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Understanding the Out-of-Field Teaching Experiences: A Review of Selected National Contexts

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Abstract: This literature review examines the phenomenon of out-of-field (OOF) teaching experiences across various national contexts, highlighting their prevalence, challenges, and adaptive strategies. OOF teaching, where educators are assigned subjects outside their formal qualifications, remains a systemic issue exacerbated by teacher shortages and inequitable distribution. The study is grounded in a social constructivist framework and employs a narrative literature review to investigate the experiences of OOF teaching across diverse national contexts. The review aims to identify the challenging experiences of OOF educators and propose strategies to mitigate the impacts of this phenomenon. A systematic search of secondary data was conducted using databases such as Google Scholar, Scopus, Web of Science, and ScienceDirect, yielding over 50 sources. Through defined inclusion criteria and Boolean search terms, 14 relevant articles were selected for in-depth review. The findings were analysed using thematic analysis to uncover patterns related to teacher adaptation, support mechanisms, and educational outcomes. A narrative review of global, African, and South African studies reveals that structured policies and targeted training programmes improve OOF teaching outcomes, while under-resourced regions face persistent challenges. The findings emphasise the need for policy interventions, enhanced teacher training, and equitable recruitment strategies to mitigate the negative impacts of OOF teaching. Future research should explore long-term implications for educators and students, focusing on sustainable solutions that support OOF teachers across diverse educational settings.

Keywords: Out-of-field teaching, social constructivism, out-of-field educators, out-of-field educators' challenges, student learning outcomes.

1. Introduction

This article presents a literature review aimed at understanding the phenomenon of out-of-field teaching experiences from selected national contexts. Beneath the supply-and-demand issues lies a more serious problem with out-of-field teaching (Luft et al., 2020). Educational institutions face the global challenge of out-of-field teaching (Du Plessis, 2015; Talili et al., 2021). In many education systems worldwide, the challenge of ensuring that every subject is taught by a qualified teacher remains unsolved. A growing body of evidence indicates that a significant proportion of teachers are assigned to subjects for which they have neither formal training nor specialised qualifications, a practice known as out-of-field (OOF) teaching (Du Plessis, 2015; Hobbs & Porsch, 2021). This occurs when educators, though certified in one area, are tasked with teaching another due to staffing gaps or administrative constraints. For instance, a teacher trained in life sciences may be reassigned to mathematics or technology instruction. While often framed as a practical response to teacher shortages, the widespread deployment of OOF educators raises concerns about teaching quality, teacher well-being, and student learning outcomes (Luft et al., 2020; Apau, 2022). OOF teaching is most prevalent in rural, under-resourced, or economically disadvantaged communities, where attracting and retaining qualified subject specialists is particularly difficult (Theophile et al., 2020; Muremela et al., 2023). Structural issues such as unequal teacher distribution, high attrition, inflexible

staffing policies, and a lack of incentives for rural service are key drivers of the phenomenon (Van Overschelde & Piatt, 2020).

At the classroom level, OOF educators often face challenges in curriculum planning, instructional delivery, and assessment, compounded by low self-efficacy and diminished professional identity (Talili et al., 2021; Du Plessis & McDonagh, 2021). Despite these challenges, many OOF teachers adopt adaptive strategies such as collaboration, mentoring, and reflective practice to navigate unfamiliar content and pedagogical demands. This study is grounded in social constructivism, a theory that views knowledge as socially constructed through interaction, dialogue, and shared experience (Vygotsky, 1978; Reynolds, 2016). This perspective provides a robust framework for understanding how OOF teachers engage in meaning-making, scaffold their own learning through peer networks, and reconstruct their professional identities in response to new challenges (Pretorius, 2024). However, existing literature lacks a comparative synthesis that situates OOF teaching within global, African, and South African contexts through this theoretical lens. Most prior studies are fragmented, localized, and descriptive, with limited exploration of long-term outcomes, institutional factors, or context-specific adaptations. Addressing this gap, the present review draws on a narrative analysis of selected national case studies to explore the experiences of OOF educators across varied educational landscapes. It aims to identify common challenges, highlight effective coping mechanisms, and inform policy directions that align with constructivist principles of collaboration and experiential learning. By doing so, this study contributes to a deeper, theory-informed understanding of OOF teaching, with implications for educational equity, teacher support, and systemic reform.

The justification for this study lies in the persistent and pervasive issue of out-of-field (OOF) teaching, where educators are assigned to teach subjects that fall outside their formal qualifications. This situation often arises from teacher shortages and inequitable deployment, particularly in under-resourced and rural areas. Such practices adversely affect teacher well-being, student outcomes, and the quality of instruction. Despite the global prevalence of OOF teaching, there has been a dearth of cross-national synthesis comparing experiences across global, African, and South African contexts.

This review presents a novel perspective on how OOF educators adapt, collaborate, and develop professional knowledge in various educational environments by utilising a social constructivist approach. The study addresses two gaps in the literature: the research design and theoretical approach to OOF teaching. Existing research frequently employs descriptive or cross-sectional designs, which rarely investigate the long-term effects of OOF instruction on student learning or teacher retention. In many cases, theoretical frameworks are not fully utilised, and student perspectives as well as institutional policy dynamics are often overlooked.

This review fills these gaps by emphasising systemic challenges, advocating for context-sensitive policy responses, and promoting the use of social constructivism to achieve a more comprehensive understanding of the experiences and support needs of OOF educators. Therefore, the need to understand the experiences of out-of-field educators provides an opportunity to uncover innovative strategies they employ to adapt to the demands of teaching a subject outside their expertise. These strategies may include leveraging transferable skills, seeking professional development opportunities, or collaborating with colleagues in their field. This study advances the understanding of effective pedagogical approaches to teaching outside one's field by showcasing strategies adopted in several other countries. This review specifically addresses the following research question:

1.1 Research question

How do the experiences of OOF educators differ between global, African, and South African contexts?

This question is critical because it reflects the study's intent to compare OOF teaching experiences across multiple geographic and educational settings. The title indicates that the research is focused on understanding OOF teaching experiences, while the research question clarifies *where* these experiences are being explored: on a global scale, within the African continent, and more specifically, within South Africa.

By addressing how experiences differ across these levels, the question:

- Aims to identify context-specific challenges and coping mechanisms faced by OOF educators.
- Investigates how educational policies, teacher deployment practices, and resource availability influence the nature of OOF teaching in each region.
- Supports the study's goal of providing a nuanced, comparative understanding of the phenomenon, which is necessary for informing context-sensitive interventions and policy responses.

In essence, this research question operationalises the title by framing the comparative analysis the study undertakes, helping to illuminate the shared patterns and regional differences in OOF teaching practices and experiences.

1.2 Rationale for country selection and relevance to the South African context

The countries selected for this narrative literature review—encompassing global contexts (e.g., the United States, Australia, Germany, the Philippines), African contexts (e.g., Ghana, Rwanda), and South African contexts—were purposefully chosen to capture a diverse spectrum of out-of-field (OOF) teaching experiences across both developed and developing educational systems. This comparative lens allows for a more nuanced understanding of how systemic, cultural, and policy-related factors influence the manifestation and management of OOF teaching worldwide. Including countries from the Global North (such as the U.S. and Australia) provides insight into how well-resourced systems with formal teacher support mechanisms address OOF teaching. Conversely, examining countries in the Global South, particularly within Africa, highlights challenges related to resource scarcity, rural-urban teacher deployment gaps, and limited access to professional development.

The rationale for this selection is also grounded in the study's constructivist theoretical orientation, which emphasises the contextual and social construction of professional knowledge. To thoroughly explore how OOF educators adapt and develop in different settings, it is essential to examine both contrasting and comparable educational environments. For example, Ghana and Rwanda share structural and socio-economic features with South Africa, such as teacher shortages in rural areas, systemic inequalities, and policy-practice gaps. Insights from these countries provide regionally relevant examples of how similar challenges are being addressed (or not) and thus serve as comparative learning points.

Most importantly, the inclusion of South Africa as a focal case is both timely and policy-relevant. The country continues to grapple with the uneven distribution of qualified teachers, particularly in mathematics, science, and rural education (Long & Wendt, 2019; Muremela et al., 2023). By situating South Africa within a broader international and continental dialogue on OOF teaching, the study enhances our understanding of which strategies might be adaptable, which policy interventions have proven effective elsewhere, and how South Africa's challenges are both unique and shared. This cross-contextual analysis provides the empirical and theoretical grounding necessary to inform more equitable teacher deployment policies, context-sensitive professional development, and constructivist-informed support systems within the South African education system.

2. Theoretical Lens

The theoretical framework for this study is grounded in social constructivism, which posits that knowledge is constructed through social interactions and experiences. According to Reynolds (2016), this framework stresses the significance of collaborative learning environments where students actively participate in knowledge construction, a concept prevalent in various educational settings. Perkowska-Klejman and Górka-Strzałkowska (2023) note that constructivism draws inspiration from theories by Piaget and Vygotsky, which assert that knowledge is created from social interactions and individual experiences. This review, therefore, utilises Jean Piaget and Vygotsky's social constructivism framework, which asserts that humans form knowledge and meaning through experiences (Piaget, 1952; Vygotsky, 1978). Social constructivism offers a fitting theoretical lens for this study, as it emphasises how teachers actively construct knowledge and meaning through social interaction, dialogue, and collaboration (Reynolds, 2016; Allen, 2022). Out-of-field (OOF) teachers often rely on mentorship, peer support, and contextual experiences to adapt to unfamiliar subjects (Jemberie, 2021; Mohammed & Kinyó, 2022), aligning with Vygotsky's (1978) notion of scaffolding within the zone of proximal development. This framework also highlights the situated nature of learning and the fluid reconstruction of professional identity, making it well-suited to explore how OOF teachers navigate challenging experiences, develop pedagogical strategies, and grow professionally within specific institutional and cultural settings (Nugroho et al., 2024; Perkowska-Klejman & Górka-Strzałkowska, 2023). This theory of social constructivism emphasises the impact of what Vygotsky calls "more knowledgeable others," meaning that those who provide guidance and education must possess sufficient knowledge (Arendain & Limpot, 2022). Jemberie (2021) argues that Piaget's philosophy encompasses learning theories, instructional methodologies, and educational reform. The constructivist theory chosen aligns with the goals and challenges of out-of-field teaching, promoting collaborative learning and problem-solving as crucial coping mechanisms for educators and students navigating new content.

Allen (2022) claims that constructivism emphasises that knowledge is shaped by learners' interpretations of experiences, contrasting with traditional methods that rely on passive, teacher-informed facts. Pretorius (2024) argues that constructivism, a paradigm within interpretivism, aligns with ontology and epistemology, positing that reality is created in groups. This argument by Pretorius (2024) is highly relevant to this study of out-of-field (OOF) teaching experiences. This perspective reinforces the idea that the knowledge and professional identities of OOF educators are not fixed but are *continually shaped through shared experiences, cultural norms, and institutional practices*. In the context of OOF teaching, educators often operate in unfamiliar disciplinary environments and must negotiate new meanings, teaching practices, and relational roles with peers, students, and school leaders. These educators co-construct their understanding of subject content, pedagogical strategies, and classroom management through collaborative practices such as mentoring, co-teaching, and reflective dialogue. As such, Pretorius's (2024) emphasis on the social and group-based construction of reality provides a strong philosophical foundation for exploring how OOF teachers adapt and thrive. The study's reliance on a constructivist framework permits an examination of these adaptive processes as context-bound, dialogic, and inherently social, aligning epistemologically and ontologically with the interpretivist stance that values meaning-making over fixed truths.

The current study highlights the social and cultural influence of experiences and reflective practices, particularly for OOF educators, which facilitates effective growth and adaptation of teaching methods. Regarding social and cultural influence, research indicates that OOF educators often come from different subject specialisations and may bring unique perspectives influenced by their primary field and the culture of their discipline (Zhang et al., 2022). Zhang et al. confirm that knowledge on question-and-answer sites is socially constructed through mass collaboration among users, emphasising its dynamic nature as a product of interactive sequences. Nugroho et al. (2024) affirm that knowledge is created through experience, actively interacting with raw data, identifying

patterns, and developing new understandings that involve real-world teaching challenges and personal practice reflection. Furthermore, Mohammed and Kinyó (2022) emphasise that knowledge is constructed based on prior life experiences and sociocultural contexts. They further assert that learning is perceived as building meaning by relating new information to what has already been learned. The study's methods and materials are clearly explained in the next section.

3. Materials and Methods

This paper employed a narrative literature review (NLR) approach (Green et al., 2006). A literature review generally aims to provide a thorough overview of research in a particular field (Yawar & Seuring, 2017), fostering comprehension of the subject matter of interest and its critiques (Mahlangu, 2018). Study gaps are identified, fragments of previous studies are integrated, and the findings are refined to an easily understood level (Yawar & Seuring, 2017). According to Green et al. (2006), narrative literature reviews include journal articles, editorials, and commentaries. Editorials may reflect the editor's thoughts on a recent journal issue; therefore, they are not always considered narrative reviews (Green et al., 2006). Badaru and Mphahlele (2023) state that a narrative review identifies and summarises common themes from a body of knowledge about a certain subject or relevant research issues. The choice of a narrative literature review (NLR) in this study is methodologically appropriate, given its aim of synthesising diverse research findings on out-of-field (OOF) teaching across multiple national contexts. Unlike systematic reviews that adhere to rigid protocols for inclusion and analysis, narrative reviews offer greater flexibility and interpretive depth, allowing researchers to explore complex educational phenomena through a thematic and context-sensitive lens (Green et al., 2006). This flexibility enabled the authors to compare the experiences of OOF educators globally, with particular attention to African and South African settings, highlighting patterns and contrasts that may have been overlooked in more narrowly focused reviews.

The research goal of this narrative literature review was to examine studies on out-of-field teaching experiences in various national contexts. Specifically, the review aimed to identify challenging experiences and suggestions for reducing the occurrence of out-of-field teaching. This guided the search strategy for finding published secondary data sources relevant to the study's goal. Using the Google Scholar, Scopus, Web of Science (WoS), and ScienceDirect databases, the researchers scrutinised over 50 journal articles to extract information that could provide answers to the research question. The researchers applied the Boolean operator "AND/OR" to engage the key terms in searching for relevant materials to include or exclude from the study (Jahan et al., 2016). The key terms used in the search process included social constructivism AND out-of-field teaching, out-of-field teaching OR out-of-field educators, and out-of-field educators' challenges AND student learning outcomes. The final paper included 14 relevant articles, as presented in Table 1, while others irrelevant to the study's goal were excluded. For data analysis, the authors utilised thematic analysis, a widely accepted qualitative method for identifying, analysing, and reporting patterns or themes within textual data (Watson, 2020). This approach allowed the researchers to organise findings around emergent categories such as systemic causes of out-of-field teaching, adaptive strategies used by educators, and the implications for teaching quality and student outcomes. The authors constructed a comparative narrative highlighting regional similarities and contextual differences in out-of-field teaching practices by applying thematic analysis across selected studies.

Given that narrative reviews are often criticised for subjectivity and selection bias (Ferrari, 2015), the authors took several deliberate steps to enhance the reliability and validity of their findings. First, we implemented a transparent and replicable search strategy using four major databases: Google Scholar, Scopus, Web of Science, and ScienceDirect. We employed Boolean operators ("AND/OR") to systematically engage relevant search terms (e.g., "social constructivism AND out-of-field teaching"). This step ensured a comprehensive and focused retrieval of relevant studies. From an initial pool of over 50 articles, only 14 were included based on relevance to the research question and

theoretical alignment with the constructivist framework, thereby strengthening content validity. To ensure reliability, the researchers clearly outlined their inclusion and exclusion criteria and adhered to them consistently during study selection. Moreover, thematic analysis supported internal consistency by organising findings according to predefined and emergent themes explicitly linked to the research questions. While the interpretive nature of narrative reviews limits statistical generalisability, the triangulation of data across multiple national contexts, coupled with a consistent analytical framework, enhances credibility and transferability. Finally, aligning the analysis with social constructivist theory provided a coherent interpretive lens, further anchoring the study in a strong conceptual foundation and mitigating interpretive drift.

Narrative reviews are particularly valuable when a field is theoretically underdeveloped or fragmented, as with literature on out-of-field (OOF) teaching. According to Baumeister and Leary (1997), a narrative review's strengths lie in integrating insights from a wide range of studies to generate new theoretical understandings rather than merely aggregating data. This study demonstrates value by using social constructivism as an analytical lens and theorising how OOF educators construct professional knowledge and identity in context. However, as Ferrari (2015) noted, narrative reviews carry inherent selection bias and subjectivity risks since inclusion criteria are less standardised. The authors addressed this limitation by clearly outlining their search strategy, inclusion terms, and thematic analysis process, thereby enhancing transparency and rigour. Thus, using the narrative review method is well justified in this study, as it allows for a holistic, comparative, and theory-informed exploration of a complex and under-researched issue. By synthesising fragmented studies across geographical and methodological boundaries, the review contributes to the practical understanding of OOF teaching and the theoretical advancement of constructivist frameworks in teacher professional learning. The next section presents the findings sourced from the extant literature.

Table 1: Summary of reviewed literature on out-of-field teaching

Title	Authors & Date	Approach	Major Findings
Out-of-field teaching in Ghanaian basic schools: A matrix of basic school teachers' experiences in Ekumfi District	Apau (2022)	Qualitative	School-level decisions drive OOF teaching; teachers struggle with lesson planning and delivery due to limited subject knowledge; rural student performance is negatively affected.
Phenomenological approach of out-of-field teaching: Challenges and opportunities	Arendain & Limpot (2022)	Qualitative	OOF educators face challenges with content mastery but adapt through reflective practice and collegial support.
Effective education: Conceptualising the meaning of out-of-field teaching practices	Du Plessis (2015)	Qualitative	OOF teaching undermines instructional quality and learning outcomes; recommends supportive leadership and rethinking teacher preparation.
The out-of-field phenomenon and leadership for well-being	Du Plessis & McDonagh (2021)	Qualitative	OOF teaching reduces teacher confidence and well-being; affects students and school leadership effectiveness; supports context-aware leadership strategies.
Taking an international perspective on "out-of-field" teaching	Hobbs & Törner (2014)	Informational website	Summarises global dialogue on OOF teaching; calls for international collaboration and research-led policy development.

Teaching out-of-field: Challenges for teacher education	Hobbs & Porsch (2021)	Editorial	Identifies systemic causes of OOF teaching; emphasises the need for reform in teacher education and better support structures.
Tracking the extent of out-of-field teaching of geography	Kriewaldt & Lee (2022)	Quantitative (Survey)	High prevalence of OOF geography teaching in Australian schools; impacts curriculum quality and teacher confidence.
Out-of-field teaching in science: An overlooked problem	Luft et al. (2020)	Editorial	OOF science teaching is common and under-addressed; it calls for urgent policy attention and resource support.
Out-of-field social studies teaching through sustainable culture-based pedagogy	Pacana et al. (2019)	Qualitative	Teachers adapt by using culturally rooted pedagogies; highlights the importance of context-specific approaches.
Performance of out-of-field teachers in basic education: Basis for program initiatives	Talili et al. (2021)	Quantitative	OOF teachers perform poorly in subject mastery and pedagogy; recommends professional development and collaboration with teacher education institutions.
National trends in the formal content preparation of US science teachers	Taylor & Clayton (2020)	Quantitative (Survey)	Formal qualifications show mixed impact on student outcomes; teaching experience and material access are stronger predictors of success.
The effect of unqualified teachers on students' academic performance in Rwanda	Theophile et al. (2020)	Mixed methods	Unqualified teachers reduce student performance in national exams, highlighting the need for improved recruitment and qualification standards.
U.S. Every Student Succeeds Act: Negative impacts on teaching out-of-field	Van Overschelde & Piatt (2020)	Quantitative (Survey)	Federal policy inadvertently increases OOF teaching and emphasises misalignment between teacher certification and classroom assignments.
Trends in the qualification of South African mathematics teachers	Long & Wendt (2019)	Quantitative (Survey)	National improvement in math teacher qualifications observed, but inequities remain; OOF teaching persists in low-income and rural areas.

4. Presentation of Findings

The presentation of findings is organised thematically to address the central research question: *How do the experiences of out-of-field (OOF) educators differ between global, African, and South African contexts?* Through thematic analysis of the selected literature, three key themes emerged: (1) Systemic Causes and Structural Challenges of OOF Teaching, (2) Adaptive Strategies and Professional Support Mechanisms, and (3) Context-Specific Impacts on Teacher Well-being and Student Outcomes. These themes illuminate both the shared and divergent experiences of OOF educators across regions. The first theme explores how global teacher shortages, unequal deployment, and policy weaknesses contribute to the persistence of OOF teaching. The second theme highlights the ways in which OOF teachers cope through collaboration, mentoring, and professional development within their distinct

institutional and cultural settings. The third theme examines how these experiences affect teacher identity, classroom performance, and learner achievement, with particular attention to disparities between well-resourced and under-resourced environments. Together, these themes provide a nuanced understanding of OOF teaching practices and responses across global, African, and South African contexts. However, the findings are generally discussed under three subheadings: a global perspective on the experiences of out-of-field educators, perspectives from Africa on the experiences of out-of-field educators, and perspectives from South Africa on the experiences of out-of-field educators. Each of these subheadings is presented as follows:

4.1 A global perspective on experiences of out-of-field educators

This section discusses three studies conducted in countries such as the United States of America, Australia, Ireland, Germany, England, Indonesia, and the Philippines to examine the experiences of out-of-field educators globally.

Hobbs and Porsch's (2021) study examines the systemic causes of out-of-field (OOF) teaching across several countries, including the US, Australia, Ireland, Germany, England, and Indonesia, using survey data, qualitative interviews, teacher biographies, case studies, and observations. The study reveals challenges in out-of-field teaching due to systemic shortages, unequal distribution, and issues within education systems, with small schools and funding constraints exacerbated by inadequate initial teacher training. Hobbs and Porsch (2021) recommend that policy and teacher education adapt programmes to prepare educators for out-of-field teaching, provide training on managing diverse assignments, address teacher challenges, implement mentoring programmes, tackle teacher shortages, foster collaboration, provide professional development opportunities, encourage reflective practices, and expand research on long-term effects and cultural contexts.

A study by Taylor et al. (2020) focuses on middle school biology instruction in the United States, analysing nationally representative data from two sources: the 2011 National Assessment of Educational Progress (8th-grade Science) and the 2018 National Survey of Science and Mathematics Education.Data were sourced from national datasets that included middle school teachers and students. The study found that while teachers' formal university-level content preparation had a mixed impact on student outcomes across science disciplines, it showed a statistically significant positive association with earth science outcomes. However, teachers' experience teaching science and access to instructional materials or kits were more strongly and consistently associated with improved student outcomes across physical, life, and earth sciences. Furthermore, out-of-field science teaching was more prevalent in middle schools than in high schools and occurred more frequently in historically lower-achieving and economically disadvantaged educational contexts.Taylor et al. (2020) recommend that policy supports OOF teachers by increasing access to science instructional materials and resources, especially in underserved contexts. To strengthen their subject knowledge and teaching skills, targeted professional development should be provided for OOF teachers. Additionally, it is important to address teacher placement by developing policies to reduce the prevalence of OOF teaching, particularly in middle schools and disadvantaged communities.

Talili et al. (2021) conducted a descriptive study in selected Department of Education schools in Cagayan de Oro City, El Salvador City, and Misamis Oriental, Philippines. The study aimed to determine the number and characteristics of out-of-field (OOF) teachers and to assess their subject-matter expertise, as well as their difficulties with lesson planning and delivery, using performance tests and other questionnaires. The research included OOF educators from all divisions, emphasising the pressing issues they faced, particularly in smaller schools. Findings reveal that new and less experienced OOF teachers with limited subject knowledge encountered significant challenges in lesson planning and instructional delivery. The study recommends collaboration with Teacher Education Institutions to design comprehensive professional development programmes that

enhance teaching competencies and subject understanding among OOF educators. It also suggests that school administrators should work with Teacher Education Institutions (TEIs) to create and implement comprehensive, continuous Teacher Professional Development (TPD) programmes. However, the study did not explore long-term impacts on student outcomes or teacher retention.

The three research studies highlight the shared findings of systemic teacher shortages. Hobbs and Porsche (2021) and Taylor et al. (2020) address the unequal distribution of trained educators, a challenge mirrored in the prioritisation of Grade 12 over Grade 9. The studies emphasise the necessity of targeted professional development for out-of-field teachers to improve their skills and knowledge. Hobbs and Porsche (2021) stress the need for a comprehensive, systemic approach to curriculum challenges across various countries, along with the significance of mentoring programmes. Taylor et al.'s (2020) study focuses on U.S. middle school science teachers, highlighting the importance of instructional resources and teaching experience in enhancing student outcomes. Talili et al. (2021), focusing on small schools in the Philippines, underscore the challenges OOF teachers face in lesson planning and delivery due to low subject mastery. These studies contribute to a better understanding of OOF education by exposing complex, context-specific experiences alongside common worldwide difficulties. This comparative understanding provides a basis for addressing the challenges of OOF teaching in Africa, as discussed in the next part of this study. The next sub-section reviews global literature on the experiences of out-of-field educators and then presents perspectives from Africa regarding their experiences.

4.2 Perspectives from Africa on experiences of out-of-field educators

This section discusses African studies conducted on out-of-field educators' experiences. Apau's (2022) study examines the experiences of out-of-field (OOF) instructors in rural basic schools in Ghana's Ekumfi District in the central region. It evaluates the impact of this phenomenon on classroom processes and student performance. A qualitative multiple-case study approach was adopted, and nine novice, semi-experienced, and experienced teachers were interviewed twice over three months about lesson planning, assessment, motivation, delivery, classroom management, audio recordings, field notes, and student worksheets.

According to Apau's (2022) research, school-level policy decisions, rather than directives from the Ghana Education Service or the Ministry of Education, led to the assignment of out-of-field teachers. Furthermore, findings show that teachers encountered difficulties in creating lesson plans, administering tests, and managing their classes. Due to a lack of knowledge and support, teachers found it challenging to adapt to their new roles. Rural students suffer significantly, and their performance, particularly on the BECE (Basic Education Certificate Examination), is affected. The study found that high attrition rates and reluctance to accept posts in rural areas are the main causes of teacher posting issues.

The study recommends that the Ministry of Education and the Ghana Education Service develop teacher recruitment and deployment policies that align with teacher expertise and school needs. In collaboration with district directorates, headteachers should implement strategies to support OOF teachers, including professional development and mentoring. Additionally, the study suggests that the department address rural teacher shortages and ensure the equitable distribution of qualified teachers to improve student learning outcomes. The study highlights systemic issues causing out-of-field teaching and its negative impact on rural education in Ghana and advocates for structural reforms at both national and local levels.

Theophile et al. (2020) conducted a study at Rusoro Secondary School in Gakenke District, Rwanda, investigating the effect of unqualified teachers on students' academic performance, examining the characteristics of qualified teachers, and identifying the causes of poor academic performance in

national examinations. This study employed a mixed-methods approach, incorporating both qualitative and quantitative data. Interviews were conducted with school staff and teachers, and questionnaires were administered to students and staff. The study also included a review of academic performance records and observations of classroom teaching practices. The target population comprised 159 individuals, including 11 school staff and 148 students. A purposive sampling method was used to select school staff, while simple random sampling was used to select students. The study found that 70.8% of respondents agreed that unqualified teachers negatively impact student performance, leading to poor results in national exams due to insufficient subject mastery and ineffective teaching methods. Qualified teachers are characterised by proficiency in the language of instruction, relevant academic qualifications, mastery of content and teaching methods, and teaching experience. Parental involvement, socio-economic challenges, teacher and student motivation, and English proficiency as the medium of instruction are all significant factors influencing student performance. The study's recommendations emphasise improving teacher recruitment by ensuring that professionally qualified educators are hired through enhanced monitoring by the Ministry of Education and the Rwanda Basic Education Board (REB). Graduates from non-education fields should complete a Post-Graduate Diploma in Education (PGDE) to transition into teaching, and REB should strengthen Continuous Professional Development (CPD) programmes. Improving English proficiency among school leaders, teachers, and students is essential, as it is the medium of instruction.

The reviewed African studies highlight systemic issues driving out-of-field (OOF) teaching, including inequitable teacher placement and insufficient training, both of which contribute to poor student outcomes. Apau (2022) emphasises the rural-urban divide and the resulting challenges, including high attrition rates and inadequate support for rural educators. Meanwhile, Theophile et al. (2020) highlight how unqualified teachers negatively affect students' academic achievement, pointing to inadequate topic knowledge and inefficient teaching strategies as major obstacles. The study on teacher qualifications in Rwanda differs in its focus, as Apau (2022) concentrates on Ghana. To conclude our findings, perspectives from South Africa are presented concerning the experiences of out-of-field educators.

4.3 Perspectives from South Africa on experiences of out-of-field educators

The research was conducted cross-nationally in Australia and South Africa, encompassing both developed and developing countries, and focusing on metropolitan and rural schools at primary and secondary levels (Du Plessis & McDonagh, 2021). The study employed a phenomenological methodology to capture the lived experiences of school leaders, teachers, parents, and students regarding the out-of-field (OOF) teaching phenomenon. It aims to comprehend the phenomenon's effects on teacher and student well-being and its implications for school leadership. The findings indicate that the OOF teaching phenomenon negatively affects teacher well-being, confidence, self-efficacy, and feelings of belonging. Moreover, teachers face significant pressure to fulfil parental and societal expectations as knowledgeable and accountable educators, leading to self-critique and stress. OOF teaching practices also impact students' well-being and the effectiveness of school leaders. Recommendations include creating context-conscious micro-education policies to support teachers' well-being and address specific challenges. The importance of workplace relationships should be emphasised, along with the need to foster strong leadership to manage the impacts of OOF teaching on teacher and student well-being. School leaders are encouraged to engage proactively with the phenomenon to make informed decisions and implement strategies that enhance the well-being of all stakeholders.

Long and Wendt's (2019) study focuses on South Africa, examining the allocation and qualification levels of mathematics teachers within the country's schools. The study analysed data from the Trends in International Mathematics and Science Study (TIMSS) conducted in 2003, 2011, and 2015. Teachers

from the TIMSS sample provided contextual information regarding their qualifications and the school environment. Descriptive statistics were calculated using the IEA IDB Analyzer. The findings revealed that South Africa has significantly improved teacher qualifications, particularly in mathematics, and has reduced structural inequality in its education system. Despite this progress, out-of-field mathematics teaching remains prevalent and is unevenly distributed across different schools. The relationship between teacher qualifications and school contextual variables, including socio-economic factors, is significant in understanding educational outcomes. The study recommends that while improvements have been made, further efforts are needed to address the issue of out-of-field teaching in mathematics. It further suggests a sustained focus on uplifting teacher qualifications and ensuring the equitable distribution of qualified teachers to reduce disparities, especially in lower socio-economic areas. Ongoing policy improvements should concentrate on ensuring that all students have access to qualified teachers, particularly in subjects like mathematics.

Muremela et al. (2023) conducted a study in the Mutale area of the Vhembe district, Limpopo province, focusing on two public secondary schools in rural communities. A qualitative research design was employed, utilising semi-structured one-on-one interviews with eight purposively selected participants. These included two school principals, two teachers of natural sciences and mathematics, and four additional stakeholders with at least five years of experience in the schools. The study revealed significant challenges in recruiting and retaining teachers with scarce skills in rural schools. Factors contributing to this include a limited supply of qualified Mathematics and Science teachers, with most opting for better-resourced urban schools or industry roles. Moreover, the study found that rural schools face issues related to resource availability, teacher emigration, and low motivation. These challenges have contributed to poor learner performance in scarce skills subjects and have hindered South Africa's economic growth and educational goals. Muremela et al. (2023) recommend improvements in the production and equitable deployment of qualified teachers to rural schools. Rural school teachers should be motivated through incentives and support to retain them in their positions. Lastly, the Department of Education should address structural disparities and create policies to ensure an adequate and sustained supply of skilled teachers in rural settings.

With significant ramifications for student outcomes, the three studies highlight difficulties in teacher recruitment, training, and retention in South Africa and beyond. Muremela et al.'s (2023) study emphasises challenges in the recruitment and retention of teachers in rural schools in South Africa, including resource disparities, emigration, and low motivation, which adversely affect student performance. Du Plessis and McDonagh (2021) examined out-of-field (OOF) teaching in Australia and South Africa. Their study reveals that OOF teaching negatively impacts both teacher and student well-being, leading to stress, low self-efficacy, societal pressures, and compromised school leadership effectiveness.Long and Wendt (2019) analysed South African TIMSS data, highlighting progress in improving mathematics teacher qualifications and reducing inequality while emphasising the persistent issue of out-of-field teaching (OOF) in low socio-economic schools. These studies underscore the challenges associated with out-of-field teaching in South Africa, particularly in rural and low socio-economic contexts, including systemic issues in recruitment, retention, and equitable distribution. We will briefly discuss the findings in the next section.

4.4 Findings: A synthesis of literature

A recurrent theme in several international and African contexts is that educators who are out-of-field (OOF) face pedagogical and systemic challenges that hinder their ability to provide effective instruction. Despite the reviewed studies collectively indicating teacher shortages, a lack of subject-matter competence, and insufficient professional support, several significant conflicts and research gaps remain. A notable methodological constraint in the literature is the over-dependence on cross-sectional and descriptive approaches. For example, in the Philippines and Ghana, Talili et al. (2021)

and Apau (2022) employed descriptive qualitative methods, which are useful for documenting firsthand experiences but offer little information about long-term effects on teachers and students. Only Taylor et al. (2020) utilise nationally representative longitudinal data, allowing for stronger conclusions about the causal relationship between OOF teaching and student outcomes. Many studies lack longitudinal or mixed methods, limiting the field's understanding of the long-term effects of OOF instruction on student outcomes, professional identity construction, and retention. Furthermore, the over-reliance on localised, small samples restricts generalisability (e.g., Apau, 2022; Muremela et al., 2023). Broader, comparative studies across various educational environments are clearly needed to identify trends and exceptions in OOF teaching experiences worldwide.

Findings from different contexts are not always consistent, particularly regarding the impact of teacher content knowledge. Taylor et al. (2020) show that training at the university level has a mixed effect, with improvements being more consistently attributed to teaching experience and material access. On the other hand, Theophile et al. (2020) in Rwanda and Talili et al. (2021) in the Philippines emphasise that a lack of content knowledge is a major obstacle to effective instruction and positive student outcomes. This inconsistency may suggest contextual variations in the level of professional development offered, classroom resources, or curriculum complexity. Similarly, while Long and Wendt (2019) document notable advancements in teacher certification levels in South Africa, Muremela et al. (2023) note ongoing shortages in rural areas, indicating inconsistent policy implementation. This gap calls into question the efficacy of national education policy in addressing regional imbalances—an issue that is rarely investigated in research.

Even while systemic factors like inadequate training and poor deployment are frequently mentioned, relatively few studies examine institutional accountability, policy enforcement, or the reasoning behind decisions to recruit out-of-field instructors. For instance, placements of out-of-field (OOF) instructors are often decided at the school level, according to Apau (2022), yet the governance frameworks that allow for this discretion are not explored. Ethnographic or institutional research could address this gap in policy analysis. Furthermore, with the exception of Theophile et al. (2020), where student input is measured but not thematically examined, student perspectives—essential in a constructivist framework emphasising learner experience—are notably lacking. The pedagogical implications of OOF instruction become less clear when student opinions are ignored, as knowledge construction is socially situated.

From a social constructivist perspective, the reviewed studies support the notion that knowledge is jointly and contextually created. The concept of "more knowledgeable others" (Vygotsky) is tested in OOF contexts, where teachers may lack the knowledge necessary to mentor students effectively. In line with constructivism's emphasis on co-constructed meaning, the literature also indicates that peer support and collaborative practices (such as team teaching and mentoring) can compensate for content shortcomings. However, most of the reviewed studies do not assess whether these collaborative arrangements are imposed externally or ingrained in school cultures. Furthermore, reflective practice, a fundamental component of constructivist teacher development, is addressed without exploring how teachers modify their pedagogy or reframe their professional identities when teaching outside of their discipline. Although the reviewed literature depicts the complex challenges faced by OOF educators, it exhibits flaws in its methodology, generalisability, and conceptual growth, particularly regarding the application of social constructivist theory. Future research should adopt comparative, longitudinal, and student-centred methodologies to elucidate difficulties and investigate how knowledge, teaching identity, and learning outcomes are co-constructed in various OOF contexts.

5. Discussion of Findings

This section discusses the findings of the study in relation to the research questions: How do the experiences of out-of-field (OOF) educators differ between global, African, and South African

contexts? Social constructivism, which emphasises learning as a socially influenced, context-dependent, and experience-driven process, frames the literature review in this article. The article explores the theoretical, practical, and policy implications of OOF teaching, drawing on South African, African, and international contexts.

It is evident from the reviewed research that the primary causes of OOF teaching in international contexts are structural issues such as teacher shortages, unequal distribution, and poor deployment mechanisms. This is most noticeable in underprivileged and rural schools (Apau, 2022; Muremela et al., 2023). Social constructivism contends that meaningful knowledge building can only take place in supportive, knowledge-rich learning environments, emphasising the significance of educational equity and context-sensitive policies (Vygotsky, 1978). When unqualified or poorly matched teachers are placed in challenging situations without support, it is detrimental to the growth of both students and teachers. A lack of subject mastery causes OOF educators to struggle with lesson design, evaluation, and instructional delivery in all circumstances (Taylor et al., 2020; Talili et al., 2021). According to constructivism, teachers who lack in-depth subject-matter expertise find it difficult to actively scaffold learning and engage in meaningful conversations with students, both of which are essential skills for knowledge co-construction. The prevalence of these issues across ethnic and socioeconomic divides indicates a widespread mismatch between classroom conditions and teacher preparation.

Particularly in situations with high societal expectations and little institutional support, teaching outside of one's expertise has a psychological impact that manifests as decreased self-efficacy, professional unhappiness, and greater attrition (Du Plessis & McDonagh, 2021). According to constructivism, teachers' capacity for reflective practice and group problem-solving—two skills essential for navigating new subject areas—are weakened by these emotional and professional challenges. Recurring recommendations include access to educational materials, mentoring, and professional development (Hobbs & Porsch, 2021; Theophile et al., 2020). These processes are highly compatible with social constructivist theory, which holds that learning occurs best in cooperative, encouraging settings where "more knowledgeable others" foster development (Vygotsky, 1978). Nevertheless, there is still a significant policy-practice gap, as implementation remains unequal, especially in rural African contexts. Thus, social constructivism provides a useful framework for understanding out-of-field (OOF) teaching. This framework affirms the necessity of collaboration, reflective practice, and experiential learning to address OOF challenges. Additionally, the theory highlights how education is socio-culturally ingrained, emphasising the need for context-specific interventions rather than general teacher development programmes.

The findings of this study align closely with the principles of social constructivism, particularly in how out-of-field (OOF) educators construct knowledge and adapt professionally through social interaction and collaboration. According to Vygotsky's theory, learning occurs most effectively within social contexts where individuals engage with more knowledgeable others through dialogue, mentoring, and shared practices. This is evident in the reviewed literature, where OOF teachers often rely on peer support, informal mentoring, and collaborative problem-solving to navigate unfamiliar content areas. These practices mirror the Zone of Proximal Development (ZPD), where educators, though initially lacking subject-specific expertise, grow professionally through supportive interactions. Additionally, the situated nature of knowledge—central to social constructivism—is reflected in how OOF educators in diverse contexts such as South Africa, Ghana, and the Philippines adjust their teaching methods based on local realities, school culture, and available resources. Reflective practice and the ongoing reconstruction of professional identity are also consistent with the theory's emphasis on dynamic, experience-driven learning.

However, the findings also highlight tensions and gaps that challenge some assumptions of social constructivism. For example, while the theory assumes access to supportive networks and

scaffolding from more knowledgeable peers, the study reveals that many OOF teachers, particularly in rural and under-resourced settings, lack structured support systems, formal training, or consistent access to mentors. This absence of systemic scaffolding undermines the constructivist ideal of socially mediated learning. Furthermore, although constructivism emphasises the co-construction of knowledge between teachers and learners, student perspectives are notably missing from most studies reviewed. This omission limits the understanding of how learners experience and respond to OOF teaching, which is critical in a constructivist framework that values reciprocal meaning-making. These contradictions suggest the need for stronger institutional support and more inclusive research that fully captures the interactive nature of learning within OOF contexts.

6. Conclusion

This study critically examines the phenomenon of out-of-field (OOF) teaching across global, African, and South African contexts, uncovering the systemic causes, adaptive strategies, and professional challenges faced by educators teaching outside their areas of qualification. The findings reveal that while OOF teaching is often a response to teacher shortages and inequitable deployment, it poses serious implications for teacher well-being, instructional quality, and student learning, particularly in under-resourced and rural settings. Despite these challenges, OOF educators demonstrate resilience and agency by engaging in peer collaboration, reflective practice, and context-sensitive pedagogical adjustments. These responses underscore the importance of institutional support systems, such as structured mentoring and ongoing professional development, to help mitigate the negative impacts of teaching out of field. More importantly, the study contributes to the development of social constructivist theory by applying it to a relatively under-theorised area of teacher practice. It extends the theory beyond traditional classroom learning to the professional learning of educators themselves, illustrating how teachers construct new knowledge, reconstruct their professional identities, and adapt their practice through social interaction and situated experience. By revealing the conditions under which collaborative learning and meaning-making occur, or fail to occur, in OOF contexts, the study enriches the social constructivist understanding of knowledge co-construction in professional settings. Moreover, it highlights the theory's limitations when systemic supports are absent, suggesting that structural factors must be integrated into constructivist models of professional growth. Thus, this review not only informs policy and practice but also advances theoretical discourse on how learning and identity development unfold in complex, real-world educational environments.

7. Limitations and Further Studies

The approach of a narrative literature review may be subjective, as it often synthesises previous literature based on the author's interests and interpretations of existing studies. Selection bias can arise from the emphasis placed on studies that support the preferred narrative, potentially overlooking less well-known or contradicting findings. Another drawback is the inability to generalise the findings across various national contexts. The narrative literature review approach may focus on the specifics of a limited number of examples rather than the overall scope, which can obscure significant national differences. Moreover, narrative reviews may fail to rigorously evaluate the quality of their sources, potentially compromising the validity of the findings. The interpretive nature of a narrative literature review may restrict its objectivity, consistency, and analytical depth, even though it can provide valuable insights and contextual understanding. Future studies should explore teacher retention, long-term student learning outcomes, and the effectiveness of intervention programmes aimed at mitigating the negative consequences of teaching out-of-field (OOF).

8. Implications for Policy and Practice

Both educational Policy and practice will be significantly impacted by the findings of this literature review, particularly in addressing the structural issues underlying out-of-field (OOF) instruction.

First and foremost, it is imperative for national ministries or departments of education to create explicit, binding teacher placement guidelines that align subject specialty with learning objectives. In rural and under-resourced regions, where OOF teaching is most prevalent, policymakers should develop strategic frameworks that include strong efforts to recruit and retain teachers. The equitable distribution of teachers must be a top priority in these frameworks, and qualified educators should be incentivised to work in underprivileged areas through financial incentives, housing assistance, and opportunities for professional advancement. Education systems must also incorporate interdisciplinary teaching approaches, content area flexibility, and pedagogical strategies that help instructors navigate various instructional environments while integrating OOF teaching preparation into initial teacher education programmes. It is recommended that school administrators and district officials establish organised support systems for OOF teachers, including collaborative professional learning communities, peer mentorship programmes, targeted in-service training, and ongoing professional development. A social constructivist approach can facilitate the development of these processes, promoting educators' shared knowledge and reflective practice. The long-term effects of OOF teaching on student outcomes and teacher effectiveness must also be evaluated through enhanced monitoring and evaluation mechanisms, which will ensure continuous feedback for the creation and modification of policies. By implementing these systemic reforms, education stakeholders can move beyond crisis-driven, short-term solutions towards equity-driven, long-term strategies that support student achievement and teaching quality across national contexts.

9. Declarations

Data Availability Statement: This review is based entirely on publicly available data and information sourced from peer-reviewed articles, reports, and other academic publications cited in the manuscript. No new primary data were generated or analysed during this study. Readers may refer to the cited sources for detailed information.

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