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Effects of Teaching Multiple Subjects by a Single Teacher on Learners' Academic Performance at Primary Level: A Case of Three Selected Rural Primary Schools in Ikelenge District, Zambia

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Abstract

This study investigated the effects of teaching multiple subjects by a single teacher on learners' academic performance at the primary school level in Ikelenge District, North-Western Province, Zambia. Guided by four objectives, the study examined the reasons why teachers teach multiple subjects, the challenges teachers face, the effects of this practice on learners' academic performance, and strategies for improving academic performance. A descriptive survey design was employed, drawing a sample of 100 respondents (3 head teachers, 9 class teachers, and 88 learners) from three rural primary schools, selected through simple random and purposive sampling. Data were collected using questionnaires, interviews, and classroom observations, and analysed using descriptive statistics and thematic analysis. The findings revealed that multi-subject teaching is driven primarily by teacher shortages,

administrative policy, and large curriculum requirements. Teachers reported heavy workload, limited preparation time, and lack of subject specialization as major challenges. The practice was found to reduce teaching quality, hinder syllabus completion, and negatively affect learners' examination performance, although it also fostered stronger teacher-learner relationships. The study concludes that although teaching multiple subjects is sometimes a necessary response to staffing shortages, it has significant negative implications for learners' academic performance when not properly managed. It recommends that the Ministry of Education and school authorities recruit more teachers, provide adequate teaching and learning materials, and strengthen continuous professional development to improve instructional quality and learner outcomes.

Keywords: Multiple Subjects, Subject Specialization, Ikelenge District, Teacher Workload, Preparation Time, Academic Performance, Upper Primary, Zambia

1. Introduction

Primary education lays the foundation for lifelong learning, and the quality of teaching learners receive at this level strongly shapes their future academic success (UNESCO, 2015) [22]. Teacher effectiveness is widely recognised as one of the most important determinants of learner achievement (Hattie, 2025) [7]. In many primary schools around the world, however, a single teacher is responsible for teaching several subjects to the same class, an arrangement commonly known as the class-teacher or generalist system (Veenman, 2024) [25]. While this arrangement can strengthen teacher-learner relationships and support continuity of learning, it also raises concerns about teacher workload, subject mastery, and instructional quality (Kyriacou, 2021; Shulman, 2023) [9, 18].

In rural districts of Zambia such as Ikelenge, in North-Western Province, the practice is intensified by teacher shortages, high learner enrolment, and the migration of trained teachers to urban or secondary schools (Ministry of Education Zambia, 2021) [12]. Additional evidence from the Examinations Council of Zambia (2023) [6] indicates that a significant proportion of primary learners fail to reach minimum proficiency in core subjects such as English and Mathematics, with classroom-level instructional quality identified as a key determinant. Despite the prevalence of multi-subject teaching in such settings, there is limited empirical evidence directly linking the practice to learners' academic performance in Ikelenge District, creating the contextual gap this study addresses.

The purpose of the study was to investigate the effects of teaching multiple subjects by a single teacher on learners' academic

performance at the primary school level in Ikelenge District. The study was guided by four objectives: (1) to investigate the reasons why teachers teach multiple subjects in primary schools; (2) to identify the challenges teachers face when teaching multiple subjects; (3) to assess the effects of teaching multiple subjects on learners' academic performance; and (4) to suggest strategies for improving learners' academic performance in such contexts.

2. Literature Review

2.1 Theoretical Framework

The study was anchored in Shulman's Pedagogical Content Knowledge (PCK) theory, Cognitive Load Theory, and Vygotsky's Constructivist Learning Theory. Shulman (2023) ^[18] argues that effective teaching requires the integration of content knowledge and pedagogy, and that teachers responsible for multiple subjects may develop uneven or superficial pedagogical content knowledge across subjects. Cognitive Load Theory (Sweller, 2023) ^[21] explains that the limited capacity of working memory means teachers who plan, deliver, and assess several subjects simultaneously face heightened cognitive demands, which can contribute to stress and reduced instructional quality. Vygotsky's constructivist perspective emphasises the teacher's role as a facilitator of learning; when teachers lack sufficient time or subject depth, their capacity to scaffold learners' understanding may be compromised. Together, these frameworks provide a lens for understanding how multi-subject teaching can affect both teacher competence and learner outcomes.

2.2 Global and Regional Perspectives

Globally, generalist or multigrade teaching is widely practised in rural and low-enrolment schools as a strategy for maximising limited teaching staff (UNESCO, 2015; OECD, 2019) ^[22, 17]. While this approach can foster stronger teacher–learner relationships and integrated learning (Drake & Burns, 2023) ^[5], research consistently identifies heavy workload, reduced preparation time, and limited subject specialization as major drawbacks (Mulryan-Kyne, 2024; Veenman, 2024) ^[15, 25]. Time management difficulties often lead to incomplete syllabus coverage and reduced instructional depth (Kyriacou, 2023) ^[10]. In the African region, similar patterns are reported in Zimbabwe, South Africa, and other Sub-Saharan countries, where teacher shortages and uneven resource distribution compound the challenges of multi-subject teaching (Bennell & Akyeampong, 2025; Ngwaru, 2015; Spall, 2013) ^[1, 16, 20].

2.3 The Zambian Context

In Zambia, multi-subject teaching is common in rural primary schools due to inadequate staffing (Ministry of General Education, 2013) ^[13]. Mulenga (2018) ^[14] found that teachers assigned many subjects often struggle to prepare lessons adequately, while Chitondo and Chitondo (2020) ^[2] reported that lack of subject specialization affects teaching effectiveness. Kalimaposo (2017) ^[8] noted that the practice reduces lesson preparation time and increases teacher fatigue, although Sinyangwe (2016) ^[19] observed that it can also strengthen teacher–learner relationships. Studies from the University of Zambia (2020; 2022) ^[23, 24] and the Zambia Institute for Policy Analysis and Research (2021) ^[26] further link multi-subject teaching to teacher burnout, reduced continuous-assessment practice, and diminished learner

mastery of foundational competencies, particularly in rural districts with limited access to professional development.

2.4 Research Gap

While a substantial body of literature addresses teacher workload, multigrade teaching, and general educational challenges, few studies isolate the specific effects of multi-subject teaching on learners' academic performance, and even fewer focus on rural Zambian districts such as Ikelenge. This study addresses that gap by providing context-specific, empirical evidence from three rural primary schools in the district.

3. Methodology

The study adopted a descriptive survey research design, considered appropriate for gathering respondents' opinions, experiences, and perceptions (Creswell, 2023) ^[3]. It was conducted in Ikelenge District, a rural district in North-Western Province characterised by teacher shortages and limited resources. The study was confined to three schools: Mwininyilamba Primary, Ikelenge Primary, and Kalene Primary.

The target population comprised primary school teachers, head teachers, and learners, estimated at 1,000. A sample of 100 respondents (10% of the population) was drawn, comprising 3 head teachers, 9 class teachers (3 each from Grades 5, 6, and 7), and 88 learners (29 from Grade 5, 29 from Grade 6, and 30 from Grade 7). Learners were selected using simple random sampling, while teachers and head teachers were purposively selected based on their direct involvement in multi-subject teaching and school management.

Data were collected using questionnaires (teachers and learners), interviews (head teachers), and classroom observations. Content and face validity were established through expert review and a pilot study, while reliability was ensured through pilot testing and a standardised interview guide. Quantitative data were analysed using descriptive statistics (frequencies and percentages), while qualitative data from interviews were analysed thematically. Ethical considerations included informed consent, confidentiality, voluntary participation, and permission from the Ikelenge District Education Board Secretary's office and school authorities.

4. Results

4.1 Demographic Characteristics

Of the 100 respondents, 88% were learners, 9% were teachers, and 3% were head teachers. Among teachers, 56% were male and 44% female; the majority (67%) were aged 31–40 years. Most teachers (77%) held a Diploma qualification, while 11.5% held a Certificate and 11.5% held a Degree; none held a Master's degree (Table 1).

Table 1: Professional qualification of teacher respondents

Professional Qualification	Frequency	Percentage
Certificate	1	11.5%
Diploma	7	77%
Degree	1	11.5%
Masters	0	0%
Total	9	100%

4.2 Reasons for Teaching Multiple Subjects

All teacher respondents (100%) cited teacher shortage,

administrative policy, and being trained to handle multiple subjects as reasons for the practice. Large curriculum requirements were cited by 67%, while budget constraints limiting the hiring of more teachers were cited by 22% (Table 2).

Table 2: Reasons for teaching multiple subjects

Reason	Frequency	Percentage
Teacher shortage	9	100%
Administrative policy	9	100%
Large curriculum requirements	6	67%
School administrator assigns multiple subjects	9	100%
Budget constraints limit hiring more teachers	5	22%
Trained to handle multiple subjects	9	100%

4.3 Challenges Faced by Teachers

Heavy workload and limited preparation time were unanimously identified (100%) as major challenges. Most teachers (88.9%) agreed that lack of subject specialization was a challenge, while responses on shortage of teaching materials were more varied (55.6% agreed). Notably, a majority (66.7%) did not consider subject mastery a personal weakness, despite the challenges reported elsewhere (Table 3).

Table 3: Challenges faced by teachers when handling multiple subjects

Challenge	Strongly Agree/Agree	Neutral/Disagree
Heavy workload	100%	0%
Lack of subject specialization	88.9%	11.1%
Limited preparation time	100%	0%
Shortage of teaching materials	55.6%	44.4%
Subject mastery (confidence)	33.3%	66.7%

4.4 Effects on Learners' Academic Performance

Learner respondents reported that teaching multiple subjects reduces teaching quality (100% strongly agreed), affects syllabus completion (88.9% strongly agreed), and negatively affects examination performance (88.9% agreed or strongly agreed). A majority (55.6%) strongly disagreed that learners understand lessons better when one teacher teaches multiple subjects. Similarly, 77.3% of the 88 learners reported not understanding lessons clearly, 65.9% felt their teacher lacked enough time to explain lessons, and 79.5% felt the practice affected their learning overall (Table 4).

Table 4: Learners' perceptions of the effects of multi-subject teaching

Statement	Strongly Agree/Agree (%)
Teaching multiple subjects reduces teaching quality	100%
It affects syllabus completion	88.9%
Learners' exam performance is affected	88.9%
Learners do not understand lessons clearly (learner survey)	77.3%
Teacher lacks enough time to explain lessons	65.9%

4.5 Strategies to Improve Academic Performance

Recruiting more teachers and reducing teacher workload each received unanimous support (100% strongly agree) as the most urgent interventions. Responses on provision of

teaching materials (22.2% strongly agree) and teacher training (33.3% neutral, with the remainder undecided) were less decisive, suggesting these were viewed as secondary to staffing and workload concerns.

4.6 Qualitative Findings from Head Teachers

Head teachers attributed multi-subject teaching mainly to low staffing levels and high learner enrolment; one school reported operating with only four teachers from Early Childhood Education to Grade 7, while another managed 931 learners. Reported challenges included difficulties in lesson planning, assessment, and giving adequate attention to all subjects, particularly in overcrowded classrooms. On effects, head teachers noted weak teacher–learner relationships, incomplete syllabus coverage, and poor performance in subjects that received less planning attention. Recommended strategies included introducing subject specialization at upper primary level, strengthening continuous professional development, enhanced monitoring and supervision, provision of teaching materials, and improved school infrastructure to reduce overcrowding.

5. Discussion

The findings show that multi-subject teaching in Ikelenge District is driven less by pedagogical preference than by structural necessity: teacher shortages, administrative policy, and school-level assignment decisions converge to sustain the practice, consistent with global and regional literature on generalist teaching in rural and under-resourced schools (UNESCO, 2015; Little, 2024; Bennell & Akyeampong, 2025) ^[22, 11, 1].

The unanimous perception that the practice reduces teaching quality, together with high rates of reported syllabus incompleteness and weaker examination performance, aligns with Cognitive Load Theory (Sweller, 2023) ^[21]: when teachers must plan, deliver, and assess across several subjects, their capacity for reflective, high-quality instruction is diminished. Similarly, the reported lack of subject specialization mirrors Shulman's (2023) ^[18] argument that effective teaching depends on the integration of deep content knowledge with pedagogy, an integration that becomes harder to sustain across many subjects.

At the same time, the finding that many teachers did not perceive subject mastery as a weakness, despite external indicators of strain, suggests a gap between self-assessed competence and actual instructional depth, an area meriting further investigation. The strong consensus favouring teacher recruitment and workload reduction over training or material provision indicates that respondents view staffing as the most immediate lever for improving learner outcomes, even though professional development and resource provision remain important complementary strategies identified in the literature (Darling-Hammond *et al.*, 2017) ^[4].

6. Conclusion and Recommendations

Teaching multiple subjects by a single teacher is a widespread and largely unavoidable practice in the rural primary schools of Ikelenge District, driven by teacher shortages, administrative decisions, and curriculum demands. While the practice can support continuity and stronger teacher–learner relationships, it significantly undermines teaching quality, syllabus completion, and learners' academic performance, particularly where

preparation time and subject specialization are limited.

Based on the findings, the study recommends that:

1. The Ministry of Education recruit more teachers and review deployment policies to address staffing imbalances in rural districts such as Ikelenge.
2. School authorities minimise over-reliance on assigning multiple subjects to individual teachers and consider balanced subject allocation.
3. Continuous professional development programmes be strengthened to improve teachers' subject knowledge and pedagogical skills.
4. Adequate teaching and learning materials be provided to support effective lesson delivery across all subjects.
5. Subject specialization be introduced at upper primary level (Grades 5–7), where content demands are greater.
6. Future research examine the long-term effects of multi-subject teaching across grade levels, and compare rural and urban contexts.

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