

Gamifying Indigenous Wisdom: Leveraging Tshivenda Proverbs to Enhance Learner Engagement in Digital Education



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ABSTRACT

The integration of educational technology into classrooms has revolutionized traditional pedagogies, yet Indigenous languages and knowledge systems remain underrepresented in digital learning environments. This study investigates the pedagogical potential of gamifying Tshivenda proverbs to enhance learner engagement and cultural identity among primary school learners in South Africa. Tshivenda proverbs are rich in moral instruction, critical reasoning, and linguistic expression, yet they are largely excluded from modern curricula and digital resources. Employing a qualitative case study approach, this research involved the design and implementation of a gamified digital lesson centred on Tshivenda proverbs in two rural schools in Limpopo Province. Data was collected through classroom observations, semi-structured teacher interviews, and learner feedback journals. The findings indicate that gamification significantly increased learner motivation, language retention, and cultural awareness. Learners were more enthusiastic and participated actively when engaging with familiar cultural content presented in interactive formats. Teachers also reported improved learner attention and deeper discussions related to moral values embedded in the proverbs. The study underscores the importance of culturally responsive pedagogy and offers practical insights into how Indigenous knowledge systems can be revitalized through digital innovation. The research contributes to a growing body of literature on decolonizing education through technology and highlights gamification as a strategic tool for inclusive, meaningful learning experiences.

Keywords: Gamification, Tshivenda Proverbs, Indigenous Knowledge, Learner Engagement, Digital Education

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Publication History

Received:

14th July, 2025

Accepted:

11th October, 2025.

Published:

30th December, 2025.

To Cite this Article:

Makhado, Avhatakali Jonathan. "Gamifying Indigenous Wisdom: Leveraging Tshivenda Proverbs to Enhance Learner Engagement in Digital Education." *Journal of Education and Learning Technology* 6, no. 12 (2025): 1622 - 1631. <https://doi.org/10.38159/jelt.202561228>

INTRODUCTION

Digital technology is more influential in education in the twenty-first century than before, providing creative opportunities to change the way knowledge is imparted, accessed, and experienced. However, digital transformation has not taken Indigenous languages and epistemologies into account in many African contexts, particularly in rural and historically oppressed populations. Ndhlovu and Makalela assert that the successful integration of Indigenous languages, including Tshivenda, into both traditional curriculum and online learning environments remains a challenge for South Africa, despite its progressive language policy

that acknowledges 11 official languages.¹ Additionally, Parmegiani posits that the majority of instruction and learning still takes place in English, frequently to the detriment of learners who speak African languages at home.² This way of using English delays learners in acquiring knowledge at the expected rate.

Oral traditions, including storytelling, folktales, and proverbs, have long been important for character development and knowledge transfer in Indigenous African communities. Particularly, Tshivenda proverbs represent the morals, beliefs, and worldviews of the Vhavenda people. Mphahlele and Mashamaite claim that these proverbs are sophisticated teaching tools that foster critical thinking, language proficiency, and ethical consciousness rather than just being linguistic expressions.³ Because of a curriculum that emphasizes Western knowledge systems and a lack of resources for Indigenous language development, Tshivenda proverbs, despite their instructional potential, are being removed from modern learning environments, particularly digital ones.⁴ Eurocentric-related curriculum is posing a threat to the development of the African home language.

Language is closely linked to cognition and identity, and learners who receive instruction in their mother tongue tend to perform better academically.⁵ However, the continued dominance of colonial languages in educational systems has marginalized Indigenous languages, leading to language shift and loss. In this regard, innovative strategies that combine technology and Indigenous knowledge offer promising avenues to reverse these trends and support multilingual education frameworks advocated by South Africa's National Development Plan. As a result, the preservation and promotion of Indigenous languages, like Tshivenda, is not only a matter of cultural heritage but also a critical educational imperative.

Furthermore, there are more possibilities for incorporating digital learning resources designed for Indigenous contexts influenced by the growth of mobile technology and rising internet access in rural South Africa. On that note, Taiwo and Adande postulate that digital education efforts have demonstrated the ability to reach remote populations and engage learners outside of typical classroom settings, despite infrastructure limitations.⁶ By using gamification in this context, learners can be empowered to take an active role in their educational journeys by converting passive information consumption into interactive experiences. Language acquisition is improved, and learners are reconnected with cultural wisdom when Tshivenda proverbs are included in gamified platforms. This creates a sense of continuity in the face of swift societal change.

Globally, gamification, which is the application of game design features outside of games, has become a popular tactic to increase learner motivation, engagement, and participation.⁷ Particularly for young people who are digital natives, well-crafted gamified learning experiences can promote greater learner engagement and cognitive activation.⁸ Gamification is still not widely used in South Africa; nevertheless, it is rarely used for Indigenous material. This study aims to close this gap by investigating how Tshivenda proverbs might be digitized through gamification to enhance language acquisition and fortify cultural identity.

One intriguing but little-studied issue is the relationship between gamification and Indigenous knowledge systems. Through the use of well-known cultural narratives in interactive formats, learners can

¹ Finex Ndhlovu and Leketi Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*, vol. 26 (Multilingual Matters, 2021).

² Andrea Parmegiani, "Language, Power and Transformation in South Africa: A Critique of Language Rights Discourse," *Transformation: Critical Perspectives on Southern Africa* 78, no. 1 (2012): 74–97, <https://doi.org/10.1353/trn.2012.0042>.

³ L. M. Mphahlele and K. Mashamaite, "The Didactic Function of Proverbs in African Languages: A Case Study of Tshivenda and Northern Sotho," *South African Journal of African Languages* 41, no. 1 (2021): 15–26.

⁴ Syden Mishi and Godfred Anakpo, "Digital Gap in Global and African Countries: Inequalities of Opportunities and COVID-19 Crisis Impact," *Digital Literacy, Inclusivity and Sustainable Development in Africa*, 2022, 1.

⁵ Ndhlovu and Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*.

⁶ Abdulkareem Taiwo and Abdulazeez Adande, "Gaming and Gamification in Physical and Health Education: Problems and Prospects," March 1, 2024, 78–84.

⁷ Karl M. Kapp, *The Gamification of Learning and Instruction Fieldbook: Ideas into Practice* (John Wiley & Sons, 2013).

⁸ Adrián Domínguez et al., "Gamifying Learning Experiences: Practical Implications and Outcomes," *Computers & Education* 63 (April 2013): 380–92, <https://doi.org/10.1016/j.compedu.2012.12.020>.

develop their language proficiency while simultaneously reflecting on and thinking critically about their values. This strategy supports the integration of learners' cultural references into all facets of learning, which is in line with Culturally Responsive Pedagogy.⁹ The study thus explores how gamified Tshivenda proverbs might provide a culturally affirming educational experience, encourage Indigenous language development, and improve learner engagement.

LITERATURE REVIEW

The Role of Indigenous Proverbs in Education

Proverbs have long served as archives of social knowledge, moral guidance, and cultural identity. They function as teaching tools that influence worldview, encourage moral reasoning, and support language development in addition to being ornamental speech in African oral traditions.¹⁰ Like those from other African languages, Tshivenda proverbs are frequently utilized in homes and at community events to teach the younger generation. They do this by condensing complicated ideas into short forms. Mphahlele and Mashamaite assert that using proverbs in the classroom fosters critical reflection, figurative language interpretation, and the application of abstract ideas to practical situations.¹¹

Proverbs are underutilized in formal education systems, particularly when it comes to digital content design, despite their abundant educational potential. Despite having an inclusive language policy on paper, the South African curriculum frequently disregards oral traditions in practice in favour of standardized, Westernized literacy approaches.¹² Proverbs can enhance learners' language skills and foster cultural relevance when incorporated into teaching methods. In the face of cultural deterioration brought on by globalization and linguistic change, proverbs promote the transfer of knowledge between generations, which is particularly crucial.

Gamification as a Pedagogical Innovation

To make educational activities more interesting and motivating, the introduction of gamification, which entails incorporating aspects of gaming, like competition, point scoring, and interactive assignments, becomes interesting.¹³ Gamification in education is justified by its capacity to maintain learner interest, promote goal-oriented behaviour, and activate intrinsic motivation.¹⁴ Gamified learning environments frequently result in more involvement, better learning outcomes, and greater information retention, according to research conducted in a variety of international contexts.¹⁵

However, gamification is still mostly underutilized in African education, and when it is used, it frequently concentrates on English or Afrikaans-language subjects like Science and Maths. There is a deficit in culturally grounded digital learning since indigenous content is rarely gamified.¹⁶ Gamification needs to take into account the sociocultural circumstances and linguistic reality of the learners in order to be successful and meaningful in multilingual, multicultural settings. It is possible to create interesting and culturally genuine content by incorporating Tshivenda proverbs into gamified educational platforms.

⁹ Geneva Gay, *Culturally Responsive Teaching: Theory, Research, and Practice* (Teachers College Press, 2010).

¹⁰ R. Finnegan, *Oral Literature in Africa* (Cambridge: Open Book Publishers, 2012).

¹¹ Mphahlele and Mashamaite, "The Didactic Function of Proverbs in African Languages: A Case Study of Tshivenda and Northern Sotho."

¹² Ndhlovu and Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*.

¹³ Kapp, *The Gamification of Learning and Instruction Fieldbook: Ideas into Practice*.

¹⁴ Sebastian Deterding et al., "From Game Design Elements to Gamefulness," in *Proceedings of the 15th International Academic MindTrek Conference: Envisioning Future Media Environments* (New York, NY, USA: ACM, 2011), 9–15, <https://doi.org/10.1145/2181037.2181040>.

¹⁵ Domínguez et al., "Gamifying Learning Experiences: Practical Implications and Outcomes"; Michael Sailer et al., "How Gamification Motivates: An Experimental Study of the Effects of Specific Game Design Elements on Psychological Need Satisfaction," *Computers in Human Behavior* 69 (April 2017): 371–80, <https://doi.org/10.1016/j.chb.2016.12.033>.

¹⁶ Taiwo and Adande, "Gaming and Gamification in Physical and Health Education: Problems and Prospects."

Indigenous Languages and Digital Inclusion

Indigenous languages are in danger of going extinct worldwide, primarily as a result of their lack of formal education and scant digital representation.¹⁷ Despite being recognized by the constitution, the majority of Indigenous languages in South Africa do not have enough digital resources, educational applications, or instructional tools. This digital exclusion impedes attempts to decolonize learning environments and maintains disparities in access to culturally relevant education.¹⁸

Digital technologies can be effective instruments for language preservation if they are used inclusively. Indigenous languages can be resurrected and presented to younger generations in interesting ways through gamified learning, multimedia applications, and narrative platforms. Mishi and Anakpo contend that the development of easily navigable, regionally relevant information is just as important to language survival in the digital age as legislation.¹⁹ One such strategy is gamifying Tshivenda proverbs, which incorporates language into interactive experiences to boost usage and visibility.

Culturally Responsive Pedagogy and Learner Motivation

When designing and delivering education, Culturally Responsive Pedagogy (CRP) places the learner's cultural background at the centre. According to Gay, when learners see their identity, language, and experiences represented in the lessons they are learning, they become more motivated and perform better.²⁰ CRP promotes diversity and authenticity in the delivery of content while challenging the prevailing practices in curriculum creation.

CRP serves as a vital link between the cultures of the home and the school in South African classrooms, where learners are taught in English but frequently speak African languages at home.²¹ Teachers can promote a sense of pride and belonging by gamifying classes by including Tshivenda proverbs, which are well-known and significant to many learners. When learners believe the content is pertinent, relatable, and validating of who they are, their motivation levels rise. Gamification of Indigenous content is, therefore, a culturally transformational instructional approach as well as a technology breakthrough.

METHODOLOGY

Research Design

The pedagogical impact of gamifying Tshivenda proverbs among primary school learners in South Africa's Limpopo Province was investigated in this study using a qualitative case study design. To acquire a deeper understanding of learners' experiences, cultural views, and engagement patterns, a qualitative approach was selected. According to Yin, the case study approach is especially well-suited for contextual investigations in which it is difficult to distinguish between the phenomena and their surroundings.²² The researcher was able to investigate the use of gamification in authentic classroom settings while taking linguistic and cultural considerations into account, brought about by this design.

Research Setting and Participants

Tshivenda is the primary home language, and a language taught in two rural public primary schools where the study was carried out. The schools were specifically chosen because they have access to basic ICT infrastructure and were willing to incorporate digital instructional tools. There were 48 learners from Grades 5 and 6 (ages 10–13), and two Tshivenda language teachers participated. To guarantee agreement with the

¹⁷ Mishi and Anakpo, "Digital Gap in Global and African Countries: Inequalities of Opportunities and COVID-19 Crisis Impact."

¹⁸ M. Nkondo, "Decolonising the Digital: Rethinking Technological Futures in Africa.," *Critical African Studies* 11, no. 3 (2019): 289–303.

¹⁹ Mishi and Anakpo, "Digital Gap in Global and African Countries: Inequalities of Opportunities and COVID-19 Crisis Impact."

²⁰ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

²¹ Ndhlovu and Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*.

²² R. K. Yin, *Case Study Research: Design and Methods*, 5th ed. (SAGE Publications, 2014).

study's goals, the participants were chosen using purposive sampling, specifically teachers with experience in teaching Indigenous languages and learners who could read and comprehend Tshivenda proverbs.

Development of Gamified Learning Tool

Using interactive quiz and narrative platforms like Kahoot! and BookWidgets, a gamified digital learning module was created and modified for offline use. The curriculum included matching games, contextual narrative exercises, and multiple-choice presentations of Tshivenda proverbs. To increase learner motivation, each game featured badges, advancement stages, and a score. Proverbs were chosen with input from Tshivenda language experts and teachers based on grammatical complexity, moral themes, and community usage frequency.

DATA COLLECTION AND ANALYSIS

Data Collection Methods

To understand the effects of gamifying Tshivenda proverbs on learner engagement and cultural awareness, three qualitative data collection methods were employed:

a) Classroom Observations

During and after the gamified teachings were implemented, observations were made in the classroom. Learner behaviour, interaction patterns, engagement levels, and reactions to the proverbs incorporated into the games were all documented by the researcher using an observation checklist. Participation, vocal comments, peer collaboration, and emotional displays like excitement, frustration, or curiosity were given special consideration.

b) Semi-Structured Teacher Interviews

Using a semi-structured approach, two Tshivenda language teachers who led the gamified courses were questioned. Their opinions on learner engagement, the content's cultural relevance, observable behavioural shifts in learners, and the possibility of incorporating Indigenous knowledge into digital learning platforms were the main topics of the questions. After being audio recorded, the interviews were transcribed for examination.

c) Learner Feedback Journals

After the gamified sessions, learners were asked to complete brief feedback journal entries (in either Tshivenda or English), reflecting on their experiences. Prompts included what they enjoyed, what they learned, and how the games made them feel about their language and culture. These journals provided insight into learners' perspectives and emotional engagement with the material.

d) Data Analysis

Thematic content analysis was used to find themes and patterns in the learner journals, interview transcripts, and observation notes. The analysis was conducted using the six-phase method proposed by Braun and Clarke: familiarization with the data, creation of initial codes, topic search, theme review, theme definition and naming, and report production.²³

During the first round of manual coding, recurrent themes were categorized under the following general headings: (1) learner participation and engagement, (2) cultural connection and identity, (3) language understanding and retention, and (4) difficulties faced. Data triangulation was used to validate themes, comparing results from several data sources to guarantee reliability and consistency. The researcher

²³ Virginia Braun and Victoria Clarke, "Using Thematic Analysis in Psychology," *Qualitative Research in Psychology* 3, no. 2 (2006): 77–101.

acknowledged positionality as a facilitator of the digital instrument and an insider to the culture, demonstrating reflexivity throughout.

Ethical Considerations

The Limpopo Province Department of Education granted ethical approval. Additionally, permissions were obtained from parents, teachers, and school principals. All participants gave their informed consent, including minors' parents' consent. Pseudonyms were employed in all data documentation, and participants were guaranteed anonymity.

PRESENTATION OF FINDINGS AND DISCUSSION

This section presents and interprets the key findings of the study, organized thematically in relation to the reviewed literature. The results reveal that gamifying Tshivenda proverbs significantly enhanced learner engagement, strengthened cultural identity, and improved linguistic competence among primary school learners in Limpopo Province.

Increased Learner Engagement and Motivation

Observations across both participating schools revealed that learners demonstrated noticeably higher engagement levels during gamified lessons than in traditional Tshivenda language instruction. Learners displayed excitement, frequently volunteered answers, and collaborated energetically with peers. The inclusion of points, badges, and progression levels fostered a competitive yet supportive atmosphere.

In the observation notes, one learner was seen exclaiming, *“Let’s play again, I want to get more points!”* which is a reflection of heightened enthusiasm and goal-oriented motivation. Another commented, *“This game makes learning like a challenge, not just reading.”*

Teachers corroborated these observations, noting increased attentiveness and participation:

“Even the quiet learners wanted to try and answer during the game,” said Teacher A. *“Normally, some of them switch off during lessons, but with this activity, everyone was alert,”* added Teacher B.

These results align with international research suggesting that game-based features enhance sustained attention and active engagement.²⁴ As Sailer et al. observed, mechanisms such as immediate feedback and level progression stimulate intrinsic motivation, patterns mirrored in this study’s classrooms through laughter, peer encouragement, and collaborative problem-solving.²⁵

Deepened Cultural Connection and Affirmation of Identity

Learner journals revealed strong emotional responses to encountering Tshivenda proverbs in a digital game format. Several learners expressed pride and a renewed sense of belonging. Typical reflections included:

“I didn’t know our old sayings could be in a game. It feels good to see our words in the computer.”

“I feel like our language is important now.”

“My grandmother always says these proverbs. Now I can understand them better because we played with them.”

These statements illustrate a powerful link between digital learning and cultural affirmation. Gay’s Culturally Responsive Pedagogy emphasizes that learning becomes more meaningful when it validates

²⁴ Kapp, *The Gamification of Learning and Instruction Fieldbook: Ideas into Practice*; Domínguez et al., “Gamifying Learning Experiences: Practical Implications and Outcomes.”

²⁵ Sailer et al., “How Gamification Motivates: An Experimental Study of the Effects of Specific Game Design Elements on Psychological Need Satisfaction.”

learners' cultural identities.²⁶ The integration of Tshivenda oral traditions into a modern digital format exemplifies this principle. Teachers also recognized this cultural connection. One remarked:

"The learners were very proud when they saw Tshivenda words on the screen. They were saying, 'This is ours!'"

By bridging Indigenous wisdom and digital learning, the gamified lessons challenged the marginalization of African languages in formal education²⁷ and affirmed learners' linguistic and cultural heritage within the classroom.

Enhanced Language Retention and Comprehension

Teachers observed noticeable improvements in learners' ability to recall and correctly apply Tshivenda proverbs after participating in the gamified sessions. The use of matching, fill-in-the-blank, and proverb interpretation games supported comprehension and long-term retention.

"When I asked them the next day, they could still remember the proverbs and even explain what they meant," noted Teacher A.

"They started using the proverbs in their own sentences, which never happened before," added Teacher B.

Learners also described feeling more confident using Tshivenda expressions:

"Now I can say the proverbs without forgetting," wrote one learner.

"I learned new words and how to say them properly," added another.

These observations affirm Mphahlele and Mashamaite's argument that proverbs function as powerful tools for vocabulary expansion and moral reasoning.²⁸ The gamified format further enhanced learning through repetition, sensory engagement, and active participation, consistent with Gee's view of digital play as a vehicle for deeper literacy and language development.²⁹

Challenges: Technical Barriers and Initial Adjustment

While the intervention was largely successful, several practical challenges emerged. Some learners initially struggled to navigate the devices or understand the game rules. One student confessed,

"At first, I didn't know how to move to the next level, but my friend helped me."

Connectivity issues and unfamiliarity with technology also posed barriers. Teachers highlighted the need for initial orientation and ongoing support:

"Some learners had never used tablets before, so the first session was slow. But by the second day, they were showing each other," reported Teacher A.

These difficulties mirror Mishi and Anakpo's critique of the digital divide, which continues to limit equitable access to educational technologies in rural areas.³⁰ Nonetheless, learners adapted quickly once they received guidance, suggesting that consistent exposure and teacher facilitation can effectively mitigate these barriers.

Discussion Summary

The purpose of this study was to investigate how gamifying Tshivenda proverbs could improve language learning, cultural identification, and learner engagement in Limpopo, South Africa, primary school classrooms. According to the research, incorporating Indigenous knowledge, more especially proverbs, into

²⁶ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

²⁷ Ndhlovu and Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*.

²⁸ Mphahlele and Mashamaite, "The Didactic Function of Proverbs in African Languages: A Case Study of Tshivenda and Northern Sotho."

²⁹ James Paul Gee, "What Video Games Have to Teach Us about Learning and Literacy," *Computers in Entertainment* 1, no. 1 (October 2003): 20–20, <https://doi.org/10.1145/950566.950595>.

³⁰ Mishi and Anakpo, "Digital Gap in Global and African Countries: Inequalities of Opportunities and COVID-19 Crisis Impact."

gamified learning settings boosts learner enthusiasm, fosters a closer cultural bond, and enhances language comprehension.

Incorporating culturally relevant content within a gamified framework not only enhances learners' emotional and cognitive engagement but also affirms their linguistic and cultural identities. These results add to the growing body of research supporting the digital inclusion of African languages,³¹ and gamification,³² as well as culturally responsive pedagogy.³³

While some technical and learning curve challenges were noted, the overall positive outcomes suggest that gamified Indigenous content can serve as a meaningful bridge between traditional knowledge systems and modern educational technology. This study thus contributes to the discourse on decolonizing digital education and calls for innovative practices that align with learners' sociolinguistic realities.

RECOMMENDATIONS

Based on the study findings, the following recommendations are made:

- To encourage culturally appropriate pedagogy, curriculum advisors ought to incorporate Indigenous oral traditions and proverbs into digital learning platforms.
- To improve inclusivity and participation, educators should be given professional development on how to use gamification techniques in Indigenous language training.
- Developers of educational technology ought to create gamification platforms that are easy to use, offline, and multilingual.
- Long-term effects of gamified Indigenous content on academic achievement and the development of cultural identities should be investigated in future studies.
- Digital resources in all official languages, especially those that are underrepresented like Tshivenda, should be given priority by policymakers and the Department of Basic Education.

CONCLUSION

The purpose of this study was to investigate how gamifying Tshivenda proverbs could enhance learner engagement, strengthen cultural identity, and support language development in primary schools in Limpopo Province, South Africa. Grounded in the principles of Culturally Responsive Pedagogy, the research sought to address the underrepresentation of Indigenous languages and knowledge systems in digital education. The findings demonstrated that incorporating Tshivenda proverbs into a gamified learning environment significantly improved learner motivation, participation, and enjoyment. Learners were more eager to contribute, collaborate, and persist with tasks when traditional content was presented through interactive and playful digital formats. Moreover, exposure to familiar proverbs fostered a renewed sense of pride and cultural affirmation among learners, validating their linguistic heritage and strengthening their sense of identity. The study also revealed that gamification supported language retention and comprehension, as learners actively engaged with vocabulary, meaning, and contextual usage in ways that traditional methods often fail to achieve. While the intervention was successful, challenges such as limited digital literacy, technical constraints, and connectivity issues highlighted the ongoing impact of the digital divide in rural education contexts. Nonetheless, these barriers were mitigated through teacher support, peer collaboration, and repeated exposure to the digital tools, illustrating the adaptability and resilience of learners when given culturally relevant and engaging learning experiences. In conclusion, the study affirms that gamification can serve as an effective and culturally grounded pedagogical strategy for revitalizing Indigenous knowledge systems in the digital age. By blending traditional wisdom with modern educational technology, teachers can create inclusive, motivating, and contextually meaningful learning environments. The integration of

³¹ Ndhlovu and Makalela, *Decolonising Multilingualism in Africa: Recentering Silenced Voices from the Global South*.

³² Kapp, *The Gamification of Learning and Instruction Fieldbook: Ideas into Practice*; Sailer et al., "How Gamification Motivates: An Experimental Study of the Effects of Specific Game Design Elements on Psychological Need Satisfaction."

³³ Gay, *Culturally Responsive Teaching: Theory, Research, and Practice*.

Tshivenda proverbs into digital learning not only promotes language development but also contributes to the broader goal of decolonizing education and affirming cultural identity in South Africa's multilingual classrooms. Ultimately, this study underscores that the future of digital education in Africa must not merely be about technological advancement but about ensuring that technology becomes a medium through which Indigenous voices, languages, and ways of knowing are preserved, celebrated, and passed on to future generations.

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