Opportunities, Benefits, and Challenges of Using Artificial Intelligence in the Teaching and Learning of IsiXhosa Poetry

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Abstract

IsiXhosa poetry holds significant potential for cultivating critical thinking, creativity, and problem-solving skills. However, its pedagogical implementation is often hindered by reliance on rote learning and lecture-based instruction, which restricts the higher-order cognitive engagement required for interpreting poetry. Cultural-Historical Activity Theory (CHAT) provides a useful framework for analysing this pedagogical tension by viewing teaching and learning as mediated activity systems involving subjects (students and educators), tools (instructional technologies), rules, community, and division of labour. Guided by CHAT, this study investigates how artificial intelligence (AI) can function as a mediating tool within the isiXhosa poetry learning activity system, identifying its opportunities, benefits, and contradictions. A systematic literature review synthesised global scholarship on AI in education, higher education, and language education to identify AI tools that could be integrated into isiXhosa poetry pedagogy. Studies were analysed through the lens of CHAT to evaluate the transformative potential and systemic tensions arising from AI adoption. The study provides a framework for selecting and integrating AI tools in isiXhosa poetry instruction, and it offers evidence-based recommendations for educators and policymakers to support the responsible adoption of AI in African-language literature education.

Keywords: IsiXhosa poetry, Artificial Intelligence, Cultural-Historical Activity Theory (CHAT), Mediated learning, Systematic Literature Review

Introduction

Scholars agree on the significance of the teaching and learning of poetry, both in basic and higher education. According to Khan (2020: 803), the teaching and learning of poetry "has the tendency to engage and motivate students more profoundly and at the same time open avenues to improve multiple language constructs." This view is corroborated by Moldagali et al. (2024: 169) who note that teaching and learning poetry is key "for teaching linguistic nuances and enriching students' emotions, thoughts, and vocabulary." Jaxa (2024: 119) adds that teaching and learning of poetry "fosters critical thinking, and empowers learners to question, evaluate, and support information effectively." The skills alluded to by these scholars are crucial in the development of human beings as social beings and responsible citizens of the global village, capable of contributing meaningfully to sustainable global development and grounded in ethical responsibility, and social justice. Hence, Jaxa (2024: 119) further notes, "Through poetry analysis, learners develop a nuanced understanding of their social and personal identities and thereby reinforce the integral role of poetry in education." In addition, Makhenyane (2024) alludes to the fact that isiXhosa poetry is abstract in nature, tapping into middle and higher-order cognitive skills, such as analytical thinking, problem-solving, critical thinking, and creativity.

Despite its significant role in improving analytical skills, critical thinking, motivation, language use, creativity, and problem-solving, evaluative skills are often found to be difficult to teach and learn by instructors and students alike. Jaxa (2024) discovered that learners perform poorly in isiXhosa poetry, citing the 2019 to 2022 Basic Education Diagnostic Reports. Jaxa (2024) further argues that this poor performance has ripple effects on the entire academic trajectory of learners. Gxekwa and Satyo (2017) support this view as they discovered that poetry can be used to improve literacy, numeracy, and life skills in learners. Their study focused on how in-service educators can leverage poetry to address difficulties in learning literacy, numeracy, and language skills.

Furthermore, Mbambo and Hlabisa (2024: 262) discovered that some instructors "use approaches that treat poetry as something to be memorised and regurgitated rather than comprehended and appreciated, thus exacerbating learners' anxieties in relation to poetry." Such approaches offer little and yield bitter fruits on the experience of teaching and learning poetry. Participants in their study commented on the difficulty of teaching poetry, due to the language diction and figurative language used by poets, contributing to difficulties in grasping meaning. In addition to language complexities, these participants added difficulties caused by their negative attitudes towards teaching poetry. Mbambo and Hlabisa (2024) argue that formal intervention through professional development is crucial in addressing issues raised in their study about the teaching of poetry. Developing instructors professionally includes keeping up with modern ways of teaching poetry, which include incorporating Artificial Intelligence (AI) in their instruction.

Huang et al. (2023) argue that AI plays a pivotal role in language teaching, which involves the teaching and learning of poetry. Similarly, Semerikov et al. (2021: 1) claim that "AI-assisted language education (AILE) is an emerging interdisciplinary field that integrates AI technology and language education theory and practice." In the Fourth Industrial Revolution (4IR) era, leveraging AI tools in language teaching benefits the language instructor, especially in teaching difficult discipline areas like poetry. Scholars such as Le et al. (2024), Monika (2019), Rahma and Irianti (2024) argue for the use of AI technologies and AI-powered technologies like ChatGPT, Duolingo, and Plotagon in the teaching of language and poetry. AI-powered tools are beneficial to both instructors and students and

are known to improve performance, motivation, pedagogy, as well as bolster problem-solving, critical thinking, creativity, and evaluative skills needed in humanity today.

Although AI has been studied extensively in language teaching, especially its benefits to improve the teaching and learning of poetry, there is a lacuna in what it can do in the context of isiXhosa poetry. It is against such a backdrop that this paper aims to investigate the opportunities, benefits, and challenges of using AI in the teaching and learning of isiXhosa poetry. Therefore, this study endeavours to address this lacuna by situating the integration of AI within the pedagogical context of isiXhosa poetry, thereby contributing to broader discourses on technology-enhanced language education.

Methodology

In this paper, a systematic review, as a research design, was used. According to Page et al. (2021), systematic reviews are critical in synthesising knowledge in a particular field and in addressing key questions in the field that cannot be answered by individual studies. Page et al. (2021: 1) state that the validity and value of the review is determined by "transparent, complete, and accurate account of why the review was done, what they [researchers] did (such as how studies were identified and selected) and what they found (such as characteristics of contributing studies and results of meta-analysis)." To guide the process, Preferred Reporting Items Systematic Reviews and Meta-Analysis (PRISMA) were employed. Purssell and McCrae (2024: 43) note that PRISMA assists "by giving guidance as to what should appear in the report of a systematic review." Therefore, PRISMA principles were used to search, identify, and select material to be included in the study, as well as how to read, extract, and manage data mined from the selected studies (Moher et al., 2015). In using PRISMA, the following methods items, as identified in the PRISMA 2020 statement by Page et al. (2021), were followed:

- Item #5 – Eligibility criteria: specify inclusion and exclusion criteria.
- Item #6 – Information sources: specify all databases consulted to identify studies.
- Item #7 – Search strategy: presentation of full search strategies for all consulted databases.

The methods used are further outlined in the PRISMA flowchart in Figure 1 below.

Eligibility criteria

An electronic search to identify studies for review was conducted. The table below (Table 1) outlines the criterion used to include and exclude material used for review in this study:

Table 1: Inclusion/exclusion criteria

Inclusion	Exclusion
Peer-reviewed articles	Editorials and book reviews
Peer-reviewed book chapters in edited volumes	Conference proceedings
Articles and book chapters written in English	Written in any other official language
Articles and book chapters published from 2021 – 2025	Published prior 2021
Involving basic and higher education	Dissertations and thesis

Inclusion	Exclusion
Discuss opportunities, benefits and challenges of using AI in language education	

Although the timeframe of 2021 to 2025 may seem too restrictive and overlook foundational studies, Tahiru (2021) notes that AI language education has been studied extensively from 2017 to 2020. To avoid reviewing studies that have been reviewed extensively, the focus was on the period between 2021 to 2025. Furthermore, this timeframe was selected for its currency and for revealing new trends in the use of AI in education and language education.

Information sources

Various databases were consulted to identify studies for review in this study. Those are EBSCOhost, Science Direct, ProQuest, and ResearchGate. In consulting the identified databases, the following Boolean search terms were used:

> "Artificial AND intelligence AND in AND education"
>
> "Use AND of AND artificial AND intelligence AND in AND language AND education"
>
> "Artificial AND intelligence AND in AND poetry AND teaching"
>
> "Opportunities AND benefits AND challenges AND using AND artificial AND intelligence AND in AND language AND teaching"

The search yielded a large pool of resources, which were screened using the inclusion/exclusion criteria stated above.

Search strategy

The researchers selected only peer-reviewed journal articles and book chapters in peer-reviewed edited volumes. Crompton and Burke (2023), citing Gough et al., alluded to the fact that peer-reviewed material attests to the quality of the selected data. Furthermore, this ensures validity of data, as all the selected data went through the scrutiny of experts in the field. In collecting data for a systematic review in this study, the search was narrowed to studies published from 2021 to 2025.

Selection process

In this study, only peer-reviewed journal articles and peer-reviewed book chapters in edited volumes were selected to ensure the validity and credibility of data.

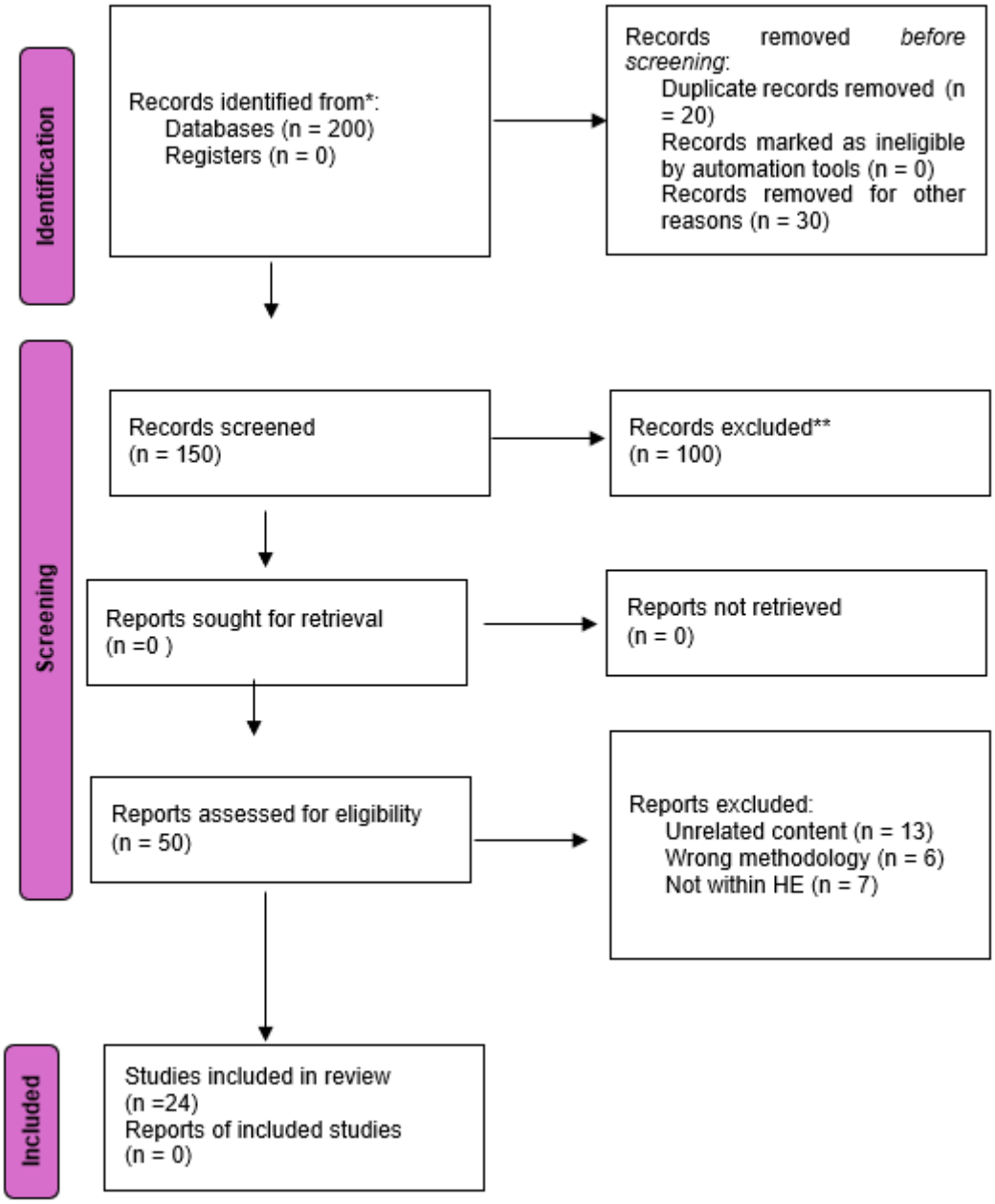

Figure 1: PRISMA flowchart for systematic review which included searches from databases

The theoretical insights that inform the identified design and interpretation of data are discussed below.

Theoretical Framework

The Cultural–Historical Activity Theory (CHAT) was employed as the principal theoretical framework in this paper. This theory is attributed to three scholars or proponents over three stages: Vygotsky at its developmental stage in the 1920s and 1930s, Leontiev, who expanded it in the late 1970s, and, more recently, Engeström, from the late 1980s, further developed the theory (Tkachenko & Ardichvili, 2017). CHAT emphasises that human cognition and learning are not isolated mental processes but are fundamentally socially mediated and

rooted in culture and history (Cong-Lem, 2022; Engeström & Sannino, 2021). Furthermore, CHAT considers learning and teaching as socially mediated activity systems, where artefacts, tools (AI tools), language, rules, community, division of labour, and the historical/cultural context interact to shape cognition and practice (Vygotsky, 1978; Engeström, 1999). Tools (both material and symbolic), language, artefacts, and social interactions play central roles. Within CHAT, an activity system is composed of interacting components: the subject (e.g., lecturers or students), the object (the goal or motive of the activity such as learning isiXhosa poetry), mediating artefacts or tools (AI platforms, language resources), rules, community, division of labour, and outcomes (Engeström, 1987; Daniels et al., 2009).

The key assumption of CHAT is mediation – the notion that technology, language, and culture shape the way individuals engage with learning tasks (Engeström, 1999). Another is historicity, which recognises that activities develop over time are influenced by their cultural and institutional histories (Leontiev, 1978). CHAT also emphasises contradictions within and between elements of the activity system as drivers of innovation and change (Engeström & Sannino, 2010). In educational research, these contradictions often emerge between traditional pedagogical practices and new technological tools, offering opportunities for transformation (Roth & Radford, 2010).

The use of CHAT in this study is justified because the teaching and learning of isiXhosa poetry involve a complex interplay of cultural traditions, pedagogical practices, and emerging digital technologies. Applying CHAT enables the researcher to explore how AI tools can mediate the relationship between lecturers, students, and poetic content within a university context, while also revealing the tensions, opportunities, and challenges that arise from integrating technology into culturally grounded learning (Ballantyne et al., 2022; Batiibwe, 2019). This framework thus provides a holistic lens for analysing the dynamic interaction between culture, technology, and pedagogy in higher education.

Grounded in the principles of CHAT, which emphasises the mediation of learning through tools and social interaction, this framework guided both the research focus and data interpretation. The next section explains how these theoretical assumptions were operationalised through the chosen methodological approach.

Systematic Literature Review

This section reports on the literature that was reviewed to address the aim of this research. There is a growing interest on the use of AI in education, both higher education and basic education.

AI in education

According to Crompton and Burke (2023: 2), it was the work of Turing that began the movement towards AI by describing "the existence of intelligent reasoning and thinking that could go into intelligent machines." Nevertheless, Crompton and Burke (2023), citing Cristianini, reveal that it was McCarthy who coined the term artificial intelligence in 1956, following up on Turing's work of 1937 and 1950. Tahiru (2021: 2) divulges that "In the 1960s, the US Department of Defence took an interest in artificial intelligence and began training computers to mimic basic human reasoning." This early work spread rapidly to various fields such as medicine, entertainment, sci-fi, business, tourism, and in education. Fitria (2021: 134) argues that "In its development, artificial intelligence has also penetrated

the world of education. AI systems allow people to learn with the help of education assistants such as bots." Nevertheless, Tahiru (2021) notes that the pace of adoption of AI in education has been slow in the 20th century and early years of the 21st century. The rise began around 2017. Although there is a rise in the adoption of AI in education, it is still slow in the teaching and learning of isiXhosa.

According to Abdelkader et al. (2024: 103), "AI is a fast-growing topic in education with the potential to significantly expand and improve teaching and learning in higher education". Fitria (2023) is of the same view in stating that AI in education plays the role of expanding intellectual capacity while helping students to effectively and efficiently perform learning activities. In addition, scholars such as Fitira (2023), Tahiru (2021), and Zhai et al. (2021) have identified AI to assist educators and lecturers in facilitating learning. Having identified problem areas in the teaching and learning of isiXhosa poetry in this study, AI places itself in a position to assist in improving the experiences of teachers and learners and their interaction with isiXhosa poetry. As the world shifts into the Fourth Industrial Revolution (4IR) era, isiXhosa poetry needs to be transformed in terms of the tools it uses to mediate teaching and learning, as espoused by CHAT.

Furthermore, the collected data reveals that AI in higher education is used for teaching, learning, assessment, and the management of learning. Azoury and Hajj (2024), focusing on pedagogical enhancement, note that AI is used in HE for learning systems, tutors, and improving curriculum. They argue that "By using AI to customize learning experiences based on students' needs and implementing DT [Digital Transformation] to bridge gaps, the university can cater to a wider range of students, including those from marginalized communities" (Azoury and Hajj, 2024: 156). This thought is predicated on the fact that AI is making education accessible and inclusive. According to Barbie and Milone (1981), Fleming and Mills (1992), and Reid (1987), there are three learning styles - visual, auditory and kinesthetic – and students can either possess one or all of them. Therefore, using AI to mediate activities in isiXhosa poetry classrooms will assist the facilitator in customising learning for each learning style, shaping how students act and learn, and how lecturers instruct their students.

To ensure access to resources needed in any field, scholars such as Crompton and Burke (2023), Fitria (2023), and Javed (2024) allude to the fact that institutions of higher learning use AI-powered Learning Management Systems (LMS). These LMS include Blackboard, Canvas LMS, Google Classroom, iSpring Learn LMS, Moodle, and Ulwazi, to name the notable ones. According to Fitria (2023: 168-169), Blackboard "… is extensively used by professors/lecturers to publish class notes, homework, quizzes, and exams, and it enables students to submit evaluation-related queries and assignments." Qazi et al. (2024) state that before Covid-19, LMSs were limited to supporting roles but during and after 2019-2020, they were thrust into the forefront. Qazi et al. (2024: 3306) posit that these LMSs "enhance the user learning experience through AI-based adaptive learning strategies tailored to individual needs." This view is corroborated by Fitria (2021 & 2023) and Zhai et al. (2021), noting that LMSs create a smart learning environment that is cognizant of students' individual needs.

Furthermore, "AI in the classroom can facilitate this by analysing students' learning styles and providing them with individualized learning aids" (Fitria, 2023: 171). Teaching larger classes makes it difficult to address the individual needs of students; nevertheless, the rise of AI-powered LMSs in HE reaches where the instructor cannot reach, attending to

individual needs of students through teaching, learning, and assessment. In the teaching and learning of isiXhosa poetry, the challenges faced by students range from understanding figurative language, relating the structure of the poem to meaning, analysing the content and the themes of the poem to the effect of literary devices used by the poet. Therefore, isiXhosa poetry instructors can leverage these AI tools to guide students to improve their performance in the challenging areas of teaching and learning isiXhosa poetry, as well as thinking skills by interacting with AI tools to make learning meaningful and effective.

Although LMSs are beneficial for teaching, learning, and assessing, they have their own limitations. With LMSs "it is often difficult to track which student is present and actively participating in the lecture or merely logged into the VCS" (Qazi et al., 2024: 3295). This poses the challenge on learning; while teaching is taking place, there is limited guarantee to how much learning is taking place. These scholars further state that "during the conduct of the exams, it is difficult to detect any means of unfair cheating by the students" (Qazi et al., 2024: 3295). This leads stakeholders to question the validity of assessment results. Furthermore, Barikzai et al. (2024) note that at times, LMSs fall short in supporting more interactive, constructive or active learning pedagogies. The teaching and learning of isiXhosa poetry is particularly affected by this challenge, given its dependence on dynamic exchanges between teachers, learners, and peers. Within a constructivist framework, instructors seek to foster active engagement by prompting students to relate poetic meaning to their own experiences and interpretations. Therefore, in using LMSs, the role of the instructor must be fully established to guide students through their thinking. This is supported by CHAT, as it encourages the accommodation of multiple perspectives, understandings and views.

Literature shows that Intelligent Tutoring Systems (ITS) has been leveraged in HE to lend a hand to the traditional tutoring programmes used by universities to assist students. Crompton and Burke (2023: 16) define ITS as "… adaptive instructional systems that involve the use of AI techniques and educational methods." AI techniques include interactive learning, tailored and immediate feedback, and immediate access to resources, which can be integrated into teaching methods and activities to ensure learning has taken place. According to Tahiru (2021), ITS promotes collaborative learning while improving motivation and learning in students. According to Riaz and Din (2023: 94), "Collaboration is known [as] one of the most important and essential skills of 21st century learning skill set." Therefore, through the use of ITS, isiXhosa poetry students stand to benefit as individual and as a group, in that they can engage with the system about the content they are learning, do activities and get immediate feedback on their learning, while improving their understanding of content. ITS can further be used for preparing for examinations, tests and assignments.

In preparing for exams, besides using ITS, literature reveals that students in HE can use an AI tool called Smart Content, with Apps like Cram101 and JustTheFacts101. According to Fitria (2023: 169), "This AI technology functions to divide and find content material and digital books that are already programmed virtually more easily and quickly." In addition, Tahiru (2021), citing Fagella, argues that this tool is capable of condensing a textbook to manageable content, such as true-or-false questions to prepare for exams. This will make it easy for students to retrieve the needed content (Fitria, 2023), instead of having to page through a textbook on the eve of an exam. These scholars reveal that this tool also incorporates videos in its storage of content. Such a tool requires higher-order thinking skills, as students will need to critically analyse, evaluate, and synthesise (another set of important skills in the 21st century) the content they will need to prepare for exams.

Although the above-stated systems are crucial for teaching and learning in HE, they are not without fault. Davar et al. (2025) argue that AI tools have limitations, such as understanding human emotions and language limitations. In addition, these tools lack the capabilities of understanding the emotions of students and instructors at a particular time. Furthermore, they offer an unfair advantage to English students, while leaving behind users of other languages. The fact that most research is written in English leads to indigenous languages playing catch-up in terms of datasets used to train these AI-powered tools (Makeleni et al., 2023; Simunyu et al., 2021; Wang, 2023). These scholars further reveal that 'The lack of African languages' datasets is discouraging many NLP practitioners to start from scratch and the task will have to be taken up by African researchers because of the low economic interest that our languages represent for top companies driving changes in NLP" (Simunyu et al., 2021: 1). IsiXhosa is among those African languages with low datasets.

Although literature above states benefits of AI on motivation, creativity, and critical thinking, Law (2024) draws attention to contrasting viewpoints, which state that AI has a potential of compromising the very psychological aspects it is known to enhance. Resulting from the literature reviewed in Law's study, this claim resulted from the discovery that some students use AI as a shortcut for written activities, even though it lacks contextual understanding. This researcher further states that AI fails to assess higher order thinking skills. Law (2024: 11) concludes by stating that despite these drawbacks stated in literature, "the potential advantages offered by GenAI programs remain uncontested." Therefore, the advantages of using AI in education outweigh the disadvantages, leaving instructors with opportunities to leverage AI in their teaching.

AI in language education

This subsection focuses on literature on the use of AI in language education, with special reference to poetry teaching and learning.

Law (2024) encourages language educators to solicit the use of Generative AI in their teaching. This view is corroborated by Makeleni et al. (2023: 159) who state that "using AI in language education offers numerous benefits that outweigh any potential or perceived costs". The paucity of empirical research on the use of AI in isiXhosa teaching attests to the low levels of adoption of AI in the teaching and learning of isiXhosa. In such cases, Law (*Op cit*.) encourages professional development, citing it as crucial in ensuring informed decision-making and effective integration of Gen AI tools in the teaching and learning of languages. This view is at the heart of the CHAT which calls for the evolution of educators through development and transformation.

The use of AI in language education has been explored mostly in English teaching and learning. This can be attributed to the increasing popularity of AI in the teaching and learning of English in HE (Javed, 2024) and that "many AI systems are developed primarily in English" (Makeleni et al., 2023: 162). In the study, Javed (2024) examines the development of AI in the teaching and learning of English, considering its uses, advantages, difficulties, and potential. Javed (2024: 276) argues that "to improve teaching and learning, AI technologies are being incorporated into educational environments more and more." In addition, the researcher supports the view that AI technologies offer individualised learning programmes which cater for individual students, and they adjust the level of content in accordance with how the learner is performing. This approach by AI can be compared to scaffolding where an instructor incrementally introduces content in distinct segments

until a student can master new concepts without support. Javed (2024) noted the following as advantages of using AI in teaching and learning English: a tailored learning system, individualised learning outcomes, instant feedback, deeper involvement in the learning process, and machine translation. Although the use of AI has multiple advantages, Javed (2024) notes the challenge it poses in teaching and learning of English, first being the digital divide manifesting itself in disparities in access and proficiency among pupils, as determined by socioeconomic status of students. The researcher adds other challenges, such as ethical challenges. Javed (2024) was generic in his approach, looking at the use of AI in a broad sense in English teaching and learning. Nevertheless, the current study is specific in poetry teaching and learning, as this aspect of language teaching is unique and is used as an independent field in other institutions.

Wang et al. (2025) examined the potential of generative AI to enhance the teaching of writing in Chinese poetry. Their research was a result of discovering challenges in the teaching and learning of poetry. Citing Liao, they state that students struggle with inspiration and are finding difficulties in expressing themselves in their poetry writing. The teaching and learning of isiXhosa poetry in HE includes students creating their own poetry on current issues, about leaders in the society, things they love and hate, etcetera. The challenges faced by Chinese students are similar to those faced by students doing isiXhosa poetry. Wang et al. (2025: 9) discovered that "The integration of generative AI in Chinese poetry instruction had a significant positive impact on students' learning interest and effectiveness." In addition, they learned that AI-generated visuals deepen students' ability to understand poetic imagery and foster creative expression in poetry writing. Furthermore, they posit that AI supports multimodal learning, enhancing students' linguistic creativity and enriching poetic sensibilities. According to these scholars, AI addressed the challenges they identified in teaching Chinese poetry. Since poetry taught in isiXhosa was mostly written before the time of the students, the diction used is difficult to understand and the imagery used is foreign to their imagination.

Le et al. (2024: 51) argue that "The emergence of AI language models, such as ChatGPT, has opened up new possibilities for personalized learning and instructional support." These scholars explored the use of ChatGPT in developing e-portfolios. Their enquiry is premised on the fact that e-portfolios "assist students in improving writing accuracy by utilizing editing, spelling, and grammar-checking features available on the e-portfolio platform" (Le at al., 2024: 55, citing Meshkat and Goli). E-portfolios form part of isiXhosa poetry teaching and learning, as students can be expected to produce a portfolio of their journey in the module, which will include written pieces of poetry and commentary on others poetry. According to Le et al. (2024: 59), "ChatGPT, with its chatbot interface, emerges as a unique and user-friendly e-portfolio platform, catering to the needs of students in a manner that minimizes frustration and enhances their overall experience." ChatGPT has proven to be among leading AI tools to be leveraged in language teaching and learning. In parading the benefits of AI, Le et al. (2024) note its challenges as well. They state that overreliance on AI-generated content can diminish critical thinking and look down upon human-generated content. Such challenges can be averted by educating students and instructors on the use of AI tools in language teaching.

In addition, Davar et al. (2025) explored the benefits and challenges of using AI chatbots. They state that using AI for role playing helps to improve language proficiency through speaking. In addition, Davar et al. (2025) argue that AI chatbots help students overcome obstacles in language learning. In the teaching and learning isiXhosa poetry, students can

face different obstacles, such as understanding literary devices used, dealing with structure used to convey meaning, diction. Therefore, chatbots, such as ChatGPT, are tools that can be used to help students understand poetry.

Mellor (2024: 247) examined the "ways to implement AI-supported paradigm as one of the solutions to mitigate the challenges in Arab higher education, drawing on AI tools, such as ChatGPT." The researcher notes that ChatGPT can be used to provide tailored feedback to each student by interacting with them in a conversation manner. Such conversations allow each student to be met at their point of educational need. According to Mellor (2024: 253), "responses [from ChatGPT] can be used as prompts for complex or difficult questions, enabling students to think more deeply about the topic and develop their critical thinking skills." Students or the instructor can prompt each other about the poem to be studied in isiXhosa poetry class, as a pre-reading activity on ChatGPT, encouraging students not to be mere consumers of information from AI but pushing them to analyse, evaluate, and debate the information. The prompts can be about aspects of poetry, such as themes, style, and recent trends in isiXhosa poetry. Ji et al. (2022) and Li (2023) call for a balance between the use of technological tools and ethical considerations. Academic integrity must be upheld at all times. In allowing students to use ChatGPT, to brainstorm research topics, an isiXhosa instructor must emphasise the importance of avoiding copying, plagiarism, and falsifying data.

In their study, Al-Kadi and Ali (2024) paired ChatGPT with two other large language models (LLM) in the teaching and learning of English, Gemini, and Copilot. They argue that these LLMs improve the command of language and they innovatively support teaching. Furthermore, they noticed that the use of these AI tools improved students' motivation to learn, an aspect that plays a crucial role in student success. Al-Kadi and Ali (2024.) state that the integration of these tools improves students' engagement with learning, which results in learning motivation.

In addition, Al-Kadi and Ali (*Op cit*.) noticed that these LLMs can be adapted to meet each student's language needs. Given the heterogeneous nature of the difficulties students face in engaging with isiXhosa poetry, the integration of intelligent tutoring systems such as ChatGPT, Gemini, and Copilot offers a personalised approach to addressing varied learning styles and instructional requirements. Furthermore, they discovered that these tools provide immediate feedback, minimising frustration for students when stuck in one place. Immediate feedback ensures progression in teaching and learning. Finally, Al-Kadi and Ali (2024: 6) discovered that "LLMs lessen reliance on formal education; learners become less dependent on their teachers, as these technological advances provide language learning opportunities beyond formal and institutionalized language education." According to Le et al. (2024: 58), citing Abdelghani, "using natural language prompts and large language models can help students develop their ability to ask thought-provoking questions." This skill is beneficial in learning isiXhosa poetry, as analysis of poetry requires one to interrogate a poem to unearth deep-lying meanings.

Makeleni et al. (*Op cit*.) focused on the challenges confronting academics on the use of AI in language education in the Global South. Language education in the Global South includes the teaching and learning of isiXhosa. Through literature review methodology, these scholars discovered four categories of challenges faced by academics. These challenges are part of the contradictions that cause tensions between what AI tools promise to bring and the reality faced by languages in the Global South, including isiXhosa. Firstly, they

discovered that AI tools have limited language options, with English, Chinese, Spanish, and French dominating the space. The result is difficulty "for people in the Global South to access digital tools and services in their own languages" (Makeleni et al., 2023: 162).

The second challenge Makeleni et al. (*Op cit*.) alluded to is students using AI to cheat in assignments and examinations. They note that, because African languages like isiXhosa are not well-represented in AI datasets, the accuracy of detecting cheating and plagiarism is limited. The third challenge discovered by these scholars is AI biases that tend to penalise those who do not use standardised languages. The fourth challenge is that AI leads "to laziness among students and lecturers" (2023: 164). This is caused by what Le et al. (*Op cit*,) refer to as overreliance on AI. These four challenges reveal tensions between the promise of decoloniality and the reality of linguistic inequality in the AI tools that are meant to mediate teaching and learning between subjects. Historical linguistic inequalities in South Africa, as a result of colonialism and apartheid, are resurfacing in the digital space, as African languages like isiXhosa continue to be under resourced. Practitioners in isiXhosa need to collaborate with computer scientists to speed up the process of bridging the digital linguistic gap.

Discussion

The opportunities, benefits, and challenges of integrating AI into the teaching and learning of isiXhosa poetry were investigated through the lens of CHAT. This theory conceptualises learning as a mediated activity shaped by the interplay between subjects (students and instructors), tools (AI technologies), community, rules, and division of labour (Engeström, 1987, 2001; Vygotsky, 1978). From this perspective, AI functions as a mediating artefact that reshapes the activity system of the teaching and learning of isiXhosa poetry by altering not only instructional practices but also student agency, community roles, and power relations.

Opportunities and benefits of using AI

Student's performance

The findings of the study demonstrate that AI is leveraged in language teaching to improve students' performance. According to Jaxa (2024), the teaching and learning of isiXhosa poetry is marred by the poor performance of students. AI-powered tools such as intelligent tutoring systems (ITS), speech recognition platforms, automated writing feedback, and adaptive learning applications enable students to receive individualised instruction that responds to their pace, proficiency level, and preferred learning style. Instructors and students in the teaching and learning of isiXhosa poetry can leverage these tools, as they are known for customised learning, which is tailored to students' individual needs, known to engage with students through interactive learning, and known to provide immediate feedback. We argue that instructors who teach isiXhosa poetry must leverage these tools in their teaching and allow students to use them in class to engage in constructive learning. Each student, instead of getting generalised instruction from the instructor, will get instruction that will meet individual needs, while providing immediate feedback. The benefits have been experienced in higher education and in language education, and the teaching and learning of isiXhosa poetry must not lag. The following section outlines

the opportunities and benefits of using AI against the intended outcomes of education in South Africa.

Improving skills, knowledge, attitudes and values

The South African education system is underpinned by the objective of developing learners' skills, knowledge, attitudes, and values that facilitate a seamless transition from the classroom to the professional sphere (Department of Basic Education, 2012). The findings of this study indicate that AI-powered tools significantly enhance students' critical thinking when engaging with isiXhosa poetry in higher education contexts. Interpreted through the lens of CHAT, AI functions as a mediating artefact that reshapes the dynamics of the learning activity system. Traditionally, students (subjects) face contradictions when attempting to interpret poetic language, particularly where idiomatic, metaphorical, or culturally embedded expressions are present. However, AI tools such as ChatGPT expand the mediational means, offering instant access to contextual explanations, translations, and alternative interpretations. This aligns with Mellor's (2024: 253) argument that AI prepares students "for the real world by promoting critical thinking skills," and with Iqbal and Pearl's (2024) findings on AI as a catalyst for analytical reasoning. Within the division of labour, AI shifts the instructor's role from sole knowledge provider to co-mediator, allowing students greater autonomy in inquiry-driven exploration.

Furthermore, the rules governing academic engagement are reconfigured as students increasingly rely on dialogic interaction with technological tools rather than linear consumption of prescribed texts. Consequently, critical thinking should not be viewed merely as an individual cognitive disposition, but as an emergent, socially mediated outcome produced through tool-assisted participation within the broader community of learning. In this way, AI becomes not only an instructional aid but a transformative component of the educational activity system. Existing literature confirms that AI enhances problem-solving and critical analysis, which are essential when engaging with isiXhosa poetry that often addresses current social issues. By breaking down complex datasets, AI supports students in deconstructing the poem's social themes, identifying causes and exploring possible solutions. Within the activity system, AI also extends the mediational means available for creative production, enabling students to compose original poems using higher-order cognitive processes, as required by Bloom's Taxonomy. Moreover, AI has been found to increase learner motivation, further strengthening sustained engagement with poetic texts. This is mediated by AI tools, which are discussed in the following section.

AI tools

The findings of this study indicate that Learning Management Systems (LMSs) and AI-powered tools are among the most prominent technologies currently used in language education and hold substantial potential for the teaching and learning of isiXhosa poetry. Interpreted through CHAT, these technologies function as mediating artefacts within the broader educational activity system (Engeström, 1987). They reshape how learners (subjects) engage with poetic analysis (object) by restructuring the tools, rules, and division of labour within the classroom.

LMS platforms such as Moodle, Blackboard, and Canvas enable instructors to design interactive learning environments, integrating discussion forums, collaborative spaces, and multimedia resources. These affordances align with CHAT's view of mediation, where digital tools enable higher levels of participation and knowledge transformation (Vygotsky, 1978; Ngubane-Mokiwa & Letseka, 2023). Moreover, the ability to automate assessment and deliver immediate and individualised feedback transforms the division of labour, reducing the cognitive and administrative burden on instructors who traditionally had to manually engage with large cohorts holding diverse interpretations of a poem. This form of algorithmic mediation supports differentiated learning pathways, allowing students to progress at their own pace (Mishra, Gupta & Reddy, 2024).

Beyond LMSs, the reviewed literature and study findings highlight the growing integration of AI-powered tools such as ChatGPT, Gemini, and Copilot within language education (Mellor, 2024; Iqbal & Pearl, 2024). These tools serve as dialogic partners, engaging learners in real-time questioning, explanation, and elaboration - activities core to the development of critical and reflective thinking. Within a CHAT framework, AI introduces new mediational means that extend learners' capacity to interpret complex poetic and literary devices, access cultural context, and generate alternative readings of isiXhosa poems. These AI-powered tools, armed with rich datasets, serve as an added resource in the teaching and learning of isiXhosa poetry, supporting knowledge acquisition.

Consequently, AI and LMSs not only support knowledge acquisition but also actively reconfigure the activity system, repositioning students as co-constructors of meaning rather than passive recipients. This aligns with the CHAT view that learning emerges through socially mediated interaction with tools and community rather than through isolated cognitive processing.

Although AI offers opportunities and benefits in relation to the teaching and learning of isiXhosa poetry, it does not come free from challenges, and the section below discusses challenges gleaned from the literature reviewed.

Challenges of using AI

Access

The findings of this study highlight access to AI tools as a critical challenge in HE and language learning. From the perspective of CHAT, this challenge can be conceptualised as a contradiction within the activity system, particularly between the tools (AI-enabled devices and digital platforms) and the subject-community configuration of students and instructors (Engeström, 2001; Vygotsky, 1978). Many students majoring in isiXhosa originates from historically disadvantaged backgrounds, which constrains their access to AI-powered devices and reliable internet connectivity, reflecting broader societal inequalities prevalent in South Africa (Sharonova & Avdeeva, 2024). Although the COVID-19 pandemic prompted universities to provide data and devices to mitigate these disparities, learners in remote or under connected areas continue to face minimal or no network coverage. Within a CHAT framework, this limits the mediating function of digital tools, reducing students' ability to engage fully in the language learning activity system. As a result, learners may struggle to access instructional content, participate in collaborative knowledge construction, or adequately prepare for assessments, thereby exacerbating educational inequalities

(Engeström & Sannino, 2010). Addressing these contradictions necessitates restructuring the activity system, for instance, through the provision of offline AI-enabled resources, the development of community-supported learning hubs, and policy-level interventions to expand digital infrastructure. Such measures ensure that AI functions as an inclusive mediating artefact, supporting equitable participation rather than reinforcing existing barriers to learning.

Ethics

Ethical challenges associated with AI in HE and language education can be understood as contradictions within the activity system, particularly between AI tools, rules (academic integrity norms), and students and instructors (Engeström, 2001; Vygotsky, 1978). Literature documents concerns regarding cheating, plagiarism, and overreliance on AI for writing and research tasks, which raise critical questions about academic integrity (Davar et al., 2025; Makeleni et al., 2023). From a CHAT perspective, these issues reflect tensions in the mediating function of AI: while AI is designed to support learning, its misuse can disrupt knowledge construction and the development of higher-order cognitive skills, resulting in missed learning opportunities. Detecting AI-generated content remains technically challenging, exacerbating the contradiction between assessment practices and tool use (Makeleni et al., 2023).

To address these contradictions, instructors can reconfigure the activity system by promoting ethical, pedagogically aligned AI use. For example, in the teaching and learning of isiXhosa poetry, AI can function as a mediating artefact for pre-reading, brainstorming, and generating reference leads, rather than producing final assignments. Learners should be guided to formulate AI prompts that generate verifiable information, thereby fostering critical engagement and responsible digital literacy. Through such interventions, AI becomes an enabler of expansive learning, supporting both student autonomy and adherence to academic norms, while mitigating ethical risks inherent in technology-mediated language education (Engeström & Sannino, 2010).

Limitations of AI tools

The findings established that AI has limitations in terms of understanding human emotions and the use of indigenous languages. In these AI-powered tools and chatbots, there is limited datasets to be accessed by students who are learning isiXhosa. Nevertheless, there is a growing trend of developing AI-powered tools that use all official languages like SHAKAI. Such tools close the language gaps and reduce inequalities.

Conclusion and Recommendations

This study has highlighted the significant opportunities, benefits, and challenges associated with the use of AI in the teaching and learning of isiXhosa poetry. The findings suggest that AI-powered tools can serve as effective mediating artefacts that enhance problem-solving, critical thinking, analytical, and evaluative skills among students – competencies that are not only essential across the curriculum but also highly relevant to professional contexts in which students will operate. The integration of AI in the teaching and learning

of isiXhosa poetry, when implemented thoughtfully, offers the potential to personalise learning, support self-regulated study, and provide continuous feedback, thereby fostering deeper engagement with isiXhosa poetry and its cultural nuances.

However, the study also underscores the challenges and contradictions that arise from integrating AI. These include digital inequalities, limited access to AI tools among students from historically disadvantaged backgrounds, and ethical concerns such as plagiarism and misuse of AI for assessments. From a pedagogical standpoint, instructors must actively guide students on the responsible and ethical use of AI, including employing AI for pre-reading, idea generation, and reference exploration rather than for completing assignments or assessments. This guidance ensures that AI becomes a supportive educational tool rather than a source of academic misconduct.

To translate these insights into practice, institutions should adopt multi-level strategies:

- Access and infrastructure: Develop initiatives to provide affordable or subsidised AI-enabled devices and reliable internet access, particularly for students in remote regions. Offline or hybrid AI tools can also be implemented to bridge connectivity gaps.
- Capacity-building and pedagogy: Train instructors to integrate AI effectively into curriculum design, emphasising ethical usage, critical engagement, and scaffolding of learning activities in alignment with pedagogical goals.
- Policy and governance: Establish clear institutional policies and guidelines on AI use in teaching, learning, and assessment, including mechanisms to detect and mitigate misuse while promoting digital literacy.
- Cultural and linguistic inclusivity: Prioritise the development of AI tools that support isiXhosa and other under-resourced languages, ensuring that technological innovation aligns with cultural preservation and equitable educational outcomes.
- Monitoring and evaluation: Implement ongoing assessment of AI integration to identify challenges, evaluate impact on learning outcomes, and refine both instructional and policy interventions.

In conclusion, AI holds considerable promise for enhancing the teaching and learning of isiXhosa poetry, but its successful adoption depends on careful alignment with pedagogical objectives, ethical practice, equitable access, and supportive institutional policies. By addressing these areas proactively, higher education institutions can harness AI as a transformative tool that fosters both academic excellence and culturally responsive language education.

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