

Human Resource and Pedagogical Challenges in the Management of Public Primary Schools: Evidence from First-Time Head Teachers in Northwest Cameroon

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ABSTRACT

Effective management of public primary schools depends substantially on the availability of adequate human resources and supportive pedagogical conditions, yet first-time head teachers in conflict-affected contexts often assume leadership responsibilities under considerable constraints. This study examined the human-resource and pedagogical challenges associated with the management difficulties experienced by first-time head teachers in public primary schools in Northwest Cameroon. An exploratory mixed-methods design was employed. Quantitative data were collected from 108 teachers using a structured questionnaire, while qualitative data were obtained through semi-structured interviews with 16 first-time head teachers, giving a total sample of 124 participants. Quantitative data were analyzed using frequencies, percentages, means, standard deviations, Pearson's chi-square test, and Cramer's V, while qualitative data were analyzed thematically to contextualize and triangulate the quantitative findings. Human-resource findings indicated that insufficient auxiliary staff constituted the most prominent challenge ($M = 2.86$, $SD = 1.01$), whereas perceived shortages of teachers were comparatively marginal ($M = 2.53$, $SD = 1.00$). A significant association was found between human-resource conditions and perceived management difficulties, $\chi^2(9, N = 108) = 89.562$, $p < .05$, $V = .526$. Pedagogical challenges were more pronounced, particularly inadequate teacher preparation for learners with exceptionalities ($M = 3.22$, $SD = 0.95$), inadequate basic infrastructure ($M = 3.20$, $SD = 0.91$), and insufficient teaching materials ($M = 3.19$, $SD = 0.87$). Pedagogical conditions were also significantly associated with perceived management difficulties, $\chi^2(9, N = 108) = 32.832$, $p < .05$, $V = .390$. Qualitative evidence reinforced these findings, highlighting workload pressures, inadequate resources, limited professional development, and insufficient preparedness for diverse learner needs. The study recommends targeted administrative support, resource provision, leadership-oriented professional development, and strengthened human-resource planning, including timely deployment of adequate teachers and auxiliary personnel, to enhance effective primary school management. The study therefore concludes that strengthening auxiliary staffing, pedagogical resources, infrastructure, and continuous professional development is essential for supporting first-time head teachers and improving public primary school management in Northwest Cameroon.

Keywords: first-time head teachers, human-resource challenges, pedagogical challenges, perceived school-management difficulties, public primary schools, Cameroon

INTRODUCTION

School leadership is an important organizational component of educational quality because school heads coordinate people, resources, instructional processes, and relationships around institutional goals. Contemporary approaches to educational leadership increasingly emphasize not only administrative management but also instructional improvement, professional learning, collaboration, and strategic resource management (OECD, 2016; UNESCO, 2024). Evidence increasingly suggests that school leaders influence teaching and learning partly through their effects on teachers' professional learning and instructional practices (Dorukbaşı et al., 2024; He et al., 2024; Nguyen et al., 2025). For teachers who move into headship for the first time, these responsibilities represent a substantial transition from classroom practice to organizational leadership. First-time head teachers

must organize staff, supervise instruction, manage school routines, communicate with parents and communities, and respond to resource constraints while maintaining conditions conducive to pupils' learning. The complexity of this transition has also led education systems to develop specific induction, mentoring, and professional-learning arrangements for newly appointed school leaders (OECD, 2023).

The transition is particularly consequential in contexts where school leaders are appointed from the teaching workforce and may receive limited preparation specifically for educational administration. Research on newly appointed principals indicates that early leadership practice involves demands relating to human-resource management, instructional leadership, financial administration, legal responsibilities, and the development of professional networks and mentoring support. These demands suggest that moving into headship entails more than assuming a new administrative title; it requires the development and application of a broader set of organizational and instructional leadership capabilities. In Cameroon, these demands need to be considered within the wider conditions in which public primary schools operate. Recent evidence from the Global Education Monitoring Report's Cameroon country study specifically identifies school leaders' administrative, pedagogical, and community responsibilities, as well as questions concerning their preparation, professional development, working conditions, and access to resources, as important dimensions of school leadership in the country (Global Education Monitoring Report Team, 2025). Similarly, recent research on primary schools in Cameroon has identified motivation, instructional supervision, communication, and human-relations skills as important leadership requirements for effective school management (Takang, 2024).

These organizational demands may become particularly pronounced in conflict-affected settings. The ongoing sociopolitical crisis in Cameroon's Northwest and Southwest Regions has disrupted educational provision and created additional pressures for schools, teachers, and school leaders. Recent evidence from Anglophone Cameroon indicates that school leaders operating in conflict-affected environments have had to navigate insecurity, school disruption, displacement, resource limitations, and changing instructional conditions while maintaining administrative and pedagogical functions (Njekwei et al., 2026). Such conditions can place additional demands on school leaders' capacity to manage personnel, instructional activities, school-community relationships, and available resources. Accordingly, examining the management experiences of first-time head teachers in this context is important for understanding how leadership responsibilities are experienced under constrained organizational conditions.

The central concern of the present study is therefore not whether human-resource or pedagogical constraints mechanically cause poor management, but whether such conditions are associated with management difficulties perceived within schools led by first-time head teachers. This distinction is important because a cross-sectional observational design cannot establish temporal precedence or causal mechanisms. Instead, the study examines whether reported human-resource and pedagogical conditions are statistically associated with perceived management challenges and uses qualitative accounts to illuminate how these conditions are experienced in everyday school administration.

Previous scholarship has established the importance of leadership preparation, instructional leadership, teacher professional learning, and organizational resources for school improvement (Leithwood & Duke, 1999; OECD, 2016; UNESCO, 2024). More recent studies have also linked principals' instructional leadership with teachers' professional development and instructional practice (Dorukbaşı et al., 2024; He et al., 2024; Nguyen et al., 2025). However, comparatively less empirical attention has been directed toward the everyday management context of first-time head teachers in public primary schools in conflict-affected and resource-constrained settings of Cameroon. This study addresses this contextual gap by examining two domains of school-level conditions, human resources and pedagogical conditions, and by integrating teacher questionnaire data with first-time head teachers' accounts of their experiences.

The study makes three contributions. First, it provides school-level evidence on the specific personnel and pedagogical conditions that teachers perceive as problematic in schools managed by first-time head teachers. Second, it focuses specifically on first-time head teachers, whose transition into leadership may create distinctive organizational and instructional demands. Third, it integrates quantitative patterns with qualitative accounts to provide a more contextualized understanding of how resource and pedagogical conditions are experienced in

day-to-day school administration. By treating the quantitative relationships as associations rather than causal effects, the study provides an appropriately cautious account of the organizational conditions surrounding first-time headship in public primary schools in Cameroon.

Conceptual Framework

Human-resource conditions

Human-resource management in schools concerns the availability, deployment, coordination, development, and utilization of personnel required for effective school functioning. In the present study, the initial human-resource domain comprised five indicators: teacher availability, auxiliary staffing, use of Parent-Teacher Association (PTA) teachers in response to teacher shortages, parental involvement, and participation of other community stakeholders. The first three indicators relate directly to personnel capacity, whereas parental and community participation represent broader sources of social, organizational, and practical support. This distinction is important because school leadership increasingly involves working collaboratively with teachers, parents, community members, and other stakeholders rather than relying exclusively on formal administrative structures (UNESCO, 2024).

Accordingly, the present study does not assume that all five indicators constitute a single homogeneous staffing construct. Teacher availability, auxiliary staffing, and the use of PTA teachers are interpreted primarily as indicators of personnel capacity, while parental and community participation are treated as contextual support resources that may supplement or facilitate school functioning when formal personnel capacity is constrained. This conceptualization is consistent with contemporary approaches to school leadership that emphasize collaboration, shared responsibility, and meaningful engagement with parents and communities (UNESCO, 2024).

This distinction also addresses a potential measurement limitation in the original construct. Unless empirical evidence demonstrates that staffing and social-support indicators form a coherent latent dimension, they should not automatically be combined into a single composite score. The current analysis therefore interprets the findings in terms of human-resource and support conditions rather than assuming that all five indicators measure the same underlying phenomenon. A future reanalysis using factor analysis or another appropriate measurement model could further examine the dimensionality and internal structure of these indicators.

Pedagogical conditions

Pedagogical conditions refer to the organizational, material, professional, and instructional circumstances within which teaching and learning are planned and delivered. In the present study, these conditions include the availability of teaching and learning materials, access to in-service training and refresher courses, availability of qualified teachers, basic school infrastructure, and teachers' preparedness to support learners with exceptionalities and impairments. These dimensions recognize that instructional capacity depends not only on the number and formal qualifications of teachers but also on opportunities for professional learning, adequate teaching resources, infrastructure, and preparedness for inclusive education.

This conceptualization is consistent with contemporary evidence that school leadership encompasses both instructional and staff-development responsibilities. The 2024/25 Global Education Monitoring Report identifies focusing on learning and developing people as central dimensions of educational leadership and emphasizes that school leaders require preparation in pedagogical, human-resource, and other practical management functions (UNESCO, 2024). Recent empirical studies likewise indicate relationships between principals' instructional leadership, teacher professional learning, and teachers' instructional practices (Dorukbaşı et al., 2024; He et al., 2024; Nguyen et al., 2025). Thus, pedagogical conditions in the present study are understood as contextual conditions that may shape the demands placed on first-time head teachers rather than as direct measures of teaching effectiveness.

Perceived school-management difficulties

The dependent construct is conceptualized as perceived school-management difficulties, rather than overall management effectiveness. The questionnaire assessed respondents' reported difficulties in planning school activities, organizing and grouping staff, managing staff, leading the school community, and controlling and directing pupils. These indicators capture perceived difficulty in performing selected school-management functions; they do not independently establish the effectiveness, competence, or overall quality of school management.

This distinction is particularly important because school leadership encompasses multiple dimensions, including setting expectations, focusing on learning, developing people, and fostering collaboration. Consequently, difficulties reported in selected management functions should not be interpreted as a global assessment of a head teacher's leadership quality (UNESCO, 2024). The present study therefore examines the extent to which particular human-resource and pedagogical conditions are associated with perceived difficulties in selected management functions, rather than claiming that these conditions cause ineffective leadership.

Conceptual Model

The conceptual model treats human-resource and pedagogical conditions as contextual domains associated with perceived school-management difficulties. School-level circumstances, including staffing patterns, infrastructure, resource availability, and community support, may shape the strength or expression of these associations.

Table 1: Proposed Conceptual Model

Contextual conditions	Proposed relationship	Outcome
Human-resource conditions	Association with perceived management difficulties(adaptation, workload distribution, coordination)	Perceived school-management difficulties
• teacher availability		• planning
• auxiliary staffing		• staff organization
• PTA personnel/support		• staff management
• parental/community support		• community leadership
		• pupil control
Pedagogical conditions	Association with perceived management difficulties(supervision, instructional coordination, resource mobilization)	Perceived school-management difficulties
• teaching/learning materials		
• professional development		
• qualified teachers		
• infrastructure		
• inclusive-education preparedness		

Source: Researcher-developed conceptual model based on von Bertalanffy (1968), Fiedler (1964, 1967), Mayo (1933), and relevant empirical literature (Dorukbaşı et al., 2024; He et al., 2024; Nadav et al., 2024; Nguyen et al., 2025; UNESCO, 2024).

The conceptual model was developed by the researchers from the theoretical and empirical literature reviewed in the study as depicted on Table 1. It treats human-resource and pedagogical conditions as contextual domains associated with perceived school-management difficulties. The model draws primarily on Systems Theory (von Bertalanffy, 1968), which conceptualizes schools as interconnected organizational systems; Contingency Theory (Fiedler, 1964, 1967), which emphasizes the relationship between management processes and situational conditions; and Human Relations Theory (Mayo, 1933), which highlights interpersonal relationships, participation, communication, and collaboration within organizations. Empirical insights from recent research on instructional leadership, professional learning, organizational structure, and educational leadership further

informed the specification of the model (Dorukbaşı et al., 2024; He et al., 2024; Nadav et al., 2024; Nguyen et al., 2025; UNESCO, 2024).

The model does not posit a deterministic or causal pathway. Rather, it proposes that human-resource and pedagogical conditions are contextual domains that may be statistically associated with perceived difficulties in selected school-management functions. Human-resource conditions may be reflected in teacher availability, auxiliary staffing, PTA personnel or support, and parental/community support. Pedagogical conditions include teaching and learning materials, professional development, qualified teachers, infrastructure, and preparedness for inclusive education. These conditions may be associated with management difficulties involving planning, staff organization, staff management, community leadership, and pupil control. The proposed relationships are therefore interpreted as associations consistent with the study's cross-sectional observational design.

Theoretical Framework

Systems Theory (von Bertalanffy, 1968)

Systems Theory provides the principal organizational logic for the study. A school can be understood as an interconnected social system comprising head teachers, teachers, pupils, families, community actors, resources, and administrative structures. Changes or constraints within one component may therefore affect the functioning of other components. From this perspective, teacher shortages, inadequate support personnel, limited instructional materials, insufficient infrastructure, or weak professional-development opportunities may alter the organizational conditions within which first-time head teachers perform their responsibilities.

Recent educational-leadership research provides empirical support for considering school leadership through a systems perspective. Nadav, Benoliel, and Schechter (2024), for example, examined principals' systems thinking in relation to school structure and student outcomes and demonstrated the relevance of organizational structure to understanding leadership processes and school outcomes. The systems perspective therefore helps explain why management difficulties should not be interpreted solely as characteristics of individual head teachers. Instead, they may reflect interactions among personnel, instructional, infrastructural, social, and organizational conditions.

Contingency Theory (Fiedler, 1964, 1967)

Contingency Theory complements Systems Theory by emphasizing that leadership and management practices operate within particular situational conditions. Fiedler's (1964, 1967) formulation proposes that leadership effectiveness depends partly on the fit between leadership orientation and situational characteristics. From this perspective, there is no single management response that is equally appropriate across all schools because organizational demands vary according to contextual circumstances. A first-time head teacher working in a school with adequate teachers, auxiliary personnel, instructional materials, and community support may encounter different management demands from a head teacher working in a school characterized by personnel shortages, limited resources, or inadequate infrastructure.

Contemporary educational-leadership research continues to examine how leadership processes interact with organizational structures and situational conditions (Nadav et al., 2024). In the present study, Contingency Theory therefore provides a basis for examining variation in perceived management difficulties across differing human-resource and pedagogical circumstances. Importantly, the theory is used to establish a contextual interpretation of the observed associations, not to claim that a particular resource condition necessarily produces a particular management outcome.

Human Relations Theory (Mayo, 1933)

Human Relations Theory adds an interpersonal and relational dimension to the framework by emphasizing cooperation, communication, participation, interpersonal relationships, and the social aspects of organizational functioning. Originating from Elton Mayo's work on human relations in organizations, the perspective emphasizes the importance of social relationships, group processes, and employee participation in organizational

functioning (Mayo, 1933). This perspective is relevant to the roles of parents, PTA members, community stakeholders, teachers, and other school personnel because school management involves coordinating people as well as administering material resources.

The relevance of this perspective is reinforced by contemporary international evidence emphasizing collaboration as a core dimension of educational leadership. UNESCO's (2024) Global Education Monitoring Report identifies collaboration as one of the central dimensions of educational leadership and emphasizes the roles of teachers, parents, community members, and other stakeholders in school leadership. Human Relations Theory consequently helps interpret parental and community participation not as substitute staffing, but as relational and organizational resources that may support school functioning, communication, problem solving, and collective responsibility.

Integration of the theoretical perspectives

The three perspectives are complementary rather than competing explanations. Systems Theory establishes the overarching view of the school as an interconnected organizational system. Contingency Theory explains why management demands may differ according to the conditions prevailing within particular schools. Human Relations Theory highlights the interpersonal and collaborative processes through which school personnel, parents, and community stakeholders contribute to school functioning. Taken together, the framework proposes that perceived school-management difficulties are embedded within a combination of personnel, pedagogical, infrastructural, and social conditions. Human-resource conditions concern the availability and support of personnel; pedagogical conditions concern the material, professional, infrastructural, and instructional environment; and perceived school-management difficulties concern challenges encountered in selected management functions. The framework therefore supports examination of whether differences in these contextual conditions are statistically associated with reported management difficulties among first-time head teachers.

Because the study is not an experimental study, the theoretical framework is not used to establish a causal pathway from human-resource or pedagogical conditions to management difficulties. Rather, it provides an organizational explanation for why such variables may be related and provides a basis for interpreting the quantitative associations alongside the qualitative accounts of first-time head teachers. This approach preserves the distinction between theoretical explanation and empirical causal inference.

Research Questions and Hypotheses

RQ1: What human-resource conditions are perceived as challenges in public primary schools led by first-time head teachers, and how are these conditions associated with perceived school-management difficulties?

RQ2: What pedagogical conditions are perceived as challenges in public primary schools led by first-time head teachers, and how are these conditions associated with perceived school-management difficulties?

H0₁: There is no statistically significant association between human-resource conditions and perceived school-management difficulties.

H0₂: There is no statistically significant association between pedagogical conditions and perceived school-management difficulties.

METHODOLOGY

The study used a mixed-methods exploratory design. The quantitative component provided a structured description of teachers' perceptions and was used to examine associations between the two contextual domains and perceived school-management difficulties. The qualitative component involved semi-structured interviews with first-time head teachers and was intended to provide contextual explanations of how staffing and pedagogical conditions were experienced in practice. The two strands were integrated during interpretation through comparison of convergent and divergent patterns.

The study was conducted in public primary schools in Momo and Mezam Divisions of the Northwest Region of Cameroon. The study made use of a target population of 27 schools (with 27 first-time head teachers and 187 teachers) and an accessible population of 16 first-time appointed head teachers and 122 teaching staff. The final quantitative sample comprised 108 teachers, while 16 first-time head teachers completed the interviews, giving 124 participants overall (See Table 2). First-time head teachers were purposively selected because they directly possessed the leadership experience under investigation. Teachers were selected through simple random sampling.

Table 2: Study Participants

Population stage	Head teachers	Teachers	Total
Target population	27 schools/head teachers	187	214
Accessible population	16	122	138
Final analytic/interview sample	16 interviews	108 completed questionnaires	124

Teacher data were collected using a structured questionnaire, while first-time head teachers participated in semi-structured interviews. The questionnaire used a four-point response scale from 1 (strongly disagree) to 4 (strongly agree). A mean above 2.50 was used as the criterion for agreement with a challenge statement. Content validity was addressed through alignment of questionnaire items with the research questions and consultation with the supervisor. A pilot study involving two head teachers and two teachers in Bamenda II Sub-Division was reported, with an overall questionnaire reliability coefficient of $\alpha = .84$. Qualitative procedures

Quantitative data were summarized using frequencies, percentages, means, and standard deviations. Pearson's chi-square test of independence was used to examine associations between categorized contextual conditions and perceived school-management difficulties, with Cramer's V used to assess the strength of associations. Chi-square assumptions were assessed using expected cell frequencies, with exact tests or substantively justified category collapsing considered where assumptions were violated. Qualitative data were analyzed thematically and compared with the quantitative findings for convergence and complementarity. Because teachers were nested within schools, potential clustering was recognized; however, school-level identifiers were unavailable for adjustment using multilevel or cluster-robust methods. The findings were therefore interpreted as respondent-level associations, with the absence of school-level adjustment acknowledged as a limitation. Ethical and administrative authorizations for the study were obtained from the university, the relevant Divisional Delegations of Basic Education, and the Subdivisional Inspectorates of Basic Education concerned. Participants provided informed consent and were informed that participation was voluntary, that they could withdraw without penalty, and that their responses would be treated confidentially and used solely for academic purposes. No personal identifying information was disclosed in reporting the findings.

FINDINGS

Human Resource Challenges and Management of Public Primary Schools

Table 3. Human Resource Challenges Faced by First-Time Head Teachers

Human resource challenges	Strongly Disagree n (%)	Disagree n (%)	Agree n (%)	Strongly Agree n (%)	M	SD
There are few teachers in school to meet the needs of all the learners.	19 (17.6)	32 (29.6)	38 (35.2)	19 (17.6)	2.53	1
There is an insufficient number of auxiliary staff to assist the teaching staff.	7 (6.5)	38 (35.2)	26 (24.1)	37 (34.3)	2.86	1.01
PTA teachers are not employed in case of teacher shortages.	26 (24.1)	38 (35.2)	37 (34.3)	7 (6.5)	2.23	0.91

Parents are not involved to support the smooth running of the school.	43 (39.8)	51 (47.2)	7 (6.5)	7 (6.5)	1.8	0.8
Other stakeholders and significant members of the community are not involved in school affairs.	39 (36.1)	57 (52.8)	12 (11.1)	0 (0.0)	1.75	0.63
Overall	134 (24.8)	216 (40.0)	120 (22.2)	70 (13.0)	2.23	0.87

Note. N = 108. M = mean; SD = standard deviation. Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. A mean above 2.50 indicates agreement with the stated challenge.

Table 3 presents respondents' perceptions of the human resource challenges faced by first-time head teachers. The overall mean of 2.23 (SD = 0.87) is below the criterion mean of 2.50, indicating general disagreement with the statements describing human resource challenges. However, insufficient auxiliary staff emerged as the most pronounced concern (M = 2.86, SD = 1.01), while the availability of sufficient teachers to meet learners' needs was also relatively concerning (M = 2.53, SD = 1.00). Respondents generally disagreed that PTA teachers were not employed when teacher shortages occurred (M = 2.23, SD = 0.91), that parents were not involved in supporting school operations (M = 1.80, SD = 0.80), and that other stakeholders and significant community members were not involved in school affairs (M = 1.75, SD = 0.63). Overall, the findings suggest that auxiliary staffing constituted the most evident human resource challenge, whereas parental and community participation were generally perceived as adequate.

Hypothesis One: Human Resource Challenges and School Management

H₀₁: There is no significant relationship between the human resource challenges faced by first-time head teachers and the management of selected public primary schools in the Northwest Region of Cameroon.

H_{a1}: There is a significant relationship between the human resource challenges faced by first-time head teachers and the management of selected public primary schools in the Northwest Region of Cameroon.

Table 4. Association Between Human Resource Challenges and Management of Public Primary Schools

Test statistic	Value	df	p	Effect size
Pearson chi-square	89.562	9	0	Cramer's V = .526
Likelihood ratio	94.325	9	0	
N	108			

Note. $\alpha = .05$. Cramer's V was used to estimate the strength of association because the contingency table was larger than 2×2 .

Table 4 shows a statistically significant association between human resource challenges and the management of public primary schools, $\chi^2(9, N = 108) = 89.562, p < .05$. Therefore, the null hypothesis was rejected in favour of the alternative hypothesis. The magnitude of the association was moderate, as indicated by Cramer's V = .526. The finding suggests that human resource challenges were associated with differences in reported school management among the first-time head teachers. However, the result does not establish a causal relationship between human resource challenges and school management.

Qualitative Finding on Human Resource Challenges

The interviews with the 16 first-time head teachers indicated that human-resource difficulties were experienced primarily through inadequate auxiliary staffing rather than a generalized absence of teachers or community support. Head teachers explained that shortages of support personnel increased the range of duties that had to be absorbed by teachers and school leaders, including pupil welfare, record keeping, supervision, maintenance, and other routine administrative activities. As one interviewee emphasized, *"When there are not enough auxiliary workers, the available staff have to take on additional duties."* Another explained, *"The shortage of support*

staff makes it difficult for us to attend to administrative work and supervise teaching at the same time.” These accounts provide a plausible explanation for the quantitative finding that insufficient auxiliary staff constituted the most prominent human-resource challenge ($M = 2.86$, $SD = 1.01$), whereas the perceived shortage of teachers was only marginally above the criterion mean ($M = 2.53$, $SD = 1.00$). Thus, the qualitative evidence suggests that the principal personnel difficulty concerned the distribution of responsibilities and the additional workload created by inadequate auxiliary support rather than an across-the-board shortage of teaching personnel.

The interviews further revealed that first-time head teachers drew on parents, PTA structures, existing teachers, and community members to compensate, where possible, for limitations in formal staffing. One head teacher noted, “When the school needs additional support, we depend on parents and PTA members to assist with some activities.” Another indicated that “the community is willing to help when the school calls on them.” These accounts correspond with the relatively low quantitative ratings for the statements that parents were not involved in supporting school operations ($M = 1.80$, $SD = 0.80$) and that community stakeholders were not involved in school affairs ($M = 1.75$, $SD = 0.63$). The convergence of the two strands therefore indicates that human-resource conditions were differentiated: auxiliary staffing represented a notable organizational constraint, while parental and community participation constituted complementary sources of support. This contextualizes the significant association between human-resource challenges and perceived school-management difficulties, $\chi^2(9, N = 108) = 89.562$, $p < .001$, $V = .526$, by suggesting that management demands were connected particularly to how limited formal personnel had to be deployed and supplemented by existing social-support networks.

Triangulation of Finding on Human Resource Challenges

The qualitative evidence broadly corroborates the quantitative findings. Quantitatively, insufficient auxiliary staff was the only human resource indicator with a clearly elevated mean ($M = 2.86$, $SD = 1.01$), while the item concerning the adequacy of teachers to meet learners' needs was only marginally above the criterion mean ($M = 2.53$, $SD = 1.00$). In contrast, respondents generally disagreed that PTA teachers were not employed when shortages occurred ($M = 2.23$, $SD = 0.91$), that parents were not involved ($M = 1.80$, $SD = 0.80$), or that other community stakeholders were not involved ($M = 1.75$, $SD = 0.63$). The interviews similarly point to the importance of auxiliary staffing while indicating that parental, PTA, and community participation provided additional human-resource support. The convergence of the two strands therefore suggests that the principal human resource difficulty was the limited availability of auxiliary personnel and the resulting distribution of responsibilities, rather than a general absence of human support within the schools. This interpretation is also consistent with the significant association between human resource challenges and school management, $\chi^2(9, N = 108) = 89.562$, $p < .001$, Cramer's $V = .526$. However, the quantitative association and the qualitative accounts should be interpreted as evidence of a relationship and contextual explanation, respectively, rather than as evidence that human resource challenges caused management difficulties.

Pedagogic Challenges and Management of Public Primary Schools

Table 5. Pedagogic Challenges Faced by First-Time Head Teachers

Pedagogic challenges	Strongly Disagree n (%)	Disagree n (%)	Agree n (%)	Strongly Agree n (%)	M	SD
The school lacks adequate teaching materials to promote the teaching-learning process.	0 (0.0)	31 (28.7)	26 (24.1)	51 (47.2)	3.19	0.87
In-service training opportunities and refresher courses to keep teachers abreast of the curriculum are lacking.	7 (6.5)	32 (29.6)	32 (29.6)	37 (34.3)	2.92	1
The school lacks qualified teachers to facilitate the teaching-learning process.	25 (23.1)	44 (40.7)	7 (6.5)	32 (29.6)	2.43	1.08
The school lacks basic infrastructure to promote teaching and learning.	7 (6.5)	13 (12.0)	39 (36.1)	49 (45.4)	3.2	0.91

Teachers are not equipped to handle learners with exceptionalities and impairments.	7 (6.5)	19 (17.6)	25 (23.1)	57 (52.8)	3.22	0.95
Overall	46 (8.5)	139 (25.7)	129 (23.9)	226 (41.9)	2.99	0.96

Note. N = 108. M = mean; SD = standard deviation. Scale: 1 = Strongly Disagree, 2 = Disagree, 3 = Agree, 4 = Strongly Agree. A mean above 2.50 indicates agreement with the stated challenge.

Table 5 shows that respondents generally agreed that first-time head teachers faced pedagogic challenges, as indicated by the overall mean of 2.99 (SD = 0.96), which exceeds the criterion mean of 2.50. The highest mean was recorded for the lack of teacher preparedness to handle learners with exceptionalities and impairments (M = 3.22, SD = 0.95), followed by inadequate basic infrastructure (M = 3.20, SD = 0.91) and inadequate teaching materials (M = 3.19, SD = 0.87). Respondents also agreed that opportunities for in-service training and refresher courses were lacking (M = 2.92, SD = 1.00). However, the statement concerning a lack of qualified teachers recorded a mean of 2.43 (SD = 1.08), slightly below the criterion mean. Overall, the findings indicate that inadequate teaching materials, infrastructure, professional development, and teacher preparedness for addressing learner exceptionalities were the most prominent pedagogic challenges.

Hypothesis Two: Pedagogic Challenges and School Management

H02: There is no significant relationship between the pedagogic challenges faced by first-time head teachers and the management of selected public primary schools in the Northwest Region of Cameroon.

Ha2: There is a significant relationship between the pedagogic challenges faced by first-time head teachers and the management of selected public primary schools in the Northwest Region of Cameroon.

Table 6. Association Between Pedagogic Challenges and Management of Public Primary Schools

Test statistic	Value	df	P	Effect size
Pearson chi-square	32.832	9	0	Cramer's V = .390
Likelihood ratio	43.781	9	0	
N	108			

Note. $\alpha = .05$. Cramer's V was used to estimate the strength of association because the contingency table was larger than 2×2 .

Table 6 indicates a statistically significant association between pedagogic challenges and the management of public primary schools, $\chi^2(9, N = 108) = 32.832, p < .05$. Accordingly, the null hypothesis was rejected in favour of the alternative hypothesis. The magnitude of the association was moderate, as indicated by Cramer's V = .390. Thus, pedagogic challenges were significantly associated with school management among the first-time head teachers studied. This finding represents an association between the variables and should not be interpreted as evidence that pedagogic challenges caused differences in school management.

Qualitative Finding on Pedagogic Challenges

The interviews provided substantial contextual evidence for the quantitative finding that pedagogical challenges were more pronounced than human-resource challenges. The first-time head teachers repeatedly described difficulties arising from inadequate teaching and learning materials, poor basic infrastructure, limited opportunities for in-service training, and insufficient preparation for supporting learners with exceptionalities and impairments. One interviewee explained, “*Teachers sometimes have to teach without the materials needed to make lessons practical and understandable.*” Another observed, “*The condition of some of the classrooms and other facilities makes teaching and learning more difficult.*” These accounts closely correspond with the relatively high quantitative ratings for inadequate basic infrastructure (M = 3.20, SD = 0.91) and inadequate teaching materials (M = 3.19, SD = 0.87). The interviews consequently suggest that the pedagogical difficulties

confronting first-time head teachers extended beyond teachers' formal qualifications to the material and infrastructural conditions within which instruction had to be organized and supervised.

Professional support and inclusive-education preparedness emerged as further dimensions of the pedagogical challenge. Head teachers indicated that teachers did not consistently receive opportunities to update their instructional knowledge and were sometimes inadequately prepared to respond to learners with exceptionalities and impairments. As one interviewee stated, *"Teachers need regular training to know how to deal with learners who have different needs."* Another explained, *"Some teachers are willing to support these learners, but they do not always have the training or resources to do it effectively."* These accounts provide a contextual explanation for the highest quantitative rating, which concerned teachers' preparedness to handle learners with exceptionalities and impairments ($M = 3.22$, $SD = 0.95$), as well as for the reported lack of in-service training and refresher courses ($M = 2.92$, $SD = 1.00$). At the same time, the interviews help interpret the comparatively lower rating for lack of qualified teachers ($M = 2.43$, $SD = 1.08$): the central concern was less the formal qualification status of teachers than their practical preparedness, access to instructional resources, and continuing professional support. Taken together, the qualitative and quantitative evidence portrays pedagogical challenges as multidimensional conditions that were significantly associated with perceived school-management difficulties, $\chi^2(9, N = 108) = 32.832$, $p < .001$, $V = .390$, without implying a causal relationship.

Triangulation of Finding on Pedagogic Challenges

The qualitative findings strongly complement the quantitative evidence. The questionnaire results showed an overall agreement that pedagogic challenges existed ($M = 2.99$, $SD = 0.96$), with particularly high means for teachers' preparedness to handle learners with exceptionalities and impairments ($M = 3.22$, $SD = 0.95$), inadequate basic infrastructure ($M = 3.20$, $SD = 0.91$), and inadequate teaching materials ($M = 3.19$, $SD = 0.87$). The lack of in-service training and refresher courses was also endorsed ($M = 2.92$, $SD = 1.00$). The interviews provide contextual support for these patterns by indicating how shortages of materials and infrastructure, together with limited professional development and preparation for learner diversity, affect the day-to-day work of first-time head teachers. The relatively low mean for the lack of qualified teachers ($M = 2.43$, $SD = 1.08$) is also informative: the issue appears to concern teachers' preparedness and available instructional support more than the mere possession of formal qualifications. Taken together, the quantitative and qualitative strands indicate that pedagogic challenges were multidimensional and were embedded in the material, infrastructural, and professional conditions under which teaching and school management occurred. This interpretation is consistent with the significant association between pedagogic challenges and school management, $\chi^2(6, N = 108) = 32.832$, $p < .05$, Cramer's $V = .390$, although the association does not demonstrate causation.

Management of public primary schools (Dependent Variable)

Table 7. Descriptive statistics of management of public primary schools

Management indicator	SD*	D	A	SA	M	Std. Dev.
	n (%)	n (%)	n (%)	n (%)		
Planning school activities at times is very problematic	12 (11.1)	20 (18.5)	25 (23.1)	51 (47.2)	3.07	1.05
Organizing, identifying and grouping staff for work is not stress-free	12 (11.1)	32 (29.6)	20 (18.5)	44 (40.7)	2.89	1.07
Managing members of staff is usually a problem	7 (6.5)	39 (36.1)	37 (34.3)	25 (23.1)	2.74	0.89
Leading the affairs of the school community is not an easy task	19 (17.6)	13 (12.0)	32 (29.6)	44 (40.7)	2.94	1.11
Controlling and directing pupils is not quite simple	0 (0.0)	20 (18.5)	37 (34.3)	51 (47.2)	3.29	0.76
Overall					2.98	1

* SD = strongly disagree; D = disagree; A = agree; SA = strongly agree; M = mean; Std. Dev. = standard deviation.

Table 7 shows that respondents generally reported difficulties in managing the participating public primary schools. The overall mean was 2.98 (SD = 1.00), above the 2.50 decision point. Controlling and directing pupils had the highest mean (M = 3.29, SD = 0.76), followed by planning school activities (M = 3.07, SD = 1.05). This suggests that the most consistently reported management difficulties concerned pupil control and the planning of school activities. The other three management functions also exceeded the decision point: organizing staff (M = 2.89), managing staff (M = 2.74), and leading the school community (M = 2.94). Consequently, the management difficulties reported in the study were multidimensional rather than confined to a single administrative function. The variation in standard deviations further suggests that respondents did not experience these management challenges with exactly the same intensity across schools.

DISCUSSION OF FINDINGS

Human Resource Challenges and Management of Public Primary Schools

The findings indicate that human resource challenges experienced by first-time head teachers were relatively limited overall but were concentrated around the availability of auxiliary personnel. Although respondents generally perceived parental, PTA, and community involvement as adequate, insufficient auxiliary staff emerged as the most prominent personnel-related concern. The qualitative accounts from the 16 interviewed head teachers reinforced this pattern, suggesting that limited support personnel could increase the workload of existing staff and constrain the efficient coordination of routine school activities. This finding is consistent with Zewdu (2018), who identified inadequate implementation of human-resource practices, insufficient teacher-support strategies, limited professional-development opportunities, and inadequate administrative support in government secondary schools in East Wollega Zone. Although the contexts differ, the two studies converge in highlighting the importance of adequate personnel and institutional support for effective school management. The present finding further indicates that, in public primary schools, human resource constraints may be expressed more through gaps in support staffing and workload distribution than through a pervasive shortage of teachers.

The significant association between human resource challenges and school management indicates that variation in human resource conditions was associated with variation in reported school management. The moderate magnitude of the association suggests that personnel-related conditions constituted a meaningful dimension of the management context within which first-time head teachers operated. This finding can be understood through Systems Theory, which conceptualizes the school as an interconnected system in which personnel, leadership, instructional processes, and organizational functions influence one another. Contingency Theory likewise suggests that management practices are shaped by the specific conditions within which leaders operate. Accordingly, limited auxiliary staffing may require head teachers to redistribute responsibilities and adjust administrative practices to prevailing school circumstances. However, given the nonexperimental design, the observed association should not be interpreted as evidence that human resource challenges caused differences in school management.

Pedagogic Challenges and Management of Public Primary Schools

The findings demonstrate that pedagogic challenges were more pronounced than human resource challenges, particularly in relation to teacher preparedness for learners with exceptionalities and impairments, inadequate infrastructure, insufficient teaching materials, and limited opportunities for in-service training and refresher courses. The qualitative evidence from the 16 first-time head teachers corroborated these quantitative patterns, indicating that material and infrastructural limitations, together with inadequate professional support, complicated the supervision and coordination of teaching and learning. The relatively lower rating for the lack of qualified teachers further suggests that the central concern was not necessarily the formal qualification status of teachers, but their preparedness to address diverse learner needs and their access to appropriate instructional resources and continuing professional development. These findings are consistent with Limon (2016), who reported that administrative quality and inadequate facilities were relevant to teachers' pedagogical development

and students' achievement. The convergence of the quantitative and qualitative evidence therefore suggests that pedagogic challenges in the participating schools were multidimensional, encompassing material, infrastructural, professional-development, and inclusive-education dimensions.

The significant association between pedagogic challenges and school management further indicates that pedagogic conditions were meaningfully related to reported management among the participating schools. Systems Theory provides a useful explanation for this relationship because instructional resources, infrastructure, teacher preparedness, supervision, and school leadership constitute interdependent elements of the school system. Constraints in one component may consequently create additional demands for other components without implying a direct causal pathway. Contingency Theory similarly emphasizes the need for school leaders to adapt their management practices to contextual conditions, including the availability of instructional resources and teachers' professional capacities. Thus, the findings suggest that effective management by first-time head teachers cannot be considered independently of the pedagogic environment in which it occurs. Nevertheless, the observed statistical relationship represents an association and, given the study's nonexperimental design, should not be interpreted as evidence that pedagogic challenges caused difficulties in school management.

IMPLICATIONS OF THE FINDINGS

The findings imply that effective management by first-time head teachers depends partly on the adequacy and strategic deployment of school personnel. The prominence of inadequate auxiliary staffing suggests that head teachers may require not only leadership preparation but also institutional mechanisms for workload distribution and access to appropriate support personnel. The generally positive involvement of parents and community stakeholders further implies that school-community partnerships constitute an existing resource that can be strategically mobilized to complement, rather than replace, formal staffing provision.

The pedagogic findings imply a need to strengthen both the material and professional conditions in which first-time head teachers supervise teaching and learning. Inadequate instructional materials, infrastructure, continuing professional development, and teacher preparedness to support learners with exceptionalities indicate that leadership preparation should be complemented by sustained pedagogic support at school level. Strengthening these conditions would enable head teachers to devote greater attention to instructional leadership rather than responding predominantly to resource and teacher-support constraints.

RECOMMENDATIONS OF THE STUDY

The Ministry of Basic Education and relevant education authorities should strengthen staffing and support mechanisms in public primary schools, with particular attention to the provision of adequate auxiliary personnel. Newly appointed head teachers should also receive structured induction and continuing professional development in human-resource management, staff coordination, conflict management, and school organization. Given the generally positive perceptions of parental and community involvement, head teachers should further strengthen these partnerships as complementary resources for addressing school-level personnel and operational needs.

Education authorities should prioritize the provision of adequate teaching and learning materials, basic school infrastructure, and sustained professional-development opportunities for teachers and head teachers. Professional-development programmes should place particular emphasis on inclusive pedagogies and practical strategies for supporting learners with exceptionalities and impairments. Such support should be integrated into ongoing school improvement programmes rather than provided solely as short-term interventions.

LIMITATIONS OF THE STUDY

The study was conducted among first-time head teachers and teachers in selected public primary schools in Momo and Mezam Divisions of the Northwest Region of Cameroon, which limits the extent to which the

findings can be generalized to other regions, school types, or educational contexts. The findings should therefore be interpreted within the specific institutional and regional conditions under which the study was conducted.

The quantitative data were collected at one point in time and relied largely on participants' self-reports, which may be influenced by recall difficulties, personal perceptions, or social desirability. Consequently, the observed associations between human-resource and pedagogical conditions and management difficulties should not be interpreted as evidence of causal relationships.

Despite these few limitations, the study provides useful empirical evidence on the human-resource and pedagogical conditions associated with management difficulties among first-time head teachers in public primary schools in Northwest Cameroon. By combining quantitative evidence with qualitative insights, the study offers a contextually grounded basis for strengthening staffing support, pedagogical resources, professional development, and school-management practices.

CONCLUSION

This study examined human-resource and pedagogical challenges associated with the management of public primary schools by first-time head teachers in the Northwest Region of Cameroon. The findings indicate that human-resource challenges were relatively limited overall but that inadequate auxiliary staffing remained a notable concern. At the same time, parental, PTA, and community involvement were generally perceived as available sources of support. Pedagogical challenges were more pronounced, particularly inadequate teaching and learning materials, basic infrastructure, continuing professional-development opportunities, and teachers' preparedness to support learners with exceptionalities and impairments.

The qualitative evidence from the 16 first-time head teachers provided contextual support for these quantitative patterns. The interview accounts indicated that insufficient auxiliary personnel could increase workload and redistribute responsibilities among existing staff, while inadequate materials, infrastructure, professional-development opportunities, and inclusive-education preparation complicated the supervision and coordination of teaching and learning. Thus, the two strands of evidence converge in portraying school-management difficulties as embedded within broader personnel, pedagogical, infrastructural, and professional conditions.

The inferential findings further demonstrated statistically significant associations between human-resource conditions and perceived school-management difficulties and between pedagogical conditions and perceived school-management difficulties. These relationships should, however, be understood as associations rather than causal effects. Overall, the evidence suggests that strengthening first-time headship in public primary schools requires more than leadership preparation alone. It requires adequate auxiliary staffing, appropriate teaching and learning resources, functional infrastructure, sustained professional development, inclusive-education support, and continued engagement with parents and community stakeholders. A coordinated approach to these conditions could provide first-time head teachers with a stronger organizational and pedagogical environment within which to perform their leadership responsibilities effectively.

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