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Challenges Faced by Grade 12 Geography Teachers in Implementing Geomorphology Fieldwork in Tshwane Districts

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Abstract. Grade 12 Geography teachers face significant challenges when implementing geomorphology fieldwork, a crucial component in understanding physical landscapes and deepening learners' abstract geomorphic concepts. This study, underpinned by a product-based curriculum, explored these teachers' experiences, focusing on the difficulties encountered and their impact on the teaching process. A purposive and convenient sample of three districts in Tshwane, South Africa, was selected, with a total of nine Grade 12 teachers (n = 9) participating. Data were collected through semi-structured interviews and document analysis. Using thematic analysis, the findings revealed that while teachers acknowledge the value of fieldwork in enhancing learners' geomorphic conceptual understanding, numerous obstacles hinder its effective execution. These challenges include financial limitations, time constraints, heavy workloads and inadequate support. In addition, insufficient training in fieldwork implementation and pressure to cover the curriculum within strict timelines further discourage its integration. The study concludes that despite teachers' willingness to implement fieldwork, systemic and financial constraints often limit its success. The study recommends targeted interventions such as in-service training, dedicated funding, and greater curriculum flexibility to address these challenges. These measures could enable more effective integration of fieldwork, promoting experiential learning and improving learners' understanding of geomorphology concepts in Grade 12 Geography.

Keywords: challenges of fieldwork; experiential learning; geomorphology fieldwork; Grade 12 geography; product-based curriculum

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1. Introduction

According to Fouberg (2023), geography learners must be allowed to engage with challenging geographic concepts in real-life settings to help improve their understanding. However, this is only possible if fieldwork is incorporated into geography teaching and learning. For years, fieldwork has been regarded as an essential pedagogy in geography education to provide learners with experiential learning that deepens their geomorphic conceptual understanding (Mathews et al., 2023). In the context of this study, Grade 12 geography learners are often criticised by the Department of Basic Education's annual technical/diagnostic report for the end-year examination performance. These reports suggest that learners struggle with conceptual understanding of geomorphic processes. However, limited research has explored the underlying causes of this gap in understanding, especially from the perspective of teachers tasked with implementing the curriculum.

Mathews et al. (2023) and Czochański et al. (2024) argue that hands-on engagement with physical landscapes enables learners to bridge theoretical knowledge with real-world environments, thereby enhancing comprehension and retention. Fieldwork allows learners to visualise and internalise geomorphic processes, which may improve academic performance (Souza, 2022). Nonetheless, several studies have noted that the integration of fieldwork remains a challenge due to factors such as limited resources, time constraints, and curriculum demands (Sikerete, 2023). Despite international discourse on these challenges, there is a notable lack of empirical research within the South African context addressing how these obstacles manifest and affect teaching practice.

Therefore, this study intends to bring forward these realities faced by Grade 12 geography teachers when integrating geomorphology fieldwork within South African geography education. By exploring the experiences of these teachers in Tshwane districts, the findings will contribute to a nuanced understanding of how fieldwork can be tailored to the geography curriculum in South Africa, which is seen as a product-based curriculum (Naidoo, 2021). Furthermore, it highlights how experiential learning through geomorphology fieldwork can be powerful despite the product-based curriculum constraints. To achieve the latter, this study is guided by the following research question: *What are Grade 12 geography teachers' challenges in effectively implementing geomorphology fieldwork?*

2. Literature review

Developing critical thinking in geography learners requires more than content delivery, but it demands a pedagogical approach that fosters exploration and application. Rannikmäe et al. (2020) argue that learners are naturally inquisitive and must be guided to make sense of their world. This aligns with Argyilan et al. (2024), who stress that classroom-based conceptual instruction should be complemented by fieldwork to support deeper learning. Fieldwork serves as a vital bridge between theoretical knowledge and real-life application (Czochański et al., 2024), enabling learners to visualise geomorphic processes and retain complex content. However, the effectiveness of this approach largely depends on teachers' pedagogical content knowledge, particularly Fieldwork Pedagogical

and Content Knowledge (FPACK), as noted by Kim (2022). In South Africa, where geography education under current curriculum, referred to as the Curriculum and Assessment Policy Statement (CAPS), is heavily content-driven, integrating such experiential approaches remains a challenge.

According to the Department of Basic Education (DBE, 2024), Grade 12 learners continue to struggle with high-order questions in the geomorphology section of national exams. These types of questions often require learners to apply theory to real-world scenarios, which are skills that fieldwork naturally cultivates. Ahmad and Laha (2020) argue that the lack of fieldwork limits learners' ability to engage in analytical and problem-solving tasks. Their findings support the earlier arguments that field-based activities enhance learners' application of theoretical knowledge. However, despite this known benefit, CAPS's rigid structure often discourages experiential learning in favour of meeting tight curriculum schedules, thereby perpetuating the problem rather than resolving it.

2.1 Benefits of Geomorphology Fieldwork

The value of geomorphology fieldwork extends beyond content mastery. Geomorphology fieldwork promotes skills such as problem-solving, teamwork and adaptability. A myriad of support for fieldwork in geography in literature argues that these skills contribute to learners' holistic development (Argyilan et al., 2024; Czochański et al., 2024; Rannikmäe et al., 2020). Thus, this study suggests that the skills, as mentioned earlier, go beyond the academic performance of learners in geomorphology but are invaluable in their lives, too. Kassim et al. (2024) found a strong correlation between experiential learning and personal growth, indicating that fieldwork supports both academic and character development.

Hirsch and Paczyńska (2024) add that fieldwork fosters social and emotional learning, often overlooked in conventional classrooms. In a South African context, where socio-economic disparities influence educational experiences, fieldwork could be a tool to level the playing field by engaging learners more meaningfully. Czochański et al. (2024) note that as learners are allowed to engage with geomorphological concepts in the real world, they start to unearth environmental issues, which foster their environmental awareness, encouraging them to think critically about sustainability issues. Bertling (2015) and Sciortino and Mifsud (2024) argue that such awareness may inspire learners to pursue environmentally conscious careers, an important consideration in addressing global issues like pollution and climate change.

2.2 Challenges to Effective Implementation of Geomorphology Fieldwork

2.2.1 Logistical Constraints and Location Limitations

Despite the benefits associated with fieldwork in geography education, the realities of different geography classrooms worldwide still hinder its successful implementation by teachers. Sciortino and Mifsud (2024) observed that although, in theory, fieldwork is ideal, its practicability and feasibility of implementation still face numerous challenges. A study conducted by Nwokocha (2024) in Nigeria revealed that logistics and lack of access to geomorphic sites nearby for effective fieldwork implementation challenge schools located in urban areas. As a result,

learners are deprived of hands-on experience due to the limitations of the urban location of the schools and the lack of a natural environment around them. This observation is echoed by Remmen and Frøyland (2014) who argue that the proximity of fieldwork sites is crucial for successful implementation. For instance, if a geography teacher and learners are able to walk to a nearby river, the chances of implementing such fieldwork are very high compared to when they need to travel further distances. MacKay et al. (2021) support the notion that short, accessible trips are more likely to succeed.

2.2.2 Financial Constraints and Safety Concerns

A recurring theme in literature is the financial barrier to offsite learning. Both Sikerete (2023) and Wang and Sercombe (2021) link the inability of schools located in under-resourced communities to undertake offsite field activities to the affordability of transport and accommodation. As such in South Africa, where schools in lower socio-economic areas depend on learner contributions, fieldwork becomes a luxury rather than a norm. Therefore, the financial capability of a school becomes crucial for fieldwork to be successful (Islam, 2024)

In addition, learners' safety is paramount for many parents when they embark on off-site fieldwork activities (O'Neal et al., 2014). It is argued that many parents are sceptical about allowing their children to embark on long-distance journeys for fieldwork, fearing for their children's safety (Herrick, 2010). Prior-Jones et al. (2020) suggest that geography teachers obtain and provide parents with details of all safety measures before embarking on a field trip. Furthermore, Prior-Jones et al. (2020) warns that although obtaining detailed safety plans and official permission from departments and parents is a burdensome it is a necessary administrative process. In many cases, the failure to secure parental consent leads to the cancellation of planned excursions, leaving learners without this crucial experiential learning. Thus, teachers are caught between providing learners with experiential learning and navigating the complexities of obtaining permission and safety concerns. Due to these challenges, fieldwork in geography is in most case relegated to the least of their tasks in teaching.

2.3 Policy and Curriculum Limitation under CAPS

The South African CAPS curriculum is highly prescriptive and time-bound, often discouraging innovative and learner-centred teaching methods. Chuene and Teane (2024) argue that CAPS restricts teachers' pedagogical autonomy, making it difficult to integrate flexible, inquiry-based activities like fieldwork. Their assertion is backed by Ajani (2023), who found that teachers in rural communities are left stranded due to limited room for innovation in the curriculum, as they must strictly adhere to its timelines as prescribed. Therefore, in this case, geography teachers are likely to prioritise theoretical teaching over hands-on activities associated with fieldwork. This practice deprives geography learners of experiential learning and the opportunity to deepen their geomorphology conceptual understanding.

However, Esteves et al. (2018) offer a possible explanation for this reliance on theoretical instruction. These researchers believe that prioritisation of theory teaching in geography stems from pre-service training years where the focus was

on curriculum delivery and classroom management with no integration of fieldwork. This practice leaves teachers underprepared and not confident in facilitating field-based learning. As a result, many fall back on traditional methods that meet curriculum goals but fail to foster deep understanding.

2.4 Teacher workload and systemic constraints

The challenges faced by teachers are not limited to pedagogical training or curriculum limitations. Barth et al. (2016) and Wiggan et al. (2021) highlight global budget cuts in public education, which result in teacher shortages and increased class sizes. For instance, in South Africa, Du Plessis and Mbunyuza (2014) had already foreseen how such constraints could impact education quality. With larger classes and dual-subject teaching responsibilities, teachers are forced to prioritise immediate deliverables like syllabus coverage over enrichment activities like fieldwork. Mohammed (2016) concludes that when workload increases and fieldwork is not part of final assessments, it is often deprioritised. Sciortino and Mifsud (2024) agree, stating that without systemic support and assessment-driven motivation, geography teachers continue to view fieldwork as optional rather than essential.

3. Theoretical framework

3.1 Product-based curriculum

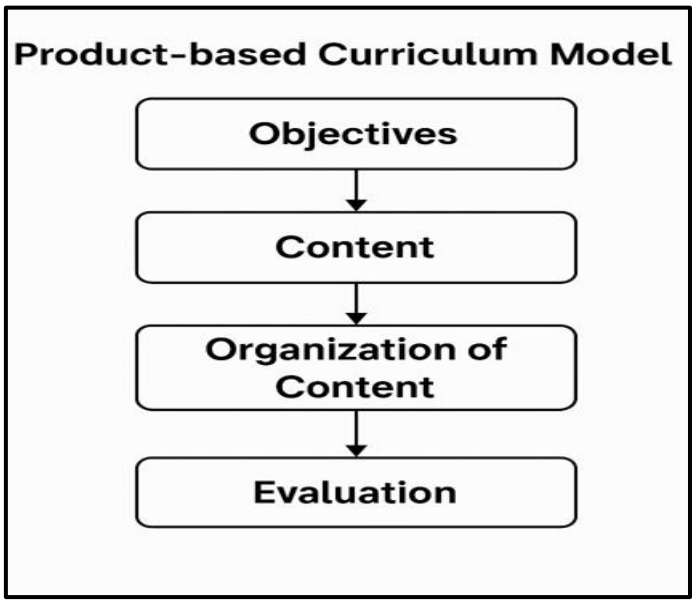

Figure 1: Product-based Model (adapted from Tyler, 1949).

A product-based curriculum, coined by Ralph Tyler (1949), was used as the lens through which the study was foregrounded. The word product-based curriculum is used interchangeably with teacher-centred (Murphy et al., 2021) and content-based curriculum (Johnsen & VanTassel-Baska, 2023); however, in this paper, the word "product-based curriculum" is used. According to Mobit et al. (2024), the structured curriculum model developed by Ralph Tyler in 1949 explains how the curriculum strictly focuses on measurable outcomes and objectives. The focus is

on predefined learning objectives for learners to achieve specific knowledge and skills (Mobit et al., 2024). Moreover, Endeley et al. (2021) posit that in a product-based curriculum, time spent in classroom teaching is of the essence because the subject matter has been pre-determined; thus, deviating from it becomes a challenge. Additionally, it is characterised by the lecturer method, where learners become passive participants because traditional activities such as reading, writing and listening fit well with teacher-centred approaches supported by heavy reliance on the textbooks as the source of their material (Endeley et al., 2021).

Furthermore, it is seen as an authoritative curriculum, and the content is structured with the teacher being the authority that unpacks it and assesses it using standardised exams and tests (Lewis et al., 2020). Naidoo (2021) argues that teaching geography in the current dispensation of CAPS diminishes deep learning opportunities; however, it has shifted towards a knowledge-based curriculum where the policy defines the content to be taught, sequencing, and pacing. Based on the latter, the researchers in this paper believe that challenges will arise with such a curriculum packaged with knowledge and behaviourist ideas. Mpofu and Sefotho (2024) note that heavy teacher workload, burnout, and limited learner participation and assessment are among the challenges of a product-based curriculum. However, Endeley et al. (2021) believe that many curriculum innovations in Africa fail before they start because of a lack of clarity and capacity to engage in change processes. Moreover, these researchers suggest that professional training is crucial before curriculum implementation. However, they warn that teachers will most likely implement what they have been trained in (Endeley et al., 2021).

In this context, fieldwork is often excluded in practice because it is not explicitly assessed in final examinations, does not align with standardised outcomes, and requires time, flexibility, and resources that a tightly structured product-based curriculum does not accommodate. Teachers, therefore, tend to prioritise examinable content over experiential learning such as geomorphology fieldwork, which they perceive as peripheral rather than essential.

4. Methodology

4.1 Design

This study followed a qualitative descriptive research design proposed by Bradshaw et al. (2017) to detail the geography teachers' challenges when implementing geomorphology fieldwork without preconceived theories. According to Irshaidat (2022), the qualitative descriptive research design is situated within the paradigm of interpretivism as it believes that meaning is socially constructed with multiple realities based on individuals' experiences. This design allowed the geography teachers to describe their challenging experiences when implementing geomorphology fieldwork for Grade 12 learners at school. The research method employed was semi-structured interviews, supported by document analysis, to gather in-depth qualitative data from participants.

4.2 Participants

Nine participants were purposively and conveniently sampled from three districts located in Tshwane. According to Setia (2016), using a combination of purposive and convenience sampling allows the researcher to select participants who align with the study's purpose and those who are readily available to the researcher. In this study, Grade 12 geography teachers were the only teachers who could report on their experiences regarding geomorphology fieldwork and were seen to align with the purpose of the study. Furthermore, these teachers and their schools were easily accessible, which reduced the cost of travelling and were willing to participate in the study (Cohen et al., 2018).

4.3 Data collection and analysis

To elicit relevant and accurate information from each geography teacher, individual semi-structured interviews were used to collect data (Liamputtong, 2019). The face-to-face semi-structured interviews with each participant lasted between 45 minutes and an hour. Due to teachers' commitments, the interviews were conducted during their free periods at their respective schools. Additionally, the geography CAPS document, teachers' preparation and assessment files and the geography national examination diagnostic report from 2022 to 2024 were analysed to concur or contrast with the interview data. Belina (2023) argues that combining these two data collection instruments enables the researcher to delve into the nuances of social phenomena through semi-structured interviews, while document analysis provides a complementary perspective that can only be gained through existing records and text. Specifically, the document analysis involved a systematic review of curriculum guidelines when it comes to fieldwork in Grade 12 from CAPS, how teachers incorporate fieldwork in their daily classroom planning and assessment from teacher files, and national diagnostic reports to identify recurring themes, gaps, and alignment with teachers' reported experiences. These insights were then triangulated with the interview data to validate findings and deepen the contextual understanding of the challenges surrounding geomorphology fieldwork implementation. The raw data that emerged from these data collection instruments were analysed following Braun and Clarke's (2014) six steps of thematic analysis. Figure 2 below presents a flowchart of the data analysis techniques used in this study.

Figure 2: Data Analysis flowchart for the study (adapted from Braun & Clarke, 2014)

Initially, the audio-recorded interviews were transcribed verbatim, which formed the first step of becoming familiar with the data and looking for potential themes. Initial codes were then captured in the second step, while the third step led to the coding of the themes. Furthermore, in step four, the codes were reviewed into potential themes, refined and defined in step five. In step six, the four final themes were presented: time constraints and curriculum coverage, financial implications and lack of stakeholder support, safety concerns, teachers not trained to implement fieldwork, and teachers' workload.

4.4 Ensuring rigour

To ensure trustworthiness in the findings of this study, Lincoln and Guba's (1985) four criteria of Credibility, Transferability, Dependability, and Confirmability were considered. Credibility was achieved through prolonged engagement with participants during data collection, member checking after transcription, and triangulation using two data collection instruments—semi-structured interviews and document analysis. These strategies helped ensure that the participants' accounts were accurately captured and interpreted. Transferability was ensured by selecting a diverse sample of Grade 12 geography teachers across three Tshwane districts. The inclusion of participants from schools with varying quintile† rankings enabled the study to capture multiple perspectives on

† Quintiles are a system to classify public schools based on their poverty index. This assists in determining state funding.

geomorphology fieldwork, increasing the potential for the findings to be applicable in similar educational contexts.

Dependability was demonstrated by providing an auditable trail, which included a detailed description of the research process, covering participant selection, data collection, transcription, coding, and thematic analysis. This documentation enables future researchers to follow and assess the reliability of the study procedures (Klem et al., 2022). Confirmability was addressed by presenting direct verbatim quotations from participants to support each theme, ensuring that the interpretations were grounded in the data and not shaped by the researchers' biases. Additionally, researchers' reflexivity was maintained throughout the process to guard against subjectivity.

4.5 Ethical consideration

Following Head's (2020) recommendation, ethical approval was sought from the University of South Africa, College of Education (2023/10/11/16667646/04/AM) and from the Gauteng Department of Education to conduct research at their schools. Before data collection, informed consent was obtained from all participants, and pseudonyms were used to replace participant's names. Using pseudonyms ensured that the privacy and confidentiality of the participants were protected throughout the reporting of findings.

5. Findings and Discussions

The paper explored the challenging experiences that Grade 12 geography teachers encounter when implementing geomorphology fieldwork activities in three Tshwane districts. This paper found that geography teachers are willing to give their learners experiential learning through geomorphology fieldwork; however, systemic challenges prevent them. As noted by Sciortino and Mifsud's (2024) assertion that fieldwork theoretically seems possible, its practical implementation has challenges. This could be the issue of implementing the CAPS as a product-based curriculum, which is too prescriptive, leaving little to no room for teachers to be creative. To facilitate the discussion of findings in this paper, as mentioned earlier in the data analysis section, four themes emerged from the raw data, namely: time constraints and curriculum coverage; teachers' workload; financial implications and lack of stakeholder support; and safety concerns and teachers not trained to implement fieldwork.

Theme 1: Time constraints and curriculum coverage

The findings revealed that despite participating teachers acknowledging the importance of geomorphology fieldwork, they were challenged in incorporating fieldwork due to time limitations. Time was seen as a hindering factor which prevented the geography teachers from adding any activity like fieldwork to the prescribed Annual Teaching Plan (ATP). For instance, Mhlava explained that: *"My biggest challenge is the issue of time. A double period I have a week is 80 minutes, usually used for mapwork. So, if we're given enough time, maybe it would be easier for us just to take the kids outside."* Makgari also indicated that *"…there isn't time because the syllabus is so packed. You hardly get through the curriculum; you struggle with map work every single period. It is a struggle before considering incorporating fieldwork."*

This finding concurs with Ajani (2023), who discovered that teachers in rural areas could not be innovative in their teaching because of the limited time prescribed by the CAPS, which does not allow deviation from what is prescribed. Similar findings emerged with Thoko explaining that theory in geography was crucial as prescribed in the curriculum. In her assertion, she said: "*…one of the biggest challenges is that fieldwork activities that learners would do, it is not part of SBA, so I would rather focus on the ATP knowing that my learners are well prepared for the exam …to be honest with you and you know it, we are judged by our results in Grade 12.*"

As a result, this teacher felt the need to prioritise such teaching over fieldwork (Chuene & Teane, 2024). This finding is significant as it confirms the theoretical framework, which indicates that teachers are likely to prioritise certain topics as the curriculum is authoritative in nature using a standardised examination for a final assessment, which limits innovative teaching (Lewis et al., 2020). Consequently, teachers believed that fieldwork would take time away from their mandated teaching schedule and reduce their ability to meet curriculum demands. This was evident with Mchayi's response: "*…for instance, our ATP indicates what I need to teach … when and if my facilitator comes to visit and finds me behind, then I will have to account, … so for me, I just see that fieldwork will take away my teaching time to complete the curriculum.*"

Such articulation, like the one from Mchayi, clearly indicates how the curriculum confines geography teachers and prevents them from looking at other alternative methods to teach geomorphology, which can help learners better understand the nuanced concepts. Further evidence of a lack of curriculum flexibility is presented in Table 1 below. The ATP for geomorphology indicates that it has been divided into weeks, and for teachers to cover the syllabus, they need to adhere to these prescripts.

Table 1: 2023/2024 Annual Teaching Plan for Geography Grade 12

2023/24 ANNUAL TEACHING PLANS: GEOGRAPHY (INLAND): GRADE 12

GEOMORPHOLOGY					
TERM 1	**WEEK 7**	**WEEK 8**	**WEEK 9**	**WEEK 10**	**WEEK 11**
CAPS TOPIC	**Drainage systems in SA**	**Drainage systems in SA & fluvial processes**	**Fluvial processes**	**Fluvial processes**	**Assessment, consolidation**
CORE CONCEPTS, SKILLS, AND VALUES	• Concepts (definition, identification, and application of: Drainage basin, catchment area, river system, tributary, confluence watershed, interfluve, source, river mouth, surface run-off, infiltration, groundwater, water table • Types of rivers (definition, identification, and application): Permanent, periodic, episodic, exotic • Identification, underlying rock structure, development, and characteristics of the following drainage patterns: Dendritic, trellis, rectangular, radial, centripetal, deranged, parallel • Definition and impact of factors influencing drainage density (high, low drainage density): Precipitation, evaporation, soil moisture, vegetation, slope, gradient, porosity permeability ***NOTE**: The above should be taught with the understanding of infiltration* **Integration map skills** Use topographic map to show concepts related to drainage basin, e.g. confluence, source, etc. Use topographic map to show types of rivers and, drainage patterns Cross-sections – drawing of cross-sections, indicating position of features on cross-sections, and identifying features represented by cross-sections Intervisibility Calculating vertical exaggeration	• Determining of stream order (definition, identification, and interpretation) • Discharge of a river (definition, identification, and interpretation) Laminar flow and turbulent flow • River profiles: Definition, description and associated characteristics including stream load ○ Cross, transverse profile ○ Longitudinal profile ○ Plan view of both profiles ○ Relationship of both profiles to the stages of a river (upper, middle, and lower course) **Integration map skills** Compare orthophoto map to topographic map Oblique and vertical aerial photographs – identifying landforms and features Use of size, shape, tone, texture, shadow, and patterns to identify features, landforms, and activities on photographs and orthophoto maps Orientation of orthophoto map with topographic map	• Identification, description, formation and significance and impact of fluvial landforms, features: Meanders, undercut and slip-off slope, oxbow lakes, braided streams, floodplain, natural levee, waterfall, rapids, delta **Integration map skills** Use topographic map to identify fluvial landforms, features (meanders, undercut and slip-off slope, oxbow lakes, braided streams, floodplain, natural levee, waterfall, rapids, delta) Drawing of a cross section, calculation of vertical exaggeration and concept of Intervisibility **GIS (definition)** Concepts (definition, identification, and application) of: • Remote sensing • Resolution • Pixels	• River grading: ○ Definition (graded and ungraded rivers) ○ Processes involved in a river becoming graded. Distinguish between graded and ungraded streams ○ Base level of erosion ○ Temporary base level of erosion ○ Permanent base level of erosion **Integration map skills** Use topographic maps Drawing of a cross section, calculation of vertical exaggeration and concept of intervisibility	**Revision and application of content and skills covered**
REQUISITE PRE-KNOWLEDGE	Grade 9 concepts related to drainage basin Concepts used in where and why rivers flow at different velocities	Grade 9 concepts and stages of rivers	Grade 9 concepts and stages of rivers	Techniques and skills Grades 10-11	
RESOURCES (OTHER THAN TEXTBOOK) TO ENHANCE LEARNING	Topographic maps and orthophoto maps, video clips, photos, Google search by learners	Topographic maps, and orthophoto maps, video clips, photos, Google search by learners	Topographic maps, video clips, photos, Google search by learners, case studies	Topographic maps, orthophoto maps	Topographic maps, orthophoto maps
INFORMAL ASSESSMENT (CONTENT & MAPWORK)	Minimum of 3 data response tasks	Minimum of 3 data response tasks	Minimum of 3 data response tasks	Minimum of 3 data response tasks	
SBA FORMAL ASSESSMENT		**TASK 1: MAPWORK (60)**		**TASK 2: CONTROLLED TEST (60)**	**Preparation and discussion of research task and rubric with learners**

All participants highlighted time constraints and rigid curriculum pacing as major deterrents to integrating fieldwork, reinforcing how policy structures restrict pedagogical flexibility in Grade 12 Geography.

Theme 2: Teachers' workload

Furthermore, it was found that participating teachers felt overworked and therefore could not incorporate geomorphology fieldwork in their teaching, which they perceived as more time-consuming than traditional methods. Both interview data and the analysis of teachers' preparation files revealed that geography teachers experienced workload pressure, often managing multiple responsibilities. As a result, they avoided adding field-based activities that they saw as an additional burden. Akin to the findings of Mohammed (2016) and Sciortino and Mifsud (2024), teachers in this study reported teaching more than one subject across various Grades, increasing their workload significantly. For instance, Mchayi explained: "*I have six classes in Grade 11, three classes in Grade 10 of Sepedi, which is nine periods per week and then I have geography Grade 12 which is seven periods per week. I am still expected to engage in extracurricular activities and other administrative tasks as a teacher. So, like I said before, incorporating fieldwork is a bit challenging, as it is not in the syllabus, and there's no time for it. Our workload is very high.*"

This statement was substantiated during the document analysis of Mchayi's preparation file, where his teaching timetable indicated that he had only six free periods in the entire week, leaving minimal flexibility for additional planning or excursions. His schedule is presented below:

	1	2	3	4	5	6	7		8	9	10	11	12	13
1	Opening	Register	11-7		9C	10-2		Break	9B	9A	10-4	11-5	12-6	
2	Register	TEST			11-7	9B			11-5		10-2	12-6	10-4	
3	Register	12-6		10-4		11-5			9A	9C	10-2		11-7	
4	Register	TEST	10-4			12-6			10-2	11-7	11-5		9A	
5	Register	10-2		11-7		11-5	9B		10-4		12-6		9C	Admin

Figure 3: Mchayi's teaching timetable

A similar challenge was identified in Amukelani's preparation file. Although she taught Social Sciences in Grade 8, she also covered Grades 10 to 12, which left her with an equally full schedule. As she explained: "*… I teach Grades 8, 10, 11 and 12, so my timetable is fully packed to squeeze in fieldwork in my teaching*". Although this paper could not confirm whether the high workloads stemmed from teacher shortages or budget cuts, as reported in studies by Barth et al. (2016), Wiggan et al. (2021), and Du Plessis and Mbunyuza (2014), the findings do align with Mpofu and Sefotho (2024), who found that a product-based curriculum can exacerbate teacher workload.

In support of this, Maditau noted that the administrative demands associated with fieldwork further discouraged him from engaging in such activities: "*I've tried, but it is just not working for me at my school. I tried two years ago to apply, but the paperwork involved in the application process was too much to the extent that I stopped the whole process because I felt it just added more workload for us.*" This statement highlights the burden of the long and bureaucratic process that teachers must follow to receive approval for fieldwork from the school and district levels.

The study could not determine whether administrative support staff were involved in assisting with this process. However, it suggests that the delegation of these tasks could potentially ease teachers' burdens. This finding supports Prior-Jones et al. (2020), who also found that extensive paperwork and administrative barriers deterred teachers from conducting field trips. In summary, the findings indicate that high teaching loads, multi-Grade responsibilities, and administrative burdens significantly limit teachers' willingness and ability to conduct geomorphology fieldwork.

Theme 3: Financial implications and lack of stakeholder support

There was a clear consensus amongst the participating teachers that without financial backing from schools and stakeholders, planning offsite fieldwork would not be possible. Not only were these two factors cited, but also the affordability of learners and their parents' ability to cover the costs involved. The teachers further emphasised that conducting geomorphology fieldwork required some form of financial support. Miringo was keen to take his Grade 12 learners on fieldwork, but faced significant challenges due to the distance of the preferred sites and the learners' inability to afford travel costs: "*Remember that some of the features I would like my learners to see … they are in other provinces like Mpumalanga and Northern Cape, and we are a quintile 1 school. Also, finances because the background they (learners) come from is not good, they would not afford to pay for such school trips*."

This finding aligns with Sikerete (2023), who highlighted the inability of parents to fund offsite fieldwork as a major challenge. Thoko reiterated Miringo's point by stating: "*…our kids don't have money, and we have a bunch of kids with parents without money because they do not work. I mean, that's not fair to say those who cannot afford to pay for the trip must remain because the purpose of fieldwork should benefit all learners."*

In contrast, Nyiko taught at a quintile 4 school, where finances were expected to be less of a constraint. However, his concerns focused more on stakeholder support, particularly from the School Management Team (SMT), rather than financial limitations: "*I think at first it is going to be difficult considering that it was never done before. Considering again that most of our SMT are not really into geography. Most of the SMT members are heads of maths and physics, consumer studies, and EMS departments, but they don't even care about geography; therefore, getting their backing would be difficult*".

Further evidence of stakeholders' lack of interest emerged in Amukelani's statement. Although her school was in a lower quintile (quintile 1), she noted that parents were more willing to pay for non-educational trips than academic excursions: "*…also, our parents are not interested in educational trips. They are so quick to pay if a trip is to visit Gold Reef City, which is not educational*".

This contradicts Sikerete's (2023) finding that learners who came from poor backgrounds could not pay for education excursions like geomorphology fieldwork. The insight from Amukelani's experience suggests that the real barrier in such contexts may not be financial but rather a lack of stakeholder support and awareness. This is a significant finding as it reinforces Herrick's (2010) view on the critical role stakeholder backing plays in successful fieldwork implementation. It challenges the assumption that financial limitations are the sole obstacle in under-resourced schools. As Amukelani concluded: "*…the only thing we need is the support from the school management and parents."* These two stakeholders are the people very close to the school, who know all the school's challenges. Thus, their backing of geography teachers' ideas could go a long way to advance the learners' learning journey. As such, while financial challenges remain a critical barrier to geomorphology fieldwork, this theme highlights that

stakeholder support, particularly from the SMT and parents, is often the determining factor in whether such learning opportunities are realised.

Theme 4: Safety concerns and teachers not trained to implement fieldwork

During the interview analysis, it emerged that participating teachers, not parents, were the ones who expressed concern about the safety of learners during geomorphology fieldwork. This contrasts with the findings of O'Neal et al. (2014), who reported that parental safety concerns were the main barrier. Most teachers in this study conceptualised fieldwork as an off-site activity; however, in consulting the CAPS policy document for clarification, it was found that the geography CAPS suggests that fieldwork should take place outside of teaching hours (DBE, 2011). It can, therefore, be concluded that teachers' safety concerns may be informed by this policy directive and its implicit logistical demands. For instance, Keatlegile shared her unease about taking learners off school premises: "*I think the main challenge is taking a group of Grade 12 learners out on a field trip since I cannot do it in my allocated timetable. Managing an entire group of Grade 12 learners is quite demanding and can be stressful. Controlling 17-, 18-, and 19-year-olds presents another difficulty, as they often find ways to do things they are not supposed to. It is quite daunting, especially as a young teacher. I constantly worry about their safety and behaviour.*"

Makgari raised a similar concern, although not necessarily linked to her age or experience in teaching Grade 12: "*…we are close to the Apies River, but my biggest concern was safety, so I was unsure. I was simply too afraid to take them out because, even for me, I had never been to a river before. It was purely a matter of safety*".

When further probed, both teachers acknowledged that their hesitation was linked to a lack of training and support for fieldwork implementation. Keatlegile reflected on her limited exposure to fieldwork: "*I only had the opportunity to go out and experience geomorphology fieldwork twice at university, if I recall. However, since becoming a teacher, I have had no such experiences. I have not received any training, attended workshops, or had any support in that regard. So, I am not well equipped to take learners out to the field*."

Similarly, Makgari highlighted a lack of in-service training for geography teachers in her district: "*I don't think we receive sufficient orientation in fieldwork. We do attend workshops and training sessions, but the focus is always on content – content and more content. Regarding fieldwork, we tend to avoid it because also CAPS does not enforce it*."

These insights are reinforced by the findings of Esteves et al. (2018), who argued that pre-service training significantly influences teachers' classroom methodology. The current study is also supported by Endeley et al. (2021), who found that teachers are more likely to implement methods in which they had trained. The geography teachers in this study felt more comfortable continuing with classroom-based content delivery, citing concerns over safety and a lack of adequate preparation for field-based teaching. However, unlike the studies, this paper highlights the need for ongoing in-service training specifically targeted at equipping teachers with the knowledge and skills to conduct fieldwork in geomorphology.

Furthermore, findings also reinforce the theoretical framework underpinning this study, that a product-based curriculum like CAPS may lead to structural barriers that limit pedagogical flexibility. Naidoo (2021) and Mpofu and Sefotho (2024) describe CAPS as a knowledge-based curriculum, and this study confirms that assessment remains the dominant concern. A review of the 2023 technical report (DBE, 2024) recommended that geography teachers use sketches and past examination papers to ensure learners are familiar with examination formats. This underscores the product-oriented nature of the curriculum, where the ultimate goal is for learners to produce measurable outcomes aligned with specific content and skills (Mobit et al., 2024). Therefore, this theme concludes that the dual concerns of learner safety and inadequate fieldwork training highlight how curriculum policy and professional development gaps combine to discourage geography teachers from incorporating geomorphology fieldwork in their teaching practice.

6. Conclusion

In this research paper, challenging experiences of Grade 12 geography teachers on geomorphology fieldwork implementation were shared. To uncover these challenges, the paper was guided by the research question: *What are Grade 12 geography teachers' challenges in effectively implementing geomorphology fieldwork?* Time constraints and curriculum coverage, financial implications, lack of stakeholder support, safety concerns, teachers not trained to implement fieldwork, and teachers' workload were the four key themes which emerged from the data analysis. These themes were crucial in the narration of the findings of this paper.

The findings of this paper provided a clear overview of the challenging experiences geography teachers experience when attempting to implement geomorphology fieldwork in Tshwane district secondary schools. The root cause of geography teachers eschewing geomorphology fieldwork was generally documented in the literature. However, the findings in this paper were significant as they shed light on the contextual factors and challenges that CAPS presents to geography teachers in South Africa if implemented as a product-based curriculum. Furthermore, the findings revealed that despite financial constraints playing a pivotal role in the success of geomorphology fieldwork, stakeholder support is crucial as it allows teachers to be creative in their teaching.

7. Recommendations

Based on the latter, this paper recommends that the Department of Basic Education find cost-effective ways to incorporate geomorphology fieldwork in geography. This can be done through collaboration with private entities that offer alternatives to off-site fieldwork, such as virtual fieldwork. Partnership with educational centres such as Sci-Bono Discovery Centre in Gauteng Province and surrounding higher institutions of learning, which are equipped with these educational technologies, could allow learners to explore geomorphic sites using simulations, 3D mapping tools, or interactive GIS-based platforms. A pilot study could be conducterd in under-resourced schools to evaluate accessibility,

engagement, and learning outcomes compared to traditional methods. Moreover, this can be achieved by targeted in-service training focusing on the importance of geomorphology fieldwork in learners' conceptual understanding. These training initiatives should also equip teachers with practical skills for managing fieldwork safely and aligning it with CAPS timeframes. To ease teacher workload, administrative support and shared planning models should be explored for organising fieldwork. Stakeholder engagement campaigns are needed to build SMT and parental support for field-based learning. Fieldwork safety protocols should be simplified and standardised to reduce barriers for less experienced teachers. To build on these findings, future research could add the learners' perspectives from the South African context to confirm the challenges they face on embarking on geomorphology fieldwork.

8. Limitations of the study

The study was conducted within a limited geographic scope (three districts in Tshwane) and involved a relatively small sample size (nine teachers), which may limit the generalisability of the findings to other contexts. Findings from such studies can further assist teachers in understanding geography learners' needs before implementing geomorphology fieldwork.

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