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English–Sepedi code-switching in FET Geography teaching: Effects on learner achievement in Capricorn District, Limpopo Province, South Africa

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ABSTRACT

This paper focuses on code-switching use between English and Sepedi in Further Education and Training (FET) Geography classrooms in the Capricorn District of Limpopo Province, South Africa. It investigates how teachers manage language policy instructions while at the same time considering the multilingual nature of their classrooms and how this impacts learner performance. The research combined quantitative and qualitative methods through classroom observations, teacher interviews, learner assessments, and document analysis. It involved 8 teachers and 120 Grade 10–12 Geography learners from four secondary schools. The findings revealed that code-switching, when used strategically, greatly clarifies difficult geographical concepts for learners. Learners in the code-switching classrooms scored 23% higher than those in English-only classes. Teachers use code-switching as an instructional aid to explain jargon, provide background information, and fill cultural knowledge gaps. Nevertheless, there are contradictions between the official language-in-education policies and the real classroom situation, where teachers worry about preparing learners for assessments and their own teaching identity. This paper deepens the understanding of translanguaging practices in the South African educational system and gives concrete suggestions for aligning policy and curriculum development to acknowledge multilingual learners' linguistic resources as an asset.

Keywords: Code-switching, Translanguaging, Multilingual Education, FET Geography, Language Policy.

INTRODUCTION

Language has always been one of the major issues and questions raised in South African education. For example, classroom situations are often noted to not reflect the policy aspirations stated in the documents.[1] On one hand, the South African constitution recognizes eleven official languages, and on the other hand, it is English that still is the main language of learning and teaching (LoLT) in most

[1] Margie Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies," *Classroom Discourse* 10, no. 3–4 (October 2, 2019): 216–36, https://doi.org/10.1080/19463014.2019.1628792; Mamokgethi Setati and Jill Adler, "Between Languages and Discourses: Language Practices in Primary Multilingual Mathematics Classrooms in South Africa," *Educational Studies in Mathematics* 43, no. 3 (2000): 243–69..

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secondary schools, especially in the so-called academic or science subjects.[2] This linguistic domination poses a particular problem for those learners whose first language is different from the LoLT, since instruction through an unfamiliar language can lead to a lack of quality education and thus deepen previously existing inequalities based on history.[3]

Geography, as a subject that bridges both nature and society, has become a site of linguistic difficulty in the Further Education and Training (FET) phase. Learning Geography is associated with the usage of subject-specific vocabulary, the understanding of abstract concepts, and the acquisition of the ability to represent spaces visually. The learners must do all these while most of the time the medium of instruction is English.[4] Throughout the Capricorn District, where Sepedi is the mother tongue of the majority, such a language requirement adds to the overall difficulty for learners and therefore can become an obstacle to their understanding and attainment of good marks.[5]

Code-switching, which refers to switching back and forth between two or more languages in a single conversation or instructional setting, has become one of the most common, although largely unofficial, practices in South African multilingual classrooms.[6] Educators use code-switching as a tool to enhance understanding, keep the class under control, and create a learning environment that is sensitive to the learners' entire linguistic resources.[7] On the other hand, this practice is somewhat at odds with the official policies, which frequently set English language proficiency as the goal and thus see code-switching only as a temporary scaffolding strategy rather than a legitimate pedagogical method.[8]

Although scholarship on code-switching in South African education has significantly increased, there are still several major gaps in the literature. Firstly, because most of the studies focus on mathematics and science, only a few publications have analyzed code-switching in humanities subjects such as Geography.[9] Secondly, most research sheds light on teachers' views on their use of language but fails to provide a systematic demonstration of the impact on learner achievement.[10] Thirdly, only a handful of articles address the specific context of FET phase education, where studying for examinations and preparation for the job market are factors that lead to an increase in tension.[11] Lastly, the geographic differences are still a very rarely discussed matter. Most of the research is done in Gauteng, Western Cape, and Eastern Cape provinces, thus leaving Limpopo largely unrepresented, although it is a predominantly African language-speaking area.[12] The Capricorn District, situated in the north of the Limpopo Province, is a suitable place for the study of code-switching practices. The district is mainly Sepedi-speaking at the community level, and therefore most learners have limited proficiency in English when they enter the secondary level of education.[13] Teachers of Geography in this setting face to face with the challenge of trying to interpret the curriculum, keep up with the demands of assessment, and at the same time, deal with the language realities of their learners. Teachers' ways of handling these tensions and the resulting influence on learner achievement, if known, would be highly valuable to educational policy and practice.

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[2] Kathleen Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections," *Annual Review of Applied Linguistics* 33 (2013): 215–37.

[3] Leketi Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms," *Language and Education* 29, no. 3 (2015): 200–217.

[4] David Lambert and John Morgan, *Teaching Geography 11-18: A Conceptual Approach* (McGraw-Hill Education (UK), 2010); Di Wilmot and Carolina Dube, "School Geography in South Africa after Two Decades of Democracy: Teachers' Experiences of Curriculum Change," *Geography* 100, no. 2 (July 11, 2015): 94–101, https://doi.org/10.1080/00167487.2015.12093961.

[5] Mbulungeni Madiba, "Promoting Concept Literacy through Multilingual Glossaries: A Translanguaging Approach," *Multilingual Universities in South Africa: Reflecting Society in Higher Education*, 2014, 68–87.

[6] Mamokgethi Setati, "Access to Mathematics versus Access to the Language of Power: The Struggle in Multilingual Mathematics Classrooms," *South African Journal of Education* 28, no. 1 (2008): 103–16.

[7] Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies."

[8] Kathleen Heugh et al., "Multilingualism(s) and System-Wide Assessment: A Southern Perspective," *Language and Education* 31, no. 3 (May 4, 2017): 197–216, https://doi.org/10.1080/09500782.2016.1261894.

[9] Lambert and Morgan, *Teaching Geography 11-18: A Conceptual Approach*.

[10] Gabrijela Reljić, Dieter Ferring, and Romain Martin, "A Meta-Analysis on the Effectiveness of Bilingual Programs in Europe," *Review of Educational Research* 85, no. 1 (2015): 92–128.

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

[12] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms."

[13] Limpopo Department of Education, *Annual Report 2022/2023* (Limpopo Department of Education, 2023).

Theoretically, this study is anchored in translanguaging theory, complemented by the linguistic interdependence hypothesis, sociocultural theory and critical pedagogy. Translanguaging sees bilinguals not as two separate language systems but as one linguistic repertoire that they draw from in a very flexible manner depending on their communicative needs.[14] Translanguaging questions the monoglossic view of languages as separate, isolated entities and instead sees contemporary multilingual communication as a continuum.[15] In classrooms, a translanguaging approach means that the teacher actively tries to use learners' total language capacities for the benefit of learning rather than considering learners' mother tongues as obstacles to the acquisition of English.[16]

Cummins' interdependence hypothesis is another one of the theoretical bases, as he claims that what is learned in the first language can be used to support second language learning, thereby increasing the proficiency of the academic language of the learners across the board by utilizing the already established linguistic bases.[17] The distinction between basic interpersonal communicative skills (BICS) and cognitive academic language proficiency (CALP) is still of great importance, as a subject like Geography requires the latter, namely proficiency in the specialized vocabulary and complex linguistic structures.[18]

Vygotsky's sociocultural theory of learning is a significant influence on this research, as it includes his idea of the zone of proximal development (ZPD) that is particularly relevant here.[19] Through language, which is the main mediating tool, learners construct their knowledge when peers who are more competent and teachers provide scaffolding that enables learners to do tasks beyond their independent capabilities.[20] In this way, code-switching can perform a scaffolding role: it can be understood as a tool that helps learners' linguistic abilities to be stretched, and thus the language demands of the Geography curriculum content can be met.[21]

The theoretical framework also encompasses features of critical pedagogy since it recognizes that language policies are never neutral, but they reflect and continue power relations.[22] The ongoing predominance of English in the South African education system can be equally viewed as one of the modes of linguistic imperialism that puts indigenous African languages and their speakers at the margin.[23] By analysing code-switching practices from this perspective, it becomes clear how teachers and learners, on the one hand, resist and, on the other, negotiate these power structures, thus making learning spaces more equitable.[24] From this critical standpoint, the study asks: whose language practices are valued, whose knowledge is recognized as legitimate, and to what extent do educational policies either challenge or reinforce linguistic hierarchies?

This research explores gaps in the literature by focusing specifically on code-switching in FET Geography education in the Capricorn District, thus combining an inquiry into teacher language practices with a statistical analysis of the results of learner achievement. This research endeavour aims to identify the extent, ways, and impact of English and Sepedi code-switching in Geography classrooms at the FET level in Capricorn District. The main objectives of the study are to: (1) investigate how teachers use code-switching formally or informally in their teaching; (2) determine if there is any correlation between teachers' code-switching and learners' performance in the subject; (3) find out how teachers feel about language policy in relation to their use of code-switching; and (4) understand from

[14] Ofelia García and Li Wei, *Translanguaging: Language, Bilingualism and Education* (Palgrave Macmillan, 2014).
[15] Jasone Cenoz and Durk Gorter, "Teaching English through Pedagogical Translanguaging," *World Englishes* 39, no. 2 (June 9, 2020): 300–311, https://doi.org/10.1111/weng.12462.
[16] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms."
[17] Jim Cummins, "Cognitive/Academic Language Proficiency, Linguistic Interdependence, the Optimum Age Question and Some Other Matters," *Working Papers on Bilingualism*, no. 19 (1979).
[18] Cummins, "Cognitive/Academic Language Proficiency, Linguistic Interdependence, the Optimum Age Question and Some Other Matters."
[19] Lev S. Vygotsky, "Mind in Society: The Development of Higher Psychological Processes" (Harvard university press, 1978).
[20] J. P Lantolf and S. L Thorne, *Sociocultural Theory and the Genesis of Second Language Development* (Oxford University Press, 2006).
[21] Setati and Adler, "Between Languages and Discourses: Language Practices in Primary Multilingual Mathematics Classrooms in South Africa."
[22] Paulo Freire, *Pedagogy of the Oppressed: 50th Anniversity Edition* (Bloomsbury Academic, 2018).
[23] Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections."
[24] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms."

multilingual pedagogical perspectives what the challenges and possible solutions are in teaching Geography through more than one language. Through finding out what happens in real-life teaching situations and analyzing them, the study will be part of the literature on translanguaging pedagogy and will also show how such pedagogy can help in solving the problem of educational inequalities in language in diverse settings.

LITERATURE REVIEW

Language policy and practice in South African education

In its language-in-education policy, South Africa supports the idea of additive bilingualism, thus theoretically elevating the eleven official languages to the status of equal language resources in the teaching and learning process.[25] However, the delivery of the policy exposes the significant discrepancies between the intentions of the policy and the classroom situation. Probyn and Madiba, through their studies, reveal that learners use their mother tongues when learning during the Foundation and Intermediate phases, but most of them, however, move to English as the language of teaching and learning (LoLT) by Grade 4.[26] This shift causes what Heugh describes as a 'literacy crisis' whereby learners are unable to develop academic literacy in their first language while simultaneously struggling with a new one.[27] In addition, this early shift mainly affects learners from working-class families and rural areas who have almost no exposure to English outside their school environments.[28]

More recent reports have revealed that the contradictions in language policy implementation persist. Makalela discovered that although the policies state that instruction should be in the mother tongue, the reality is that there is a shortage of teaching materials and a lack of teacher training, which, together with parental desire for English-medium education, negatively influence these intentions.[29] Furthermore, Heugh et al. showed that national assessment procedures, which are held only in English or Afrikaans for most subjects, therefore, create strong motivation for English-only instruction, disregarding the provisions in the policies that allow for other languages.[30] This assessment-driven scenario influences the way teachers carry out their duties and makes code-switching become a disputed and frequently secret practice rather than a pedagogical tool officially approved.[31]

Code-switching as pedagogical practice

Today, various international research studies acknowledge code-switching as a sophisticated linguistic and pedagogical tool that can be leveraged intentionally, rather than as a deficient mode of communication. García and Wei highlight the importance of translanguaging pedagogies, which draw from learners' linguistic repertoires, thereby facilitating both content mastery and language advancement.[32] Empirical research conducted in the fields of mathematics education,[33] science,[34] and African classrooms more broadly[35] substantiates that code-switching is a device that aids learners in

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[25] Heugh et al., "Multilingualism(s) and System-Wide Assessment: A Southern Perspective."
[26] Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies"; Madiba, "Promoting Concept Literacy through Multilingual Glossaries: A Translanguaging Approach."
[27] Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections."
[28] Setati, "Access to Mathematics versus Access to the Language of Power: The Struggle in Multilingual Mathematics Classrooms"; Stephen Taylor and Marisa von Fintel, "Estimating the Impact of Language of Instruction in South African Primary Schools: A Fixed Effects Approach," *Economics of Education Review* 50 (2016): 75–89.
[29] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms."
[30] Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections."
[31] Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies."
[32] García and Wei, *Translanguaging: Language, Bilingualism and Education*.
[33] Setati and Adler, "Between Languages and Discourses: Language Practices in Primary Multilingual Mathematics Classrooms in South Africa."
[34] Margie Probyn, "Pedagogical Translanguaging: Bridging Discourses in South African Science Classrooms," *Language and Education* 29, no. 3 (May 4, 2015): 218–34, https://doi.org/10.1080/09500782.2014.994525; Erasmos Charamba and Kufakunesu Zano, "Effects of Translanguaging as an Intervention Strategy in a South African Chemistry Classroom," *Bilingual Research Journal* 42, no. 3 (July 3, 2019): 291–307, https://doi.org/10.1080/15235882.2019.1631229.
[35] John Clegg and Oksana Afitska, "Teaching and Learning in Two Languages in African Classrooms," *Comparative Education* 47, no. 1 (2011): 61–77.

grasping concepts, provides an opportunity for less proficient learners in English to be part of the discussion, and helps in making the classrooms more welcoming. Cenoz and Gorter state that appropriate code-switching is a conscious and carefully thought-out educational strategy rather than mere random switches between languages.[36]

Regarding the South African educational landscape, empirical evidence points to intricacies in the use of code-switching. Clegg and Afitska found that African teachers use code-switching for several main reasons: introducing and explaining technical terms, providing examples and extensions, and classroom management and teacher-learner rapport.[37] Nevertheless, research highlighted that on many occasions, code-switching is so inherent and thus unintentional that teachers consider it a 'necessary compromise' rather than consciously opting for it as a pedagogical strategy.[38] Setati and Adler also found that within multilingual classrooms, code-switching is a frequent occurrence.[39] Despite this, teachers rarely receive proper instruction on how to handle language mixing effectively or how to help learners make smooth language transitions between their first and second languages.

Academic researchers have started to delve into the link between code-switching and educational attainment. Reljić, Ferring, and Martin conducted a systematic review and meta-analysis of studies on bilingual programmes and found that bilingual approaches, including code-switching strategies, are associated with higher academic achievement, especially for learners from disadvantaged backgrounds and those with limited second-language proficiency.[40] Moreover, Charamba and Zano revealed that Grade 10 learners who were taught Chemistry with well-planned translanguaging between English and their home language achieved significantly higher scores on content tests compared to those who were taught in English only.[41] Heugh, on the other hand, warns that such advantages vary with the skill of code-switching and the degree to which both languages are truly appreciated, rather than the home language being just a temporary support to be discarded after English proficiency is gained.[42]

Language in Geography education

One way Geography education causes linguistic difficulties is the use of a very specific vocabulary. Also, it requires an advanced level of spatial thinking and combines physical and human aspects.[43] Madiba found that academic and disciplinary terms are usually not very well translated in local African languages, so both teachers and learners must master cross-linguistic ways to understand them together, for example through multilingual concept glossaries.[44] Words like 'erosion', 'urbanization', 'sustainable development', and 'climate change' are more than language problems because they also need to be culturally and contextually interpreted.[45]

The analysis of classroom interactions in subjects taught through an additional language shows that learners have difficulties with understanding abstract ideas, comparative exercises, and giving explanations.[46] If the teaching language is second or third language of the learners, these issues are compounded. Probyn gave the example of learners from the Eastern Cape who could discuss curriculum content in their mother tongues but had problems with the English version of their coursework.[47]

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[36] Cenoz and Gorter, "Teaching English through Pedagogical Translanguaging."
[37] Clegg and Afitska, "Teaching and Learning in Two Languages in African Classrooms."
[38] Probyn, "Pedagogical Translanguaging: Bridging Discourses in South African Science Classrooms."
[39] Setati and Adler, "Between Languages and Discourses: Language Practices in Primary Multilingual Mathematics Classrooms in South Africa."
[40] Reljić, Ferring, and Martin, "A Meta-Analysis on the Effectiveness of Bilingual Programs in Europe."
[41] Charamba and Zano, "Effects of Translanguaging as an Intervention Strategy in a South African Chemistry Classroom."
[42] Heugh, "Multilingual Education Policy in South Africa Constrained by Theoretical and Historical Disconnections."
[43] Lambert and Morgan, *Teaching Geography 11-18: A Conceptual Approach*.
[44] Madiba, "Promoting Concept Literacy through Multilingual Glossaries: A Translanguaging Approach."
[45] Wilmot and Dube, "School Geography in South Africa after Two Decades of Democracy: Teachers' Experiences of Curriculum Change."
[46] Probyn, "Pedagogical Translanguaging: Bridging Discourses in South African Science Classrooms."
[47] Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies."

According to the researcher, the problem was not knowledge of the subject but the language barrier. The result points to how much care is needed to avoid conflating language ability and content knowledge when assessing learners.[48]

New studies are investigating how switching between languages might help learners overcome language problems in content subjects such as Geography and the sciences. Madiba observed that learners became more deeply engaged and could explain how disciplinary concepts relate to their experiences when Tshivenda, isiXhosa and English were used side by side to unpack key terminology.[49] Similarly, Charamba and Zano have noted that when learners' home language was used selectively during content lessons, it helped learners engage more in the class discussions and understand the subject matter at a deeper level.[50] These pieces of research imply that code-switching in content-subject education is not only a means of understanding but also a method of knowledge construction that is culturally and geographically appropriate.[51]

METHODOLOGY

Research approach

The research was a mixed-methods study, integrating data collection and analysis methods of both the quantitative and qualitative components to deeply understand the code-switching practices and the impact of these on learner achievement.[52] The quantitative part looked at learner performance in Geography tests, and it was also concerned with the analysis of the relationships between the degree of exposure to code-switching and the level of academic achievement. The qualitative part focused on teacher perspectives through interviews; it also captured the actual teacher-learner interaction through observation. In addition, it went deeper into the settings and rationale for code-switching. This melding of methodologies made it possible to cross-check the results and to achieve a more comprehensive understanding of the interplay between language use and learning outcomes.[53]

Research design

The study was a quasi-experimental design that incorporated a comparative case study element. Four secondary schools in the Capricorn District were purposively selected based on language demographics, geographical location, and willingness to participate. The schools were divided into two groups: those where teachers frequently used code-switching (CS schools) and those where English-only instruction prevailed (EO schools). This variation in language use, which was not artificially imposed, enabled a comparison of learner achievement in the different language practice settings. Through the case study element, a deeper understanding was reached by a detailed look at classroom teaching and pupils' and teachers' thinking in each school setting.[54]

Schools were categorised into CS and EO groups based on the language practices that were naturally existing at different schools rather than as any artificially imposed condition. The authors visited the potential schools initially and talked informally with Geography teachers as to their habitual classroom language use. A scrutiny of the lesson plans also allowed them to determine whether instruction was in English, Sepedi code-switching or English-only was the main mode. Schools that had very clear language use differences that were very clear and that were very consistent over time constituted the selected sample. This sample finally consisted of two CS and two EO schools. The main study, which involved the author being inside a classroom and counting how often a code-switch occurred and in what setting, and how it affected the content, further substantiated the initial classification based on observations made in those classes.

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[48] Heugh et al., "Multilingualism(s) and System-Wide Assessment: A Southern Perspective."
[49] Madiba, "Promoting Concept Literacy through Multilingual Glossaries: A Translanguaging Approach."
[50] Charamba and Zano, "Effects of Translanguaging as an Intervention Strategy in a South African Chemistry Classroom."
[51] Wilmot and Dube, "School Geography in South Africa after Two Decades of Democracy: Teachers' Experiences of Curriculum Change."
[52] John W Creswell and Vicki L Plano Clark, *Designing and Conducting Mixed Methods Research* (Sage publications, 2017).
[53] R. Burke Johnson and Anthony J. Onwuegbuzie, "Mixed Methods Research: A Research Paradigm Whose Time Has Come," *Educational Researcher* 33, no. 7 (October 1, 2004): 14–26, https://doi.org/10.3102/0013189X033007014.
[54] Robert K. Yin, *Case Study Research and Applications*, vol. 6 (sage Thousand Oaks, CA, 2018).

The membership of different groups here is not due to random assignment but is a result of the actual practices of language that are going on there. Therefore, the authors acknowledge they had considered the possibility of selection bias. The researchers explain that all 4 selected schools come from the same district, serve a large proportion of Sepedi-speaking students, and teach geography at grades 10 to 12. These points are the same criteria with which the researchers had selected the schools and so they were not very different at the start of the study for the context. A baseline comparison of level of learning between the two groups had already been made, and the results of the first test have proved that no substantial difference exists between the two groups. Furthermore, the researchers had carried out an analysis of covariance (ANCOVA) that accounted for the variables of prior academic achievements, socioeconomic status and teaching experience as confounding factors. Still, the truth is these are self-selected groups instead of groups that were randomly assigned is a limitation to the whole procedure. That means, the findings should not be considered as solid proof of causation but rather as very good evidence of correlation.

Data collection

Data collection took place during one academic term (10 weeks) and involved various methods. The researchers conducted classroom observations with the help of a structured observation protocol, which recorded the number, setting and reason for each occurrence of code-switching. A total of six lessons were observed for each teacher, resulting in 48 lesson observations, which is approximately 72 hours of observation. Semi-structured interviews with eight Geography teachers delved into their language ideologies, code-switching practices, the challenges they saw, and their beliefs about language and learning. The interviews lasted about 60 minutes on average and were recorded and transcribed. Learner achievement data were obtained through standardized Geography tests administered at the start and at the end of the term. The tests consisted of the material covered in the observations and included several types of questions: multiple choice, short answer, and extended response. Tests were co-created with the participating teachers to ensure that the curriculum was followed and were scored using a standardized rubric. In addition, learner questionnaires were used to collect demographic information, language background and views on code-switching practices. Document analysis of curriculum materials, lesson plans, and language policy documents was a means of getting contextual knowledge in terms of the gap between official expectations and actual practices.

Instrument reliability and validity

Several initiatives have been implemented to ensure that measurement instruments are of good quality. The content validity of pre- and post-tests was ensured by getting all test items from curriculum topics scheduled for the term that Geography Curriculum and Assessment Policy Statement (CAPS) covered. In this way, the tests mainly assess the content to which both groups were exposed. The tests were co-created by the geography teachers who participated in the study since both subject and curriculum mastery were expert checks for the appropriateness of the questions, their clarity and whether they align with the syllabus. Two test versions, parallel for content, cognitive level and type of questions (multiple choice, short answer and extended response), were developed. All papers were marked using the agreed-on memorandum and rubrics to ensure the quality of marks is the same across the schools and markers. Psychometric properties of the tests, such as internal consistency coefficients, were not calculated, and this fact is acknowledged as a limitation in this study. That means the reading of the achievement results relies on the curriculum-based construction of the instruments, expert teacher review and a standardized rubric marking rather than on the statistical reliability estimates

The fact of consistency of observations in the classrooms is confirmed with the help of a structured observation form that was given to the observers at the same time, with the categories that they must note down: number, setting and intention of each code-switch of the speaker. Through this way, their recording was kept to the bare minimum, and standardization of the content that was recorded was done. Apart from field notes and coding decisions, the researchers engaged in peer debriefing of each other's work, and finally they carried out member-checking with the participating teachers for the teachers' interpretations of the data collected. However, no inter-observer reliability coefficient was

formally computed for this study on the basis that the lessons were not double-coded by two persons independently, which is a serious weakness, and this means the observational results are cross-validated with the findings from interviews and questionnaires rather than being the sole basis of decision.

The learner questionnaire was constructed with input from classroom language practices and multicultural learning research findings, focusing on demographic profile, language history, and code-switching perception among learners. The face validity and content validity were also considered with the help of the research group and geography teachers to check whether the language items were easily understood by the Sepedi-speaking students at the level of their age. After some of the language items were confusing, they were changed and then finally administered to the students. The questionnaire did not go through the stages of a formal pilot or a statistical validation phase; this was a drawback admitted. As a result, the data gathered through the questionnaire was merely a picture of the learners' perceptions, which were then compared with the achievement, observation and interview data.

Sampling

Purposive sampling was used to select schools that met the set criteria, such as being a school in the Capricorn District, having a majority Sepedi-speaking learner population, offering Geography in Grades 10 to 12, and willing to participate. Four schools were chosen (two CS schools and two EO schools) to make comparison possible and, at the same time, manageable given the limited resources and time. Two Geography teachers from each school participated; therefore, there were eight teachers. All Grade 10 to 12 learners taught by the teachers who participated in the research during the time of the study were invited to participate, which resulted in 120 learner participants (65 from CS schools, 55 from EO schools). The size of this sample was enough to give quantitative analysis statistical power, while it was still possible to carry out qualitative analysis in depth.[55]

Data analysis

Quantitative data analysis was carried out using descriptive and inferential statistics through SPSS version 28. Achievement scores between the CS and EO groups were compared by independent-samples t-tests. The changes from pre-test to post-test within each group were examined by paired-samples t-tests. A single-factor ANCOVA was utilized to statistically control for the influence of three confounding variables: prior achievement, socioeconomic status, and teacher experience. The magnitude of the impact in practical terms was evaluated by calculating effect sizes through Cohen's.[56]

Qualitative data analysis was conducted according to Braun and Clarke's reflexive thematic analysis methodology.[57] The researchers coded the interview transcripts and observation field notes through an inductive approach, and the developed codes were then gathered into themes reflecting the major ideas in the dataset. The procedure for analysis included: immersion through repeated readings, initial code generation, theme identification, theme review and modification, assigning theme labels, and writing the final report. The software NVivo facilitated the structuring of data and handling of codes. The validity of the interpretations was increased by checking with the participating teachers and peer feedback with colleagues.[58]

Ethical considerations

The University Research Ethics Committee approved this study, and school principals provided institutional consent; teachers signed informed consent forms, and learner participants provided assent with parental consent for those under 18 years. Each participant received a copy of the information sheets that described the study purpose, procedures, and their rights, such as voluntary participation and

[55] John W. Creswell and J. David Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches* (SAGE publications, Inc, 2023).
[56] Andy Field, *Discovering Statistics Using IBM SPSS Statistics*, vol. 5 (sage London, 2018).
[57] Virginia Braun and Victoria Clarke, "Reflecting on Reflexive Thematic Analysis," *Qualitative Research in Sport, Exercise and Health* 11, no. 4 (2019): 589–97.
[58] Sarah J. Tracy, "Qualitative Research Methods: Collecting Evidence, Crafting Analysis, Communicating Impact" (West Sussex: John Wiley & Sons, 2019).

withdrawal without penalty. To protect confidentiality, pseudonyms were used to replace the real names of schools, teachers, and learners. The data were kept securely in password-protected devices that could only be accessed by the research team. The researchers' observational presence was kept to a minimum to reduce the disruption, and teachers' feedback sessions were used to resolve any concerns that arose during data collection. The research was consistent with the ethical principles of respect for persons, beneficence, and justice.[59]

PRESENTATION OF FINDINGS

As is appropriate for a study that combines qualitative and quantitative approaches, the findings appear in two different styles. At first, quantitative findings were presented through tables. These explained how code-switching in the classroom and learners' progress were related. After that, qualitative findings were organized into different themes using data from classroom observation, teacher interviews and learner questionnaires. Finally, the Discussion section combined both approaches and related the identified themes to the existing literature and to the objectives of this study.

Quantitative Findings

Profile of learner participants. A total of 120 Grade 10 to 12 Geography learners from four schools participated in the study, of whom 65 were in the code-switching (CS) schools and 55 in the English-only (EO) schools. Table 1 summarizes the distribution of participants across the two groups.

Table 1: Distribution of participating schools, teachers and learners by group

Group	Schools	Teachers	Learners
Code-switching (CS)	2	4	65
English-only (EO)	2	4	55
Total	4	8	120

Source: Field data. All schools are Sepedi-dominant secondary schools in the Capricorn District.

Pre-test and post-test achievement by group. Quantitative analyses have shown that there are statistically significant differences in the Geography achievement of learners who were taught using code-switching and those receiving English-only instruction. At the pre-test stage, the scores for both groups did not differ significantly, confirming that the initial performance levels were nearly identical. However, the results of the post-test revealed a very different pattern, with the CS learners outperforming their EO counterparts by 12.8 percentage points, which is a 23% advantage relative to the EO group. Table 2 presents the between-group comparisons.

Table 2: Independent samples t-test results comparing CS and EO groups on the pre-test and post-test

Test	CS M	CS SD	EO M	EO SD	t(118)	P	d
Pre-test	52.4	12.3	51.8	13.1	0.26	.79	0.05
Post-test	68.7	11.4	55.9	12.8	5.63	<.001	1.05

Note: CS = code-switching group (n = 65); EO = English-only group (n = 55); M = mean percentage score; SD = standard deviation; d = Cohen's d.

Within-group gains from pre-test to post-test. Within the groups, the comparison showed that both groups raised their scores from the pre-test to the post-test, but the increase was noticeably higher for the CS group. The CS learners enhanced their scores by 16.3 points on average while the EO learners had an increase of only 4.1 points. Calculations of effect size have shown that the benefit of using code-switching instruction is of great practical significance (Cohen, 1988). Table 3 presents the paired samples t-test results.

[59] AERA-American Educational Research Association, "Code of Ethics Educational Researcher, 40 (3), 145-156," 2011.

Table 3: Paired samples t-test results for pre-test to post-test gains within each group

Group	Mean gain (points)	T	df	P	d
Code-switching (CS)	16.3	12.8	64	<.001	1.41
English-only (EO)	4.1	3.2	54	.002	0.32

Note: Mean gain refers to the average improvement in percentage points from pre-test to post-test.

ANCOVA, conducted after controlling for prior achievement, socioeconomic status, and teacher's professional experience, still supported the conclusion that the results are significant, thus indicating that it is the code-switching that made the difference, not any other variables measured in this study. Table 4 summarizes the ANCOVA results.

Table 4: ANCOVA results for post-test achievement with group as fixed factor, controlling for covariates

Source	F	df	p	Partial eta squared
Group (CS vs EO)	28.4	1, 115	<.001	.20

Note: Covariates were prior achievement (pre-test score), socioeconomic status and teacher experience.

Achievement by question type. Analysis by question type revealed that code-switching had various effects depending on the cognitive demands. The performance benefit for CS learners was largest on extended response questions that required explanation and application, moderate on short answer questions, and smallest on multiple choice questions, as presented in Table 5. This trend indicates that code-switching helps learners especially in situations where they have to produce extended discourse and show that they have understood the concepts rather than just identifying or recalling.[60]

Table 5: Post-test performance by question type for the CS and EO groups

Question type	CS M (%)	EO M (%)	Difference (points)	p
Extended response	65.3	48.7	16.6	<.001
Short answer	70.8	59.4	11.4	<.01
Multiple choice	70.1	64.2	5.9	.08

Note: M = mean percentage score per question type.

Learner perceptions from the questionnaire. Learner questionnaires showed that learners expressed a positive opinion of going back and forth between languages. In CS schools, 87% of learners stated that code-switching helped them to grasp Geography content better, and 92% of them said that they felt more comfortable taking part in class discussions when Sepedi was allowed. Table 6 summarizes these responses.

Table 6: CS-school learners' questionnaire responses on code-switching (n = 65)

Questionnaire item	Agree (%)	n
Code-switching helped me understand Geography content better	87	57
I feel more comfortable participating in class discussions when Sepedi is allowed	92	60

Note: Percentages reflect learners who selected 'agree' or 'strongly agree' on the attitudinal scale.

[60] Cummins, "Cognitive/Academic Language Proficiency, Linguistic Interdependence, the Optimum Age Question and Some Other Matters."

Qualitative Findings

Reflexive thematic analysis of the observation field notes, teacher interviews and open-ended questionnaire responses generated four themes: (1) strategic patterns and purposes of code-switching; (2) teacher ambivalence between pedagogy and policy; (3) systemic constraints on multilingual teaching; and (4) learner experiences of language in the Geography classroom. Each theme is presented below with illustrative evidence.

Theme 1: Strategic patterns and purposes of code-switching. Classroom observations revealed distinct patterns of teacher code-switching use as a pedagogical resource. Teachers in CS schools did not alternate randomly between English and Sepedi but strategically, with each switch serving an identifiable instructional function. Content analysis of the observation data identified the following five main purposes of code-switching use: (1) introducing and explaining technical terms, (2) giving examples and expanding complex concepts, (3) relating content to learners' life experiences, (4) facilitating classroom discussion and learner participation, and (5) managing behaviour and maintaining rapport.

Terminology explanation was the most common code-switching purpose. Teachers often introduced crucial geographical terms in English and then found a Sepedi equivalent or a further explanation. For instance, one teacher described 'weathering' as 'go senya le go peta ga difika ka lebaka la lebu, pula le phio', thereby explaining and locating the concept in learners' linguistic framework.

Meanwhile, when teachers explained abstract concepts in detail, they also relied heavily on code-switching. For example, one of the teachers, while describing the concept of sustainable development, changed to Sepedi to give real examples from learners' local community, saying: 'Re swanete go omia methopo ya tlhago ka mokgwa wo e sego gona pele ga nako, gore bana ba rena ba be le te ba ka di omiago ka moso'. Thus, the learners not only understood the meaning of the word 'sustainability' but also its practical implications and cultural relevance.

The observations also showed that the patterns of code-switching changed depending on the phase of a lesson. During formal presentations of new content and when working with textbooks and other English language materials, English prevailed. During discussions, group work, and informal interactions, Sepedi became the language of choice. This pattern implies that teachers have an intuitive grasp of the different functions of languages, with English being the language of formal academic discourse and Sepedi being used for more exploratory, conversational learning.

Theme 2: Teacher ambivalence between pedagogy and policy. Interview data revealed complex, at times contradictory, teacher perspectives on code-switching. Teachers in CS schools tended to have broadly positive views of code-switching, calling it necessary for effective teaching and helpful in meeting learners' needs. One teacher articulated: 'If I only used English, I could see from their faces that they didn't understand. When I switch to Sepedi, they suddenly get it, they ask questions, and they participate.' Teachers made a point that, by using code-switching, they could gauge their learners' correct understanding of the concepts rather than their understanding of English only. They saw that enforcing English-only instruction leads to confounding language proficiency with content knowledge.

Nevertheless, even those teachers who were code-switching practitioners had doubts about its validity and feared negative effects. Some thought that code-switching could put learners at a disadvantage in exams conducted in English only. One teacher said: 'I know code-switching helps them understand, but sometimes I wonder: am I really preparing them for the final exam? The exam will be in English only, no Sepedi there.'

Teachers also noted professional uncertainty about code-switching. They felt that it was useful to them but remained an 'unofficial' practice without any institutional recognition or support. Many of them said that they were not trained in strategic code-switching or translanguaging pedagogy and, instead, developed their methods through trial and error. This absence of professional development meant that code-switching was still, for the most part, an intuitive skill, rather than one that is theoretically grounded or systematically implemented. Teachers wanted clearer policy guidelines, suitable training, and the creation of resources to support multilingual Geography education.

Theme 3: Systemic constraints on multilingual teaching. Interestingly, teachers working in EO schools cited a different set of reasons for continuing English-only instruction. Some of them were convinced that the exclusive use of English better prepared learners for tertiary education and the job market. At the same time, they pointed out that their main problem has been the lack of resources. They observed that the subject of Geography has always been dominated by English in textbooks, examination papers, and teacher training. One of the teachers remarked: 'The department tells us to use home language, but then everything they give us is in English. How can we teach in Sepedi when we have no Sepedi Geography materials?' This suggests that the barriers to multilingual education are at the systemic level and go beyond individual teacher attitudes or practices.

Theme 4: Learner experiences of language in the Geography classroom. Learners highly valued code-switching to clarify challenging concepts and to relate geographical content to their experiences. One learner said: 'When the teacher explains in Sepedi, I can see how Geography connects to my community, to real life. It is not just abstract things in the textbook'.
On the other hand, learners expressed concern about their resdiness for examinations, just as the teachers did. Some learners were afraid that they would have less English practice, particularly for the writing parts of the assessments. Most of these concerns came from the top learners who aimed at tertiary education.

In EO schools, learners reported having a harder time understanding Geography content and fewer opportunities to participate in class discussions. Most confessed to feeling nervous when they had to speak in front of the class, as they feared making English mistakes. A learner reported: 'Sometimes I know the answer, but I cannot say it in English the way the teacher wants, so I just keep quiet'. This is a clear example of how English-only teaching can discourage learners from expressing their thoughts, and by doing so, it deprives them of the chance to demonstrate knowledge, not because they lack understanding but because their language proficiency is the problem.

DISCUSSION

This section discusses the quantitative and qualitative findings in an integrated manner, relating the emerging themes to the reviewed literature and the four objectives of the study.For the first research question, which aimed to examine teachers' formal or informal use of code-switching in their teaching, the results suggest that code-switching in the CS schools was neither random nor haphazard. The five instructional functions that emerged from Theme 1 (terminology clarification, expansion of complex concepts, contextualization in pupils' experiential realities, promotion of interaction, and classroom regulation) are similar to those identified as deploying classroom code-switching in African classrooms by Clegg and Afitska, as well as similar to the intentional 'bridging discourses' characterized by Probyn in her study of South African science teachers.[61]

The lesson phase patterning noted by the present study, where formal instruction was carried out in English and informal exploration was largely conducted in Sepedi, reflects the distinction Setati and Adler made between formal, institutional discourse in English and informal discourse in the learner's home language.[62] Theologically, this finding is in line with the perspective of a single translinguistic resource [63] and with the Vygotskian view of languages as the primary mediating and scaffolding function in the zone of proximal development.[64] Simultaneously, the teachers' position that their code-switching practices were 'finessed' over time through experience and practice echoes the critical

[61] Clegg and Afitska, "Teaching and Learning in Two Languages in African Classrooms"; Probyn, "Pedagogical Translanguaging: Bridging Discourses in South African Science Classrooms."
[62] Setati and Adler, "Between Languages and Discourses: Language Practices in Primary Multilingual Mathematics Classrooms in South Africa."
[63] García and Wei, *Translanguaging: Language, Bilingualism and Education*.
[64] Lantolf and Thorne, *Sociocultural Theory and the Genesis of Second Language Development*.

observation that code-switching in South African classrooms is often more intuitive than analytically considered, which indicates a professional development need, not a pedagogical weakness.[65]

With the second objective of the study, which focused on examining the relationship between learners' performance and code-switching by teachers, it's the data from Tables 2 to 4 that show in a most vivid way that the learners attending Code-Switching (CS) schools outperformed learners in English-Only (EO) schools with a big and significant gap in achievement. The post-test difference was 12.8 percentage points - i.e. a 23% advantage over the EO group - and the effect size was large (d = 1.05). The significant achievement advantage of learners in CS schools remained after prior achievement, socioeconomic status and teacher experience were controlled for. This outcome matches what Charamba and Zano discovered through their experiments, when they found that South African learners who learned Chemistry using translanguaging performed A lot better than those who did not.[66] In fact, it supports the findings of Makalela who, after a controlled comparison, revealed that the gains by the participants in the translanguaging group were statistically very significant.[67] Besides, our conclusion also agrees with that of the international meta-analysis, which stated that bilingual approaches lead to improved academic results, mainly for learners from disadvantaged backgrounds that have very limited resources.[68] The variation in the results across different types of questions presented in Table 5 indicates a greater benefit for the CS group in extended response items, while at the same time showing a very small advantage in multiple-choice items. This is quite informative on a theoretical level, as it shows that code-switching supports mainly those tasks which are cognitively demanding, language-heavy and require academic proficiency, the very type of proficiency that Cummins refers to as CALP.[69] That means code-switching is not just to help with recognition or recall, but it also makes a difference in developing higher levels of language proficiency.

The outcome further validates the interdependence theory, indicating that students' conceptual knowledge of math developed during teaching in Sepedi is carried over to the learners' performance in English-medium evaluation tasks. Because of this, it negates the view that using the home language during classroom instruction will necessarily decrease English-medium success, which was expressed by some of the teachers and learners involved in this research. Research conducted here in South Africa demonstrates that if learners are given a firm foundation in their home language, then later, their proficiency in language (Mainly English) will not only remain the same but will improve.[70]

The third objective involved how teachers see language policy with their own use of code-switching. In Theme 2, one can clearly see the teachers' ambivalence between their strong belief in the value of code-switching from the pedagogical point of view and their uncertainty about its legitimacy in professional work. This kind of ambivalent attitude is a natural reaction to the contradiction which is well documented in the literature: there is a language-in-education policy that supports additive multilingualism but, at the same time, an assessment regime that remains monolingual in English. The teachers' characterization of code-switching as a practice that they cannot do without but also one that must be done "in secret" reflects Probyn's understanding of translanguaging as a disputed and covert teaching strategy in South African primary schools.[71] From the critical pedagogy point of view, the fear and worry about examinations expressed by the teachers indicate how power is exercised through evaluation. It is the English-only exams, and not the official policy, that, by default, become a guide for

[65] Probyn, "Pedagogical Translanguaging: Bridging Discourses in South African Science Classrooms"; Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies."
[66] Charamba and Zano, "Effects of Translanguaging as an Intervention Strategy in a South African Chemistry Classroom."
[67] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms."
[68] Reljić, Ferring, and Martin, "A Meta-Analysis on the Effectiveness of Bilingual Programs in Europe."
[69] Cummins, "Cognitive/Academic Language Proficiency, Linguistic Interdependence, the Optimum Age Question and Some Other Matters"; Jim Cummins, *Rethinking the Education of Multilingual Learners: A Critical Analysis of Theoretical Concepts*, vol. 19 (Multilingual Matters, 2021).
[70] Taylor and von Fintel, "Estimating the Impact of Language of Instruction in South African Primary Schools: A Fixed Effects Approach."
[71] Probyn, "Pedagogical Translanguaging and the Construction of Science Knowledge in a Multilingual South African Classroom: Challenging Monoglossic/Post-Colonial Orthodoxies."

what language policy should be in classroom teachers.[72] The result of our study shows that this line of thinking continues with FET Geography because our teachers are more dependent on code-switching when facing the exit-level pressure of final assessments, while at the same time the doubt that they have about the appropriateness of code-switching grows.

For the fourth objective, the research was intended to find out challenges and solutions in multilingual teaching of Geography. Research says there are limitations happening at three different levels. At the infrastructure level, there's a shortage of Geography teaching resources in a minority language, here being Sepedi, such as textbooks, glossaries and assessment instruments (Theme 3). This aligns with those identified by Makalela.[73] And, in fact, it shows how important it is for the policies to be backed by the physical availability of resources, and how the endorsement and/or support of policies alone is inadequate. On the terminology side, the multilingual glossary project by Madiba can be considered an evidence-based and extendable solution for the issue of terms which both the teachers and the learners involved in this study identified as an outstanding linguistic hindrance in Geography education.[74] Totally different things happen at the professional level and, if anything, the lack of training in strategic code-switching gives the rationale for the need to incorporate teaching translanguaging in teacher education for, say, content development and language learning. Systematically on paper, the monolingualism of exams in large-scale assessments is the most convincing objection to multilingual teaching practices. The South African pilot bilingual version exams mentioned by Heugh et al. illustrate that multilingual evaluations are also possible at the administration level,, even within a big testing system.[75] Finally, the learner perspectives under Theme 4 point out that the subject of discussion is also one of epistemological access and educational equity. Wilmot and Dube explain that language is one of the persistent factors affecting quality and equity in school Geography education in South Africa, where learners who understood the content were still silenced due to the language of their communication.[76]

In general, the integration of the quantitative and qualitative threads of research adds credibility to what the research is arguing in this paper. The statistical advantage of the CS group (Tables 2 to 5) is, at the level of mechanism, explained by the strategic pedagogical functions of code-switching observed in classrooms and reported by teachers and learners. However, the qualitative description of ambivalence and constraint accounts for the paradox of a beneficial language practice yet its minimalization, secrecy, and inconsistent usage across schools. Because of this, the research paper, with context - specific findings from a Mainly Sepedi-speaking district on the FET Geography content, contributes to the Southern African knowledge base that sees the learners' mother tongues as educational resources rather than barriers.[77]

RECOMMENDATIONS

From these results, several policy, practice, and future research recommendations are drawn. Firstly, a language-in-education policy overhaul is needed to clearly identify and endorse code-switching and translanguaging approaches as legitimate teaching methods. Present policies give a nod to multilingualism, but at the same time, continue to maintain English supremacy through assessment and resource distribution. Consistent policy should bridge the gap between rhetoric and practice, provide detailed instructions for the use of code-switching, and ensure that assessment practices recognize multilingual skills.

Secondly, teacher training at the pre-service and in-service levels should be geared towards equipping teachers with skills in translanguaging pedagogy. In addition to the need for theoretical

[72] Freire, *Pedagogy of the Oppressed: 50th Anniversity Edition*; Heugh et al., "Multilingualism(s) and System-Wide Assessment: A Southern Perspective."
[73] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms."
[74] Madiba, "Promoting Concept Literacy through Multilingual Glossaries: A Translanguaging Approach."
[75] Heugh et al., "Multilingualism(s) and System-Wide Assessment: A Southern Perspective."
[76] Wilmot and Dube, "School Geography in South Africa after Two Decades of Democracy: Teachers' Experiences of Curriculum Change."
[77] Makalela, "Moving out of Linguistic Boxes: The Effects of Translanguaging Strategies for Multilingual Classrooms"; Probyn, "Pedagogical Translanguaging: Bridging Discourses in South African Science Classrooms"; Charamba and Zano, "Effects of Translanguaging as an Intervention Strategy in a South African Chemistry Classroom."

frameworks explaining how language switching facilitates learning, teachers should also receive strategies for its effective use. Training for professional development should present concrete cases of when, how, and why teachers should switch languages so that teachers come up with well-justified decisions instead of relying on their hunches. This kind of education should also break down the perception of home languages as obstacles and home language usage as a sign of deficiency, thus fostering a respect toward multilingualism as a teaching tool.

Thirdly, curriculum and material production should facilitate a multilingual approach to teaching Geography. Among others, this involves assembling geographical terms glossaries in African languages, producing bilingual instruction materials, and modifying testing tools so that learners can display their knowledge using different languages. Although such resource development may be costly, investment is a vital step towards educational equality and the recognition of linguistic diversity.

Fourthly, assessment methods ought to be reconsidered so that they do not wrongly favor monolingual English learners to the exclusion of bilingual ones. Some options include permitting learners to answer in their native languages using translation support, designing test items in multiple languages, or performing portfolio assessments that show learners' work through different languages and media. These kinds of adjustments would allow a much easier determination of geographical knowledge, whereas now it is often mixed up with English proficiency.

Lastly, the present study offers a starting point for future studies to extend the research in multiple ways. For instance, longitudinal studies can track learners' progress over several years to better understand the long-term impact of code-switching on both Geography achievement and English language development. Similarly, studies conducted in other localities or provinces would help determine whether the results are specific to the Capricorn District or can be generalized. Exploring other subject areas may even lead to findings that indicate whether code-switching in Geography can be extended to other disciplines. Furthermore, research on the optimum home language to English ratios, smooth language transitions, and specific code-switching techniques that facilitate different learning objectives would provide detailed implementation guidelines.

CONCLUSION

This piece of research offers concrete evidence that switching between English and Sepedi during lessons is an effective teaching method in FET Geography, leading to a significant increase in learner achievement compared to English-only classes. It is evident from the results that appropriately timed code-switching helps the learners to grasp difficult geographical concepts, engage more intensively in the learning activities and thus gain a much deeper understanding of the subject while at the same time enhancing their English skills. A remarkable 23% performance advantage witnessed among the learners in code-switching classes is not only statistically significant but also educationally impactful and, hence, has the capacity to deal with the issue of achievement gaps among multilingual learners.

On the other hand, the study highlights several problems resulting from the differences between the language policies and the assessment criteria on the one hand, and the actual language use in the classrooms on the other. Teachers find themselves facing some tough challenges when it comes to meeting the different demands: on the one hand, the policy language calls for the embracing of multilingualism, whereas, at the same time, the provision of resources and the way the assessment of learners is done are geared towards English monolingualism. Because the two sides are not in agreement, the teachers are not sure of their work, and thus, the use of the code-switching approach is only done in a hidden manner, and it is not considered an official teaching method. When there is no agreement between the language policy and the rest of the system and hence no adequate support from the system, the use of code-switching will depend on the willingness of the individual teacher, and thus it will not be considered as a school-wide practice that can be sustained through time.

The study adds to the existing body of literature that recognizes the use of the mother tongue of the multilingual learners not as a weakness but as a strength. According to translanguaging perspectives, the monoglossic assumptions are challenged by regarding code-switching as creating more equitable and inclusive learning environments instead of positioning English as the only valid academic language and code. In settings such as Capricorn District, where most of the learners speak more than one

language, switching between two languages is not a short-term measure, but it is an acknowledgment of South Africa's linguistic diversity as an educational resource. The future entails a change in focus from perceiving home languages as hindrances that need to be gotten rid of to recognizing them as the basis for academic success.

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Mohammed Xolile Ntshangase holds a PhD (Philosophy) from the University of KwaZulu Natal. As he always believed that sharing his knowledge and perspectives with others brings more pleasure, Mohammed enjoys sharing his views with fellow academics from different fields. He is currently affiliated with the University of Limpopo in department of Education Studies, wherein he serves as a senior lecturer of Philosophy & Psychology of Education. His areas of research interest are; African philosophy, philosophy of education, psychology of education, and gender studies. He has attended and presented papers in 14 academic conferences including national and international ones, and he has more than 85 publications in DHET accredited journals. Among his ambitions, Mohammed wishes and works towards being a global scholar renowned in different areas/ disciplines with his polymathic approach to research which has attracted researchers to collaborate with him nationally and abroad. Mohammed believes that the interconnectedness of knowledge and the cry for interdisciplinarity and multidisciplinary in research nowadays cannot be ignored. His scholarly awards include the VC's 2023 best teacher award and 2024 best researcher award in the SoE (UL).