and Promote Indigenous Knowledge Systems in Africa." *International Journal of Innovative Science and Research Technology*, June 12, 2025, 4411–16. <https://doi.org/10.38124/ijisrt/25may1906>.
- Finnegan, R. *Oral Literature in Africa*. Cambridge: Open Book Publishers, 2012.
- Freire, P. *Pedagogy of the Oppressed*. New York: Herter and Herter, 1970.

⁴⁵ Amuzu, "Decolonizing African Development Education Through Indigenous Knowledge."

⁴⁶ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

- Gay, Geneva. *Culturally Responsive Teaching: Theory, Research, and Practice*. Teachers College Press, 2018.
- Granville, Stella, Hilary Janks, Magauta Mphahlele, Yvonne Reed, Peter Watson, Michael Joseph, and Esther Ramani. "English with or without g (u) Ilt: A Position Paper on Language in Education Policy for South Africa." *Language and Education* 12, no. 4 (1998): 254–72.
- Heugh, Kathleen. "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections." *Annual Review of Applied Linguistics* 33 (March 29, 2013): 215–37. <https://doi.org/10.1017/S0267190513000135>.
- Makhado, Avhatakali. "Reconsideration of Tshivenda Proverbs in Preserving Tshivenda Language and Culture." *Southern African Journal for Folklore Studies* 34, no. 2 (2025): 17–pages.
- Manyike, Tintswalo V, and Soul Shava. "The Decolonial Role of African Indigenous Languages and Indigenous Knowledges in Formal Education Processes." *Indilinga African Journal of Indigenous Knowledge Systems* 17, no. 1 (2018): 36–52.
- Mawere, Munyaradzi. "Indigenous Knowledge and Public Education in Sub-Saharan Africa." *Africa Spectrum* 50, no. 2 (2015): 57–71.
- Mogra, Imran. "Developing Essential Values through Traditional Tales: Voices of Malawian Primary School Teachers." *The Bloomsbury Handbook of Religious Education in the Global South*, 2022, 273.
- Msila, Vuyisile. "Bringing Africa into New Epistemologies: Rethinking the University in Africa." *Journal of Educational Research and Reviews* 10, no. 3 (2022): 29–37.
- Ndebele, Hloniphani. "Exploring the Challenges of Information and Communication Technology Localization in South African Higher Education: A Language Management Approach." *International Journal of Multilingualism* 19, no. 3 (2022): 368–82.
- Ndhlovu, Finex, and Leketi Makalela. *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*. Vol. 26. Multilingual Matters, 2021.
- Nyota, Shumirai, and Jacob Mapara. "Shona Traditional Children's Games and Play: Songs as Indigenous Ways of Knowing." *Journal of Pan African Studies* 2, no. 4 (2008).
- Otlogetswe, Thapelo J. "Regenerating African Languages and Cultures through Information Technology Strategies." In *The Palgrave Handbook of Everyday Digital Life*, 363–77. Springer, 2024.
- Probyn, Margie. "Language and Learning Science in South Africa." *Language and Education* 20, no. 5 (2006): 391–414.
- Sandoval-Obando, Eduardo Enrique, Alberto Moreno Doña, Katherina Walper Gormáz, Diana Leguizamón Martínez, and Matías Salvador Bertone. "Pedagogical Strategies to Promote Mediated Learning Experiences in Vulnerable Contexts." *Universitas Psychologica* 17, no. 5 (2018): 1–13.
- Seddon, Deborah. "Written out, Writing in: Orature in the South African Literary Canon." *English in Africa* 35, no. 1 (2008): 133–50.
- Skutnabb-Kangas, Tove, and Robert Phillipson. "Linguistic Human Rights." *Berlin: Mouton de Gruyter*, 1995.
- Stilwell, Christine. "Understanding Indigenous Knowledge: Bridging the Knowledge Gap through a Knowledge Creation Model for Agricultural Development." *South African Journal of Information Management* 12, no. 1 (2010): 1–8.
- Trudell, B. "The Impact of Language Policy and Practice on Children's Learning: Evidence from Eastern and Southern Africa." Paris: UNESCO, 2016.
- Vygotsky, L. S. *Mind in Society: The Development of Higher Psychological Processes*. Harvard University Press, 1978.

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