

# Exploring the Teaching of Reading for Comprehension in IsiZulu Home Language: A Bibliometric Review

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## ABSTRACT

Reading literacy has attracted the attention of a growing number of researchers in recent times. Though it is seen as an essential competency, thorough bibliometric analyses on the subject are lacking within a few African contexts, one of which is reading for comprehension in the isiZulu home language. This study attempted to fill this gap, by selecting 95 articles through the Preferred Reporting Items for Systematic Review and Meta-Analysis Protocol (PRISMA-P) method and leveraging tools such as VOSviewer, CitNetExplorer's visualization citation network, and counting techniques. The results indicated that South Africa is a central player, experiencing a notable increase in publications over the past decade. Authors such as Probert, Paulsrud B., Tian Z., Toth J., Port R.F., McKinney C., Tyler R. Moodley V., and Wildsmith-Cromarty R. stand out, alongside prolific journals like English-Medium Instruction and Translanguaging, Language Learning, and Language Teaching. Crucial topics identified include Cultural Context, Language Proficiency, Interactive Read-Alouds, and Differentiated Instruction. The results emphasized the pivotal role of reading motivation in formal education, highlighting the complex nature of online activities. The study concluded that the field of research on teaching reading for comprehension in isiZulu has evolved into a well-established and cross-disciplinary field, with South Africa leading in contributions and collaborations, and anticipates continued growth which will solidify isiZulu reading instruction as a promising and enduring subject of study.

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## INTRODUCTION

Over the past decades, exploring the nature of teaching reading comprehension in home languages and its impact on actual teaching has become a recurring research theme in South Africa.<sup>1</sup> In South Africa, where linguistic variety is a defining feature of the educational environment, the need to provide good reading instruction in the learner's home language cannot be over-emphasized. Spaul et al. states that isiZulu is the first language spoken by 22.7% of South Africa's population of over 50 million people. More than 7.9 million people, or two-thirds (78%) of the population in KwaZulu-Natal, speak isiZulu as their first

<sup>1</sup> William E Tunmer and W A Hoover, "The Cognitive Foundations of Learning to Read: A Conceptual Framework for Teaching Beginning Reading," *Unpublished Manuscript, Institute of Education, Massey University, Palmerston North, New Zealand*, 2014, 86.

language.<sup>2</sup> The goal of this bibliometric study is to investigate the research literature on the teaching of reading for comprehension in the isiZulu home language, to achieve a better understanding of pedagogical practices, innovations, and difficulties. In addition, the study aims to identify important themes, trends, and research gaps in the current literature and is regarded as an effective tool for regulating home language comprehension in reading. Reading comprehension research has garnered rising academic attention from researchers with varied disciplinary backgrounds and expanded into a sprawling and fruitful business. Presenting the whole picture of this field's development trajectory and research hotspots is crucial as boundaries continue to be expanded. Reading for comprehension in isiZulu home language education is the process of teaching students how to understand, interpret, and critically engage with written texts in isiZulu. In addition to decoding words, this pedagogical approach fosters a deep understanding of the content, context, and cultural nuances embedded in the isiZulu literature.

Furthermore, it is crucial to support students in developing excellent reading comprehension abilities in their mother tongue. In the linguistically diverse nation of South Africa, the value of becoming fluent in native tongues like isiZulu has been more widely acknowledged in the debate around education.<sup>3</sup> A thorough investigation into the complex terrain of isiZulu home language reading comprehension instruction is needed to explore educational techniques, difficulties, and potential solutions against the backdrop of a diverse cultural and linguistic tapestry. This will help to improve literacy instruction in the South African environment.<sup>4</sup>

The teaching of reading comprehension research started in the 1800s, covering aspects such as Inclusion Criteria, Geographical Distribution, Linguistic Challenges, and practical knowledge.<sup>5</sup> Today, rather than simply looking into teachers' instructional approaches, more emphasis is being devoted to investigating the complexity of teaching comprehension in the isiZulu home language. Due to the belief that as one of the eleven official languages of South Africa, isiZulu is very important both linguistically and culturally, reading and understanding texts written in isiZulu is essential for both academic success and the preservation of cultural legacy. To identify successful tactics and potential areas for development, this study investigates the approaches used in reading comprehension instruction. Notably, studies on teaching reading for comprehension, particularly in the isiZulu home language, have been carried out on a relatively large scale, exposing the complicated nature of teaching reading for comprehension in home languages, and the intricate relationship between teaching reading for comprehension and teaching isiZulu home language.

A few reviews on teaching comprehension have been conducted, producing many insightful findings that have added to the body of knowledge. For example, one review on the potential of reading comprehension to increase the visibility of local African languages in South Africa and how translanguaging can be used for learning and teaching in multilingual primary classrooms<sup>6</sup> examined the effects of three experienced teachers' different approaches to teaching grade 5 fractions. Although these studies only focus on a particular aspect of reading comprehension, no thorough or quantitative study has been carried out to assess the overall state of this field's research. Researchers can only contribute more to the field of inquiry if they have an overview of the research hotspots and frontiers. There is a pressing need to analyze the emerging literature about the teaching of reading for comprehension in the isiZulu Home Language and provide valuable insights to the academic community.

<sup>2</sup> Servaas Van der Berg, "What the Annual National Assessments Can Tell Us about Learning Deficits over the Education System and the School Career," *South African Journal of Childhood Education* 5, no. 2 (2015): 28–43; Sarah J Howie et al., *PIRLS Literacy 2016: Progress in International Reading Literacy Study (PIRLS) 2016: South African Children's Reading Literacy Achievement* (Centre for Evaluation and Assessment (CEA), 2017); Nic Spaull and Elizabeth Pretorius, "Still Falling at the First Hurdle: Examining Early Grade Reading in South Africa," *South African Schooling: The Enigma of Inequality: A Study of the Present Situation and Future Possibilities*, 2019, 147–68.

<sup>3</sup> Norma Nel et al., "Research Partnership between South Africa and China: Emergent Literacy Teaching and Learning in Early Childhood Education in South Africa," *Per Linguam: A Journal of Language Learning = Per Linguam: Tydskrif Vir Taalaanleer* 32, no. 1 (2016): 102–22; Anne Castles, Kathleen Rastle, and Kate Nation, "Ending the Reading Wars: Reading Acquisition from Novice to Expert," *Psychological Science in the Public Interest* 19, no. 1 (2018): 5–51.

<sup>4</sup> James W Chapman et al., "Teachers' Use of Phonics, Knowledge of Language Constructs, and Preferred Word Identification Prompts in Relation to Beginning Readers," *Australian Journal of Learning Difficulties* 23, no. 1 (2018): 87–104.

<sup>5</sup> Deborah Tetley and Caroline Jones, "Pre-Service Teachers' Knowledge of Language Concepts: Relationships to Field Experiences," *Australian Journal of Learning Difficulties* 19, no. 1 (2014): 17–32; Hannah L Stark et al., "Language and Reading Instruction in Early Years' Classrooms: The Knowledge and Self-Rated Ability of Australian Teachers," *Annals of Dyslexia* 66 (2016): 28–54.

<sup>6</sup> Buckingham, Wheldall, and Beaman-Wheldall, "Why Poor Children Are More Likely to Become Poor Readers: The School Years," 22.

Because bibliometric analysis, which has the same benefits as meta-analysis, is thought to be a rigorous approach to delivering a comprehensive yet scientific view of a progressive evolution from extant literature in each field, it can assist both established and emerging scholars in identifying research gaps and generating novel ideas.<sup>7</sup> Notably, a bibliometric assessment of the works is required to characterize the research environment and establish future research objectives. This bibliometric analysis aims to educate scholars about teaching reading for comprehension in the isiZulu home language and provide them with useful recommendations for future research from an insider's holistic perspective. It also promotes educational development.

This exploratory study uses VOSviewer 1.6.16, Micro Excel, and Tableau to perform bibliometric procedures of science mapping analysis based on the Scopus Database from 1993 to 2022 to describe the general research landscape of teaching reading comprehension in the isiZulu home language. In addition to adding to the body of existing knowledge, it is anticipated that by illuminating the development trajectory, national contributions, and collaboration, active authors, and journals, as well as the research foci, it will enrich the body of knowledge and offer insightful information to those just entering this field of study in the educational setting. Additionally, the results can be used to support more insightful recommendations for fostering the growth of student learning. The following four primary research questions are addressed:

- RQ1. What development trajectory can be identified in the teaching of reading comprehension in the isiZulu home language during the past three decades?
- RQ2. What are the international contributions and collaboration in reading comprehension in the isiZulu home language?
- RQ3. Who are the most productive authors and what are the most productive journals on reading comprehension in the isiZulu home language?
- RQ 4. Which topical foci have been investigated most frequently in this domain?

## LITERATURE REVIEW

### Debates on the Definition of Reading Comprehension in isiZulu

The academic community has engaged in heated discussions on the definition of "reading comprehension." Buckingham, Wheldall and Beaman only defined the knowledge structure in 1996, dividing it into three areas: background information, textual knowledge, and linguistic categories knowledge.<sup>8</sup> Chapman, et al. stated that these three elements form the basis for investigating the teaching of reading comprehension in the isiZulu home language, which is in line with the opinions of Buckingham, Wheldall and Beaman.<sup>9</sup> However, the capacity to comprehend and analyze written material is a prerequisite for reading comprehension. The information in this field may be divided into several essential categories, each enhancing the reader's capacity for general understanding. Reading is defined as the capacity to use phonemic awareness and letter-and-sound recognition to identify and pronounce each distinct word inside a text. According to Spaull, Pretorius, and Mahohlwane, the term "reading" can refer to a "skill or a process" and has "different but related meanings in the education context."<sup>10</sup> She continues by saying that reading, one of the four essential language skills, improves one's capacity to translate a group of written symbols, or letters, into spoken language; however, deriving meaning from written material is a difficult task.

<sup>7</sup> Castles, Rastle, and Nation, "Ending the Reading Wars: Reading Acquisition from Novice to Expert"; Vassiliki Diamanti et al., "Preschool Phonological and Morphological Awareness As Longitudinal Predictors of Early Reading and Spelling Development in Greek," *Frontiers in Psychology* 8 (November 27, 2017), <https://doi.org/10.3389/fpsyg.2017.02039>; Kanokporn Vibulpatanavong and David Evans, "Phonological Awareness and Reading in Thai Children," *Reading and Writing* 32 (2019): 468; Ulrika Wolff and Jan-Eric Gustafsson, "Early Phonological Training Preceding Kindergarten Training: Effects on Reading and Spelling," *Reading and Writing* 35, no. 8 (2022): 1883.

<sup>8</sup> Jennifer Buckingham, Kevin Wheldall, and Robyn Beaman-Wheldall, "Why Poor Children Are More Likely to Become Poor Readers: The School Years," *Australian Journal of Education* 57, no. 3 (2013): 190–213.

<sup>9</sup> Buckingham, Wheldall, and Beaman-Wheldall, "Why Poor Children Are More Likely to Become Poor Readers: The School Years."

<sup>10</sup> Nicholas Spaull, Elizabeth Pretorius, and Nompumelelo Mohohlwane, "Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early-Grade Reading in Agglutinating African Languages," *South African Journal of Childhood Education* 10, no. 1 (2020): 2.

Notably, in teaching reading for comprehension in isiZulu home language research, there are diverse terminologies under the umbrella of teaching comprehension.<sup>11</sup> Some of these terms, e.g. “Ukufunda NgesiZulu” (Reading in isiZulu) and “Ulimi Lwesintu (Mother Tongue)” are used interchangeably with “Ukufunda Ngokuqonda (Reading Comprehension)”. Therefore, to help clarify the concepts, Ardington et al. elaborated on different terminologies and finalized that to improve learners' comprehension of written texts in the isiZulu language, teaching techniques for teaching reading comprehension must be explored and put into practice.<sup>12</sup> This is done via the use of home language research on isiZulu. Language concerns, cultural relevance, instructional techniques, and the socioeconomic setting are just a few of the factors that this kind of study usually covers.<sup>13</sup> This concept is “defined and refined based on educational and professional experiences throughout teachers' lives,” because of the significant influence of experiential elements in mediating the relationship between reading comprehension in isiZulu and the student learning process of reading comprehension in English as a second language. Teachers' experiences of teaching reading comprehension in isiZulu are explored to better understand their approach to teaching.

### **Related Research on the Teaching of Reading for Comprehension in isiZulu Home Language**

Teaching reading for comprehension in the isiZulu home language is becoming a sprawling field of inquiry.<sup>14</sup> Most of the empirical investigations focus on deciphering the intricate relationship between reading comprehension in isiZulu and the potential for successful learning.<sup>15</sup> Substantial research has shown that reading in home languages plays an influential role in forging a strong learning process, and thus, impacts learners' professional development. One of the four learning goals included in the language Curriculum and Assessment Policy Statement (CAPS) is reading and watching. The following abilities are expected of students in Grade 7 by the Department of Basic Education comprehension of the reading material, critical response to the text, reflection, and the capacity to utilize reading skills as readers explicitly.<sup>16</sup> The policy statement contains the reading skills required to help students with their reading comprehension issues. According to the Department of Education, students should have mastered decoding by the time they reach the senior phase, particularly in Grade 7. This implies that students are not “learning to read,” but rather are “reading to learn”.<sup>17</sup>

A few researchers have attempted to evaluate earlier studies on reading comprehension in the isiZulu home language to consolidate their results and pinpoint research trends and hotspots in the reading comprehension area. For example, Ardington et al., using a conceptual review approach, presented the historical foundation, essential components, conceptual domains, and underlying dynamics of reading comprehension in the isiZulu home language, with major implications for teacher education.<sup>18</sup>

Furthermore, a greater focus has been placed on delineating the research landscape surrounding the teaching of isiZulu. To provide an ontological and methodological profile of the research trend and hotspots in the teaching of reading comprehension in isiZulu, Ardington et al. conducted mapping research based on the previously mentioned literature to address several important questions regarding the nature of teaching comprehension in isiZulu.<sup>19</sup> By centering on teaching reading comprehension in isiZulu’ from an equity perspective, Ngema examined the understanding of pedagogical content knowledge of teachers

<sup>11</sup> Howie et al., *PIRLS Literacy 2016: Progress in International Reading Literacy Study (PIRLS) 2016: South African Children's Reading Literacy Achievement*; Spaul and Pretorius, “Still Falling at the First Hurdle: Examining Early Grade Reading in South Africa.”

<sup>12</sup> Cally Ardington et al., “Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages,” *International Journal of Educational Development* 84 (July 2021): vii, <https://doi.org/10.1016/j.ijedudev.2021.102433>.

<sup>13</sup> Kate Nation, “Children's Reading Difficulties, Language, and Reflections on the Simple View of Reading,” *Australian Journal of Learning Difficulties* 24, no. 1 (2019): 48.

<sup>14</sup> M Jukes et al., “Setting Reading Benchmarks in South Africa” (Khulisa Management Services Ltd: USAID and Department of Basic Education, 2020).

<sup>15</sup> Melissa DeJonckheere and Lisa M Vaughn, “Semistructured Interviewing in Primary Care Research: A Balance of Relationship and Rigour,” *Family Medicine and Community Health* 7, no. 2 (2019), 2.

<sup>16</sup> Department of Basic Education. *National reading strategy*, (Pretoria: Department of Education, 2011).

<sup>17</sup> Howie et al., *PIRLS Literacy 2016: Progress in International Reading Literacy Study (PIRLS) 2016: South African Children's Reading Literacy Achievement*.

<sup>18</sup> Ardington et al., “Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages,” 3.

<sup>19</sup> Ardington et al., “Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages,” 3.

in teaching isiZulu reading.<sup>20</sup> Spaul et al., reviewed enhancing the visibility of local African languages in South Africa through learning to read.<sup>21</sup>

Reading is a difficult process that requires each reader to achieve specific cognitive and linguistic goals. in addition to socially constructed behaviour.<sup>22</sup> Aspects of reading that are cognitive-linguistic consist of four primary parts: reaction, decoding, comprehension, and metacognitive and metalinguistic knowledge. These parts combine to create subparts that are connected and affect how a reader responds to a book as well as their desire to read. Understanding is one of the elements of reading, known as the capacity for meaning-making and comprehension of the text. Understanding what is being read is the primary goal of reading.<sup>23</sup>

In summary, earlier research has provided a thorough overview of the literature, highlighted research trends, and focused on specific aspects of teaching reading comprehension. However, there is still a knowledge gap regarding the overall performance and scholarship of teaching reading comprehension in isiZulu as a home language from a historical and general standpoint, and no bibliometric research has been used to date to close this gap. This study closes this gap, helping to emphasize the significance of some key themes to help rising academics determine research goals. It also demonstrates how the subject has evolved in research over the last three decades.

## METHODOLOGY

### Data Collection

The study followed PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to improve the research findings (see Figure 1). There are four steps in these recommendations. These are identification, screening, eligibility, and inclusion. The initial step of the search process defined the search phrases as "Comprehension in isiZulu." To account for spelling variations, the wildcard character "\*" was also utilized in the search. Using the search query "TITLEABS-KEY ("Comprehension in isiZulu\*") AND PUBYEAR > 1993," the first 104 publications were found. The 20th of December 2023 saw the extraction of all data.

Books and conference papers in other languages were screened during the screening stage because the study's focus was limited to English-language articles, book chapters, and reviews. Four products in all were not included. To determine eligibility, the article titles and abstracts were carefully reviewed to ensure they were pertinent, and any missing material was also filtered out of the documents. In the end, 95 samples in total were used to perform the bibliometric study.

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<sup>20</sup> Millicent Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal," *Per Linguam* 39, no. 2 (2023), <https://doi.org/10.5785/39-2-1026>.

<sup>21</sup> Spaul, Pretorius, and Mohohlwane, "Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early-Grade Reading in Agglutinating African Languages."

<sup>22</sup> Elizabeth Pretorius et al., "Teaching Reading (and Writing) in the Foundation Phase: A Concept Note," *ReSEP Projects*, 2016.

<sup>23</sup> Spaul, Pretorius, and Mohohlwane, "Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early-Grade Reading in Agglutinating African Languages."

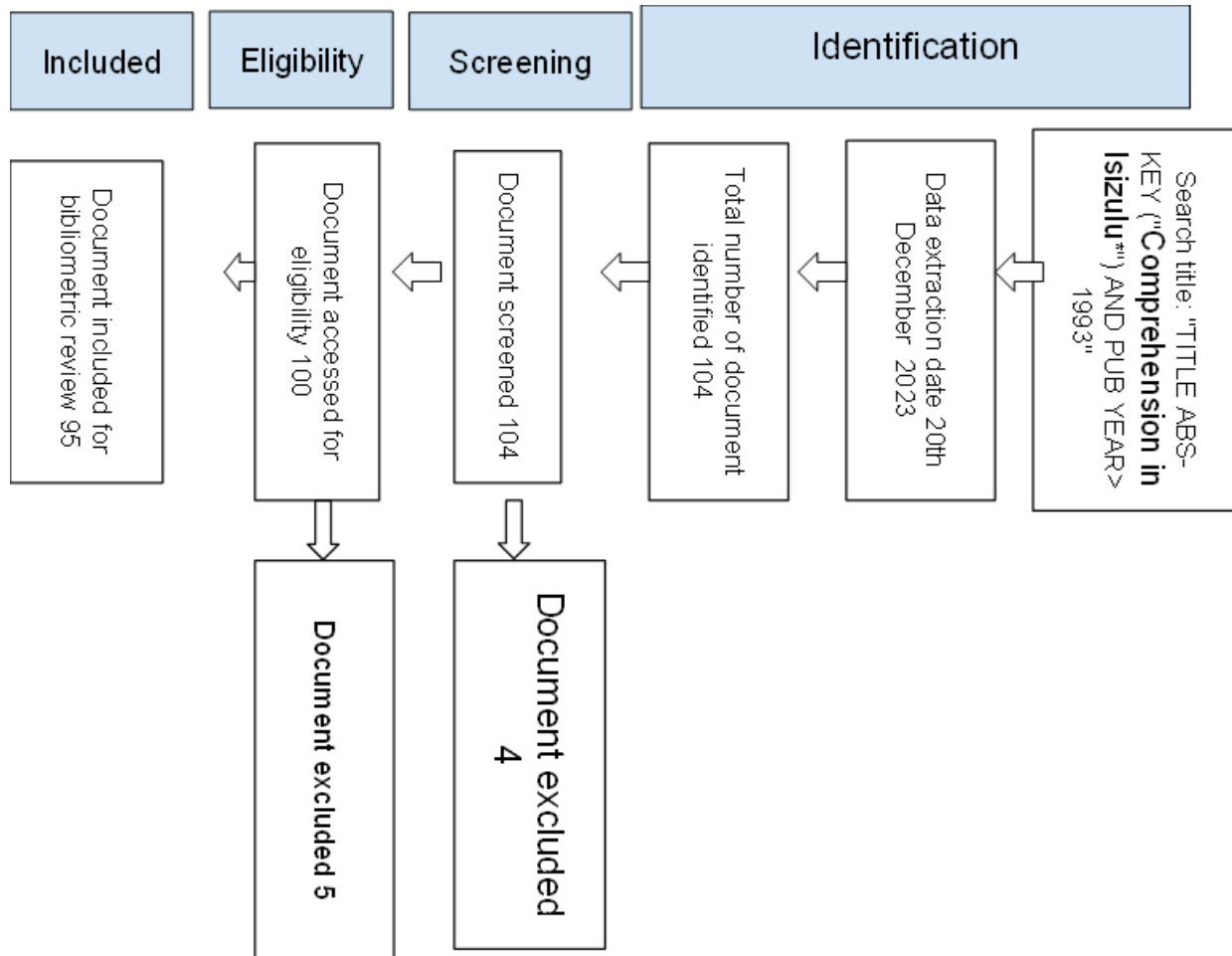


Figure 1: PRISMA flowchart of document identification on comprehension in isiZulu

### Data Analysis

Firstly, the bibliometric data extracted from the Scopus database was used to demonstrate the development trajectory of articles on teaching comprehension in the isiZulu home language. A graph showing the annual number of publications was created using Microsoft Excel 2019. Additionally, Tableau was used to create a global map that showed the publication's distribution and the contributions from each nation. A country partnerships network visualization map was also displayed using VOSviewer 1.6.16. Also used to assist in listing the most prolific writers and journals was Microsoft Excel, which was based on the bibliometric data obtained from VOSviewer 1.6.16. There were additional data as well, including journal quartiles, h-index, total citations, and SJR 2021

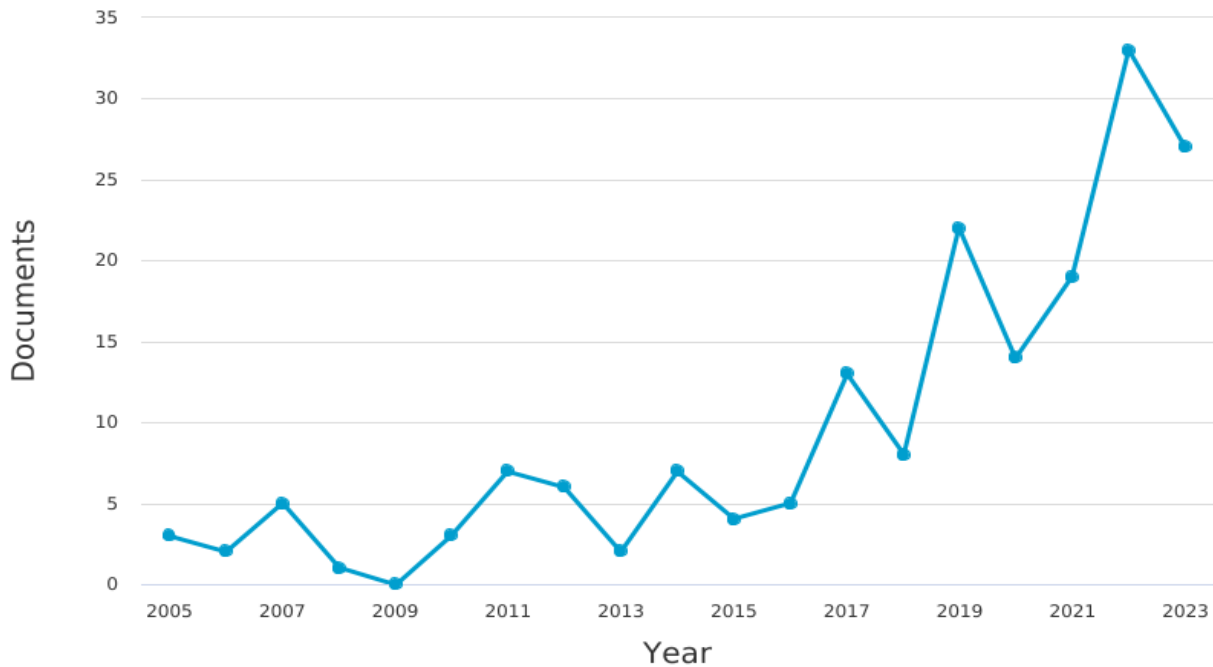
To determine the study foci, a network visualization map of the co-occurrence of terms was created using VOSviewer 1.6.16. The terms were filtered using the thesaurus file before the data analysis to prevent duplication. For example, it was discovered that the terms "teaching of reading", "teaching reading", "comprehension in isiZulu", "comprehension in isiZulu home language", and "teaching comprehension in isiZulu" were duplicates, therefore "teaching comprehension in isiZulu" was used to replace them all. Likewise, "teaching comprehension" was substituted with "teaching of reading of comprehension," "isiZulu home language" with "isiZulu". When a keyword's minimum number of occurrences is set at three, 79 out of the 928 keywords meet the criterion.

### PRESENTATION OF FINDINGS

The bibliometric analysis was conducted based on 95 publications yielded from the Scopus database from 1993 to 2023. Most of the publications were articles (87.05%) while others were book chapters (8.41%) and reviews (4.54%)

**The Development Trajectory of Publications on Teacher Cognition**

The annual development trend of publications on teacher cognition from 1993 to 2023 is depicted in Figure 2. Three phases can be distinguished in the development trend based on the bar graph. Less than four papers (a small number) were published about Comprehension in isiZulu between 1993 and 2012. The following ten years, from 2003 to 2012, saw a steady increase in the number of publications, from 2 to 18. Notably, the number of publications increased dramatically over the last ten years, peaking at 45 in 2023.



*Figure 2: Development trajectory of publications on comprehension in isiZulu from 1993 to 2023*

The overall trajectory of publications on comprehension in isiZulu over this period, notably from 2013 to 2023, is clearly on the rise, notwithstanding a few minor oscillations.

**Country Contributions and Collaboration**

Tableau was used to produce the geographical distribution of publications by nation. The publication density is represented by the small blue dots, with a darker shade in color representing a higher number of publications. Figure 3 shows that out of 55 nations, South Africa, the United States, Australia, Germany, Malaysia, the United Kingdom, Belgium, China, France, Italy, Spain, Sweden, and Turkey have published the most papers on comprehension in isiZulu. With 104 papers in this area, South Africa has made the most contributions, accounting for 70% of the total. The United States comes in second place, however, with 13 publications (including publications from Australia, Germany, Malaysia, the United Kingdom, Belgium, and China), it does not have half the number of publications that South Africa has. The United States comes in second with 15 publications.



Figure 3: Geographical distribution of publications by country

The co-authorship across 11 nations with at least one publication was displayed to help comprehend the nation-to-nation collaboration in this field (see Figure 4). The statistics created only considered the largest group of items rather than those with no collaboration at all, as 7 out of 11 countries are related in terms of collaboration. The graphic illustrates that the biggest node South Africa is bordered by four edges, indicating the four nations with whom it collaborates, comprising Spain, South Africa, and China, which has worked with 3 other nations on the scholarly subject.



Figure 4: The network visualization map of country collaboration

Seven clusters in various hues (green, blue, orange, and yellow) may be seen in Figure 4's network depiction of country collaboration. There is evidence of intercontinental cooperation in certain clusters. For example, the green cluster consists of three nations—South Africa, Spain, and China. The United Arab Emirates, on the other hand, did not actively collaborate with other nations.



**Most Productive Authors and Journals**

Table 1 lists the 9 writers out of 41 who have been recognized as having more than four publications. With nine papers overall in this field, Professor Paulsrud B.; Tian Z., and Toth J. from Dalarna University, Sweden; University of Texas, San Antonio, United States; Dalarna University, Sweden are the most productive authors. Port R.F. from the University of Toronto and McKinney C.; Tyler R. from the School of Education, University of Cape Town, Cape Town, South Africa are next in line. Most prolific writers, who have 75.79% of the 41 publications, are from South Africa, the United States, and Canada. The 9 productive authors show varied degrees of total citations. The most citations ever received, by Paulsrud B.; Tian Z. and Toth J., was 46, and his average citations per article was 16. Sherin M.G. came in second with 35 total citations. Seven authors have received more than 20 citations in total. However, in their writings, writers like Nazari M. and Karimi M. N. received fewer than ten citations.

**Table 1: Top 9 productive authors in the teacher comprehension in isiZulu**

Rank	Author	Nation/institutions	No P	TC	ACPC
1	Paulsrud B.; Tian Z.; Toth J.	Dalarna University, Sweden, and the University of Texas	207	46	16
2	Port R.F.	South Africa	49	35	10
3	McKinney C.; Tyler R.	University of Cape Town	17	32	15
4	Moodley V.	South Africa	20	17	2
5	Wildsmith-Cromarty R.; Balfour R.J.	North-West University, South Africa.	21	16	3
6	Coetzee-Van Rooy S.	South Africa	27	14	3
7	Maseko K.; Mkhize D.N.	South Africa	19	12	3
8	van Rooyen D.; Jordaan H.	South Africa	287	10	2
9	Omidire M.F.; Ayob S.	South Africa	129	9	2

Note. NoP=Number of Publications, TC=Total Citations (up to 23rd December 2023, ACPC=Average Citations Per Article.

Table 2 displays the list of 5 highly productive journals that have been published more than five times. With 28 publications overall, English-medium instruction and Translanguaging are the biggest contributors. Language Learning and Language Teaching (22) and Language and Education (21) are the next two journals in line. Furthermore, the bulk of publications only published less than ten articles about comprehension in isiZulu. With 84 citations, the South African Journal of Education has the greatest H-index among all journals. It is followed by Language Learning and Language Teaching (961) and Language and Education (877) in terms of total citations. The publication South African Journal of Education has the highest SJR of 3.1. Most of the top journals are from industrialized nations, as the table illustrates. With four journals, South Africa tops the list in Africa, and Language and Education is its representative publication. South African Journal of Education is the most productive of the three journals that the SA owns. The sole journal in the USA is English-medium Instruction and Translanguaging.

**Table 2: Top 15 productive journals in the comprehension in isiZulu**

Rank	Journal	Country	TC	CPD
1	English-Medium Instruction and Translanguaging	United States	46	16
2	Language Learning and Language Teaching	South Africa	35	10
3	Language and Education	South Africa	32	15
4	South African Journal of Education	South Africa	17	2
5	Language Teaching	South Africa	16	3

Note. NoP=Number of Publications, TC=Total Citations, CPD=Citation Per Documents

**Topical Foci**

The network visualization map of the co-occurrence analysis of author keywords, as displayed in Figure 5, provided the topical foci of the research on teaching reading comprehension in the isiZulu home language. A total of 29 keywords that had more than five occurrences were included out of the 144 keywords, to get a distinct clustering result. The largest node on the map is labelled "Reading Comprehension," which has 4 occurrences and is the largest lemon-green node. Nodes labelled "isiZulu," with 2, are the largest light blue nodes, while "translanguaging," with 3, is the largest dark blue node. The edges separating keyword pairs show a high degree of co-occurrence. The boundaries, for example, between keyword pairs like "African languages" and "benchmarking," "isiZulu" and "English second language," "deep learning" and "reading comprehension,"

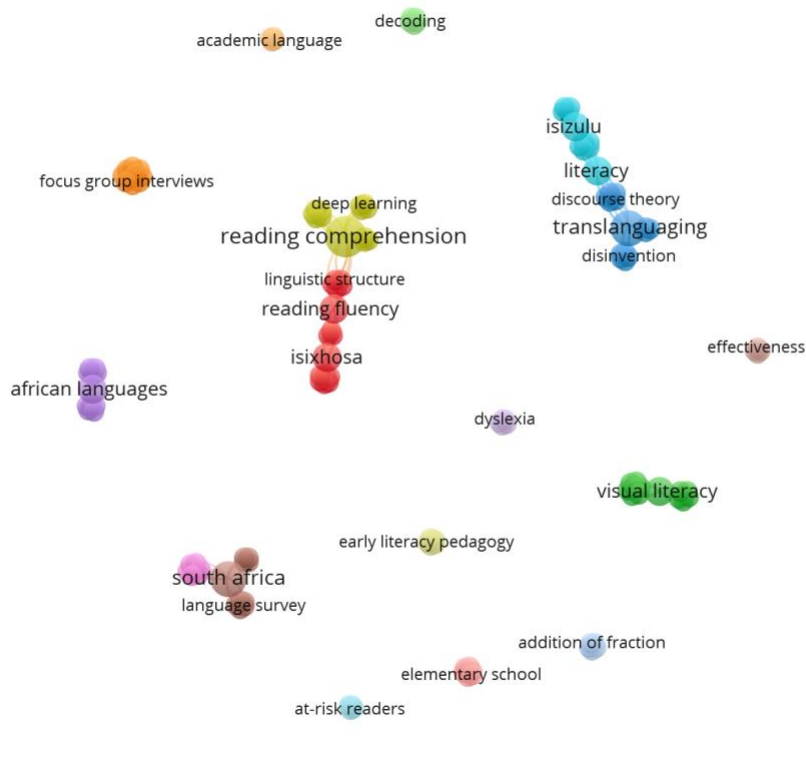


Figure 5: The network visualization map of the co-occurrence of keywords (Occurrence Threshold ≥ 5)

The 29 keywords were divided into 6 clusters, each represented by a different hue corresponding to a research topic. With 18 keywords, the blue cluster is the largest. Of these, the nodes for "reading comprehension," "deep learning," and "indigenous language" are significantly larger than those of the other nodes. Consequently, the primary focus of this cluster is on teaching reading comprehension in the isiZulu home language. Regarding the green cluster, the study topic of teaching reading is represented by the larger nodes like "reading fluency," "whole language approach," and "metalinguistic skills". With connections to the topics of "teaching reading comprehension" and "comprehension in isiZulu," the largest

node in the green cluster, "reading comprehension," is in the centre. The cluster then suggested that deep learning and African language be the research emphasis. The blue cluster had six keywords, with the primary focus being on "isiZulu," "translanguaging," and "literacy." This suggests that the cluster's emphasis is the cognitive abilities of novice teaching of reading for comprehension in the isiZulu home language. The largest nodes in the smallest cluster in purple, which only has three terms, are notably "African languages" and "benchmarking," suggesting that these two concepts are the main discussion topics.

Furthermore, Figure 6 presents the areas that have been the subject of growing interest in the academic community. The lighter colors denote more current interest in the subject matter. Over time, the teaching reading comprehension in the isiZulu home language field has identified nodes, such as "academic performance," "academic language," and "morphological awareness," as the hotter research focus, in contrast to the nodes in the brown, such as "dominant language constellation", "languaging", and "South Africa language."

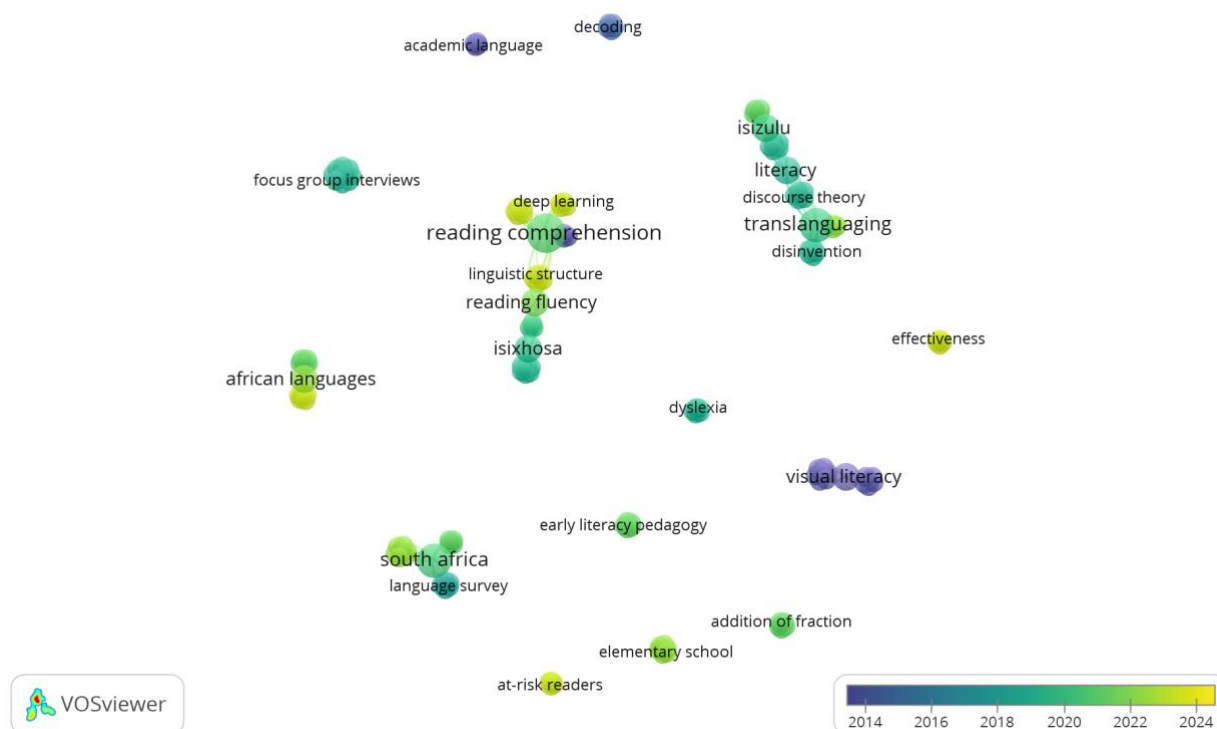


Figure 6: The overlay visualization map of the co-occurrence of keywords

## DISCUSSION

The bibliometric analysis of reading comprehension in the isiZulu home language research provided by the study is based on 95 publications that were taken from the Scopus database between 1993 and 2023. The following is a discussion of the research questions and their respective findings.

### What development trajectory can be identified in the teaching of reading for comprehension in the isiZulu home language field during the past three decades?

The results show an increase in scholarly interest in teaching reading for comprehension between 1993 and 2023. This is consistent with the assertion made by Ngema, that since the mid-1990s, there has been a constant interest in teaching reading for comprehension in isiZulu research.<sup>24</sup> Many academics, both domestically and internationally, have highlighted the significance of researching the teaching of reading for comprehension in the isiZulu home language. It is important to look at cultural relevance, knowledge, thoughts, perceptions, theories, and assumptions to improve pedagogical practices. This is because

<sup>24</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

teaching reading for comprehension in the isiZulu home language may have a significant influence on and determine how teachers apply their lessons in the classroom.<sup>25</sup>

Ngema, also recommends that adequate attention be paid to examining the cultural significance, which includes readings, tales, and illustrations, that speak to the learners' respective cultures.<sup>26</sup> This improves interest in and connection to the subject matter. Owing to the teaching of reading comprehension in isiZulu significant impact on developing teaching practices, promoting professional development, and improving educational policies, it should be necessary to conduct continuing research to compile the essential elements of teaching reading comprehension in isiZulu home language.<sup>27</sup> Notably, the trend of publications on comprehension in isiZulu has grown over time, particularly in the past ten years. This result generally agrees with Probert's report from 2019, which said that readers of Southern Bantu languages employ the morpheme as a reading grain size, therefore, making this a prominent topic for research.<sup>28</sup>

Since the turn of the millennium, a subject in education. Spaul et al. investigated how Grade 3 isiXhosa and Setswana learners preferred grain size when reading related texts, paying close attention to how they used syllables and morphemes.<sup>29</sup> The predominant grain size unit in both languages for connected-text reading, according to the results, is the syllable. Grammar and syntax increase comprehension and give clear instructions on isiZulu sentence construction. Scholars like Ardington et al. have made a strong case for the need to focus on the teaching of reading for comprehension in the isiZulu home language knowledge base of second language teachers. This may also be responsible for the field's development trend.<sup>30</sup>

### **Who are the most productive authors and what are the most productive journals on teaching of reading for comprehension in the isiZulu home language?**

Paulsrud B., Tian Z., and Toth J. are, without a doubt, the most prolific writers, and have contributed the most to the topic of teacher cognition. Paulsrud B.; Tian Z. and Toth J., reinterpreted thinking as the teaching of reading after reviewing a plethora of research on comprehension in the isiZulu home language.<sup>31</sup> As Paulsrud, Tian, and Toth pointed out. To properly comprehend teachers' practices and foster development, it is crucial to investigate the ideas, knowledge, and other unobservable phenomena underlying their actions.<sup>32</sup> The teaching of reading for comprehension in isiZulu home language research "has become a well-established domain of inquiry in language teaching research"<sup>33</sup> thanks to all his contributions while leading this field of study, and researchers can now move "toward better understanding the fullness of the work of teaching."<sup>34</sup>

The journal that has published the highest number of studies on the topic of teaching reading for comprehension in the isiZulu home language is English-medium Instruction and Translanguaging. The English-medium Instruction and Translanguaging journal focuses on using educational technology and applied linguistics to solve problems related to teaching and learning languages. The journal has focused a lot of emphasis on the fundamental problems in the field of language teacher education, such as teaching reading for comprehension in the isiZulu home language, as noted by Probert.<sup>35</sup> The teaching of reading for comprehension in isiZulu home language research is a hot issue in the field of language teaching,

<sup>25</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>26</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

<sup>27</sup> Spaul, Pretorius, and Mohohlwane, "Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early-Grade Reading in Agglutinating African Languages."

<sup>28</sup> Tracy N. Probert, "A Comparison of the Early Reading Strategies of IsiXhosa and Setswana First Language Learners," *South African Journal of Childhood Education* 9, no. 1 (April 11, 2019), <https://doi.org/10.4102/sajce.v9i1.643>.

<sup>29</sup> Spaul, Pretorius, and Mohohlwane, "Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early-Grade Reading in Agglutinating African Languages."

<sup>30</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>31</sup> Spaul, Pretorius, and Mohohlwane, "Investigating the Comprehension Iceberg: Developing Empirical Benchmarks for Early-Grade Reading in Agglutinating African Languages." 12.

<sup>32</sup> Castles, Rastle, and Nation, "Ending the Reading Wars: Reading Acquisition from Novice to Expert."

<sup>33</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>34</sup> Probert, "A Comparison of the Early Reading Strategies of IsiXhosa and Setswana First Language Learners."

<sup>35</sup> Probert, "A Comparison of the Early Reading Strategies of IsiXhosa and Setswana First Language Learners."

according to Language Learning and Language Teaching Research, a prominent publication with a high impact factor over the years, which has the same study scope in foreign language teaching.<sup>36</sup>

### **What topical foci in this domain have been most frequently investigated?**

The topical foci in the teaching of reading for comprehension in the isiZulu home language domain identified are (1) Cultural Context, (2) Language Proficiency, (3) Interactive Read-Alouds, and (4) domain Differentiated Instruction.

The primary focus is on teaching reading for comprehension in the isiZulu home language. The results support the assertion made by Ardington et al., that there is evidence of a connection between teaching reading in isiZulu and effective teaching of reading comprehension.<sup>37</sup> Effective reading comprehension training and the teaching of reading in isiZulu are closely related and dynamic. In addition to linguistic ability, it also entails cultural relevance, strategic thinking, and a supportive learning environment, all of which support the overarching objective of developing proficient and enthusiastic isiZulu readers (Ardington et al. 2020: 3). Inspired by De Vos's theory, instilling a love of reading and honoring language and literature are key components of fostering a pleasant reading environment in isiZulu. Students' motivation to read in isiZulu is increased when they find the language enjoyable, which in turn promotes effective understanding.<sup>38</sup>

Fostering literacy skills in isiZulu-speaking learners requires a close relationship between the effective teaching of reading comprehension and the teaching of reading in isiZulu. Teaching reading comprehension effectively involves more than just word decoding; it also entails giving students the tools they need to comprehend, evaluate, and interpret written materials. This is how providing good reading comprehension education and teaching reading in isiZulu connect.<sup>39</sup> For example, Ardington et al., argued that choosing books that are both culturally appropriate and resonate with the students' experiences is essential while teaching reading in isiZulu.<sup>40</sup> Effective comprehension is aided by this cultural connection, which raises engagement and encourages a deeper comprehension of the subject matter.

The second focus is language proficiency. This finding is consistent with the statement made by Ardington et al., who assert that the focus of isiZulu reading instruction is on language proficiency, which includes syntax, grammar, and vocabulary growth.<sup>41</sup> Language proficiency is a prerequisite for proficient reading comprehension.<sup>42</sup> Teaching phonics in isiZulu facilitates proper word decoding by helping students make the connection between written symbols and sounds. Moreover, phonemic awareness exercises improve comprehension and general reading ability.<sup>43</sup> Teaching isiZulu reading skills entails directing students' approach to texts. These techniques, which include summarizing, asking questions, and formulating predictions, have a direct effect on how well students understand what they read.<sup>44</sup> This urges greater effort toward identifying the factors that affect teachers' professional development and learning.

The third topical focus is interactive read-aloud. Using interactive read-aloud in isiZulu to model comprehension skills aids students in understanding how to actively interact with a text. Conversations in isiZulu regarding the text's topic improve language proficiency and increase understanding.<sup>45</sup> According to Ngema, effective reading comprehension requires an understanding of the structure of isiZulu texts as well as various genres.<sup>46</sup> Students can better browse and understand a variety of resources by learning

<sup>36</sup> Probert, "A Comparison of the Early Reading Strategies of IsiXhosa and Setswana First Language Learners."

<sup>37</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>38</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

<sup>39</sup> Tetley and Jones, "Pre-Service Teachers' Knowledge of Language Concepts: Relationships to Field Experiences"; Stark et al., "Language and Reading Instruction in Early Years' Classrooms: The Knowledge and Self-Rated Ability of Australian Teachers."

<sup>40</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>41</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages."

<sup>42</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages."

<sup>43</sup> Tetley and Jones, "Pre-Service Teachers' Knowledge of Language Concepts: Relationships to Field Experiences"; Stark et al., "Language and Reading Instruction in Early Years' Classrooms: The Knowledge and Self-Rated Ability of Australian Teachers."

<sup>44</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

<sup>45</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

<sup>46</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

about the properties of different genres and how texts are organized. As Ardington et al., found in their qualitative study, visual and auditory literacy are supported when reading teaching in isiZulu incorporates multimedia materials and visual aids.<sup>47</sup> These multimodal strategies improve comprehension by fostering a deeper comprehension of the subject matter.

The fourth topical domain is differentiated instruction. This is reflected in Ardington et al.'s statement that to ensure that education in isiZulu reading is customized to meet the needs of each student, it is important to acknowledge their unique needs.<sup>48</sup> Differentiated education encourages successful comprehension by offering extra help for challenges based on each student's needs. Furthermore, according to Ngema, collaborative approaches are fostered when isiZulu reading activities are promoted to families and the community.<sup>49</sup> Students' reading comprehension is positively impacted when they recognize the value of reading in the context of their families and cultures. However, instilling a love of reading and honouring language and literature are key components of fostering a pleasant reading environment in isiZulu. Students' motivation to read in isiZulu is increased when they find the language enjoyable, which in turn promotes effective understanding.

## **RECOMMENDATIONS**

Considering the study's results, the Department of Education should plan workshops for teacher educators to teach reading comprehension in isiZulu. Additionally, it is advised that teachers receive training in teaching reading comprehension strategies as part of their teacher preparation, so they are prepared to teach comprehension when they start their jobs. Just giving teachers access to reading materials like newspaper articles and magazines is said to be insufficient in terms of collaborative support. More research in additional circuits and districts is advised to help the Department of Education enhance the way that instructors throughout the province apply the EMC2 framework technique, thereby addressing students' reading comprehension and ensuring professional growth and learning for teachers. Joint participation in professional learning communities and meaningful communication within professional bodies are considered to increase great teacher learning. Environments that foster a collaborative culture also foster leadership, respect for one another, and the ability for educators to make decisions for themselves.

## **CONCLUSION**

In conclusion, a rising trend in the number of publications exploring the teaching of reading for comprehension in the isiZulu home language has been observed. This suggests that this expansion will continue. Geographic distribution of the publications was primarily focused on SA, the US, China, and the UK, with South Africa leading in terms of contributions and teamwork. The most prolific writers are Probert, Paulsrud B.; Tian Z.; Toth J., Port R.F., McKinney C.; Tyler R. Moodley V. and Wildsmith-Cromarty R.; and Balfour R.J. The most prolific journals are English-Medium Instruction and Translanguaging, Language Learning and Language Teaching, Language and Education, and the South African Journal of Education, Language Teaching. Cultural context, language proficiency, interactive read-aloud, and differentiated instruction are the identified topical foci in the teaching of reading for comprehension in the isiZulu home language. The teaching of reading for comprehension in the isiZulu home language has developed into a reputable, multidisciplinary field of study and may continue to be a fascinating topic. As the first attempt to use bibliometric analysis to shed light on the research hotspots and development trajectory of the teaching of reading for comprehension in the isiZulu home language field, this study can provide new insights for educational practitioners looking to broaden their research themes and leverage more insightful recommendations for supporting teacher development.

## **LIMITATIONS**

Though the study provides an extensive quantitative analysis of the body of knowledge on the teaching of reading for comprehension in the isiZulu home language, some limitations restrict its scope. First off, as the information was gathered from a single source, some relevant publications might not have been

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<sup>47</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>48</sup> Ardington et al., "Benchmarking Oral Reading Fluency in the Early Grades in Nguni Languages," 3.

<sup>49</sup> Ngema, "Understanding the Pedagogical Content Knowledge of Teachers in Teaching IsiZulu Reading: A Case Study of Two Rural Primary Schools in KwaZulu-Natal."

included. Moreover, articles released after December 20, 2023, were not included, or investigated, as the data were extracted on that day. Moreover, despite the authors' best efforts to maintain objectivity, subjectivity may have had an impact on how the results are interpreted. Therefore, to ensure complete coverage of data, future research on teaching reading for comprehension in the isiZulu home language has been proposed using various other databases. Notwithstanding its shortcomings, this study has provided insightful information about the teaching of reading for comprehension in isiZulu home language research.

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