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Instructional Leadership for Curriculum Innovation and 21st-Century Competencies at Selected Secondary Schools in Ohangwena Region, Namibia

Isidor Haufiku[1], Immanuel Nghitotelwa Nakambale[1], Josephine Mwasheka Nghikefelwa[1], Hosian Hitanwa[1] & Hilya Tulipomwene Shuulinawa Nghitoolwa[2]

[1]*International University of Management, Nkurenkuru Campus, Namibia*
[2]*International University of Management, Eenhana Campus, Namibia*

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Abstract
Namibia's curriculum reforms emphasise critical thinking, creativity, collaboration, communication and digital literacy, yet their implementation remains challenging in resource-constrained secondary schools. This study examined instructional leadership practices, challenges and strategies for advancing curriculum innovation and 21st-century competencies in selected secondary schools in the Ohangwena Region, Namibia. Informed by instructional and distributed leadership perspectives, the study adopted a pragmatic philosophy and convergent parallel mixed-methods design. All 60 Heads of Department (HoDs) completed a questionnaire, representing the entire defined population. Three focus group discussions involved 30 purposively selected HoDs with at least five years of leadership experience. Quantitative data were analysed using frequencies, percentages, means and standard deviations, while qualitative accounts underwent thematic analysis. Collaborative departmental planning (85.0%; M = 4.20), classroom observation and feedback (81.7%; M = 4.10) and professional development (80.0%; M = 4.12) received the strongest endorsement. Digital integration received comparatively less support (63.3%; M = 3.60). Major constraints included heavy teaching workloads (88.3%), inadequate resources (86.7%), limited supervisory time (83.3%) and weak ICT infrastructure (81.7%). Focus group accounts emphasised collaborative planning, supportive supervision and continued professional learning, while identifying examination pressure and inadequate digital access as further challenges. The findings suggest that HoDs facilitate curriculum innovation through shared professional practices, but their influence is bounded by

organisational and material constraints. The study recommends protected supervisory time, sustained school-based professional development, strengthened departmental collaboration and equitable digital investment. These measures should be evaluated through classroom-based evidence of curriculum enactment and learner competencies in comparable resource-constrained schools across Namibia's regions.

Introduction

The National Curriculum for Basic Education links learner-centred pedagogy and the development of transferable competencies to Namibia Vision 2030 and a knowledge-based society (Ministry of Education, Arts and Culture, 2016). This national ambition makes curriculum innovation more than a response to global digitalisation: it is a locally articulated human-development priority. In rural Ohangwena, translating that priority into critical thinking, communication, collaboration and digital learning depends on departmental middle leaders who connect policy expectations with teaching under constrained resources. International evidence on technology and complex skills offers useful points of comparison but does not remove the need to investigate local implementation conditions (Foster & Piacentini, 2023; Mustafa et al., 2024).

Instructional leadership directs attention towards curriculum coordination, teaching improvement and professional learning. However, a principal-oriented model does not map directly onto a HoD's authority. Here, the mission dimension is operationalised as the translation of school and curriculum priorities into subject-department goals; instructional programme management concerns joint planning, supportive observation and assessment moderation; and the learning-climate dimension concerns peer mentoring and departmental professional enquiry. Distributed leadership additionally captures the negotiated and relational character of those activities. HoDs may convene collaborative routines but generally cannot independently determine staffing, infrastructure or examination requirements. Consequently, agency is viewed as conditional rather than assumed (Lipscombe et al., 2021; Shaked, 2023).

Curriculum innovation for 21st-century competencies requires changes in pedagogy, formative assessment and opportunities for practical and digital inquiry. Evidence from low- and middle-income contexts cautions that learner-centred approaches are mediated by teacher preparation, resources and assessment expectations (Bremner et al., 2022; Sakata et al., 2022). For HoDs, such conditions may allow low-cost collaboration while obstructing technology-dependent changes. The analysis therefore distinguishes practices that leaders report undertaking from independent evidence of learners' competency acquisition.

Across African systems, competency-based intentions interact with unequal resourcing and high-stakes examination cultures. Namibia's national curriculum similarly calls for continuous-assessment, learner-centred teaching and meaningful competencies (Ministry of Education, Arts and Culture, 2016). Namibian studies describe teacher preparedness and implementation difficulties (Josua et al., 2022; Katshuna & Shikalepo, 2023), while Ohangwena-specific work reports challenges with revised-curriculum enactment (Nghitoolwa & Ntandokamenzi, 2025).

Rather than treating a rural region as a flawed proxy for the country, the present study uses it as an analytically important setting for explaining the intersection of HoD work, infrastructural disadvantage and curriculum expectations. Comparable Kenyan curriculum implementation research highlights capacity and family–school involvement challenges, which are instructive comparisons rather than proof of equivalence (Gatuiri et al., 2025; Mueni, 2025).

This study investigates how HoDs in selected Ohangwena secondary schools report supporting curriculum innovation, the constraints that shape this work, and the strategies they consider feasible. The next section states the three guiding questions, followed by a thematically organised literature review, the theoretical framework and the methods.

Literature review

Instructional leadership practices and curriculum innovation. Studies of school middle leaders show that collaborative planning, coaching and coordination can connect shared goals to classroom practice, although the distribution of decision-making authority varies across institutions (Lipscombe et al., 2021; Lipscombe et al., 2023; Highfield et al., 2024). These studies provide comparative mechanisms, not evidence that Namibian schools possess equivalent staffing or organisational support. Namibia's national curriculum makes departmental translation of competencies, continuous-assessment and pedagogical aims especially relevant (Ministry of Education, Arts and Culture, 2016).

Constraints experienced by middle leaders. Research on learner-centred pedagogy in resource-constrained settings identifies tension between reform ideals, teacher preparation, class size and assessment demands (Bremner et al., 2022; Sakata et al., 2022). Namibian evidence adds specific implementation challenges (Josua et al., 2022; Katshuna & Shikalepo, 2023). Thus, reported planning and observation rates need to be interpreted alongside HoDs' limited supervisory time, workload and digital access rather than as proof of successfully transformed instruction.

Strategies for sustainable transformation. Collaborative professional learning offers a comparatively low-equipment mechanism for change, whereas digital integration requires devices, connectivity, usable materials and ongoing support (Msambwa et al., 2024; Mustafa et al., 2024). Research on middle leadership suggests that school-based enquiry may connect department-level routines with teacher learning (Lipscombe et al., 2023). For Ohangwena, the practical question is not whether a single leadership practice solves the problem, but which package of time, resources, capacity-building and locally appropriate assessment support is feasible.

Instructional leadership and the translation of reform. Middle leadership occupies an intermediary position between policy specification and classroom enactment. The systematic review by Lipscombe et al. (2021) identifies the importance of role clarity, relational influence and school context; the subsequent study by Lipscombe et al. (2023) locates teacher learning in collaborative teams. Highfield et al. (2024) likewise examine curriculum middle leaders' practices alongside teachers' perceptions, emphasising that leadership activity and perceived effectiveness are not identical. Taken together, these accounts suggest that departmental meetings matter when they develop shared pedagogical judgement, not merely when they monitor coverage. In Namibia, the intended competencies and continuous-assessment

expectations are specified nationally (Ministry of Education, Arts and Culture, 2016), but how HoDs translate them into subject-specific tasks remains a question for investigation.

Professional learning, supervision and teacher agency. The literature distinguishes administrative oversight from developmental support. Shaked (2023) places instructional leadership within the responsibilities of school middle leaders, while He et al. (2024) connect principals' instructional leadership with teachers' professional development in a different institutional setting. These different leadership levels should not be conflated: HoDs may be able to convene peer observation and moderate assessments without controlling budgets or staffing. The Australian Institute for Teaching and School Leadership (2023) similarly frames middle leadership as a role requiring organisational support and professional capability. The implication is that the quality, follow-up and perceived safety of feedback are potentially more consequential than the mere existence of observation routines.

Pedagogy, assessment and structural constraints. Bremner et al. (2022) review learner-centred pedagogy in relation to outcomes, whereas Sakata et al. (2022) concentrate on implementation in low- and middle-income countries. Read together, these reviews caution against assuming that group work or inquiry labels demonstrate deep learning: teacher preparation, resources, curriculum coherence and the form of assessment shape enactment. Foster and Piacentini (2023) examine approaches to measuring complex skills, and Tayem and Bourgeois (2024) review data-based decision-making in schools. This scholarship underscores the need to link curriculum planning to credible evidence of learner reasoning and application, rather than rely only on syllabus completion or pass rates.

Digital inclusion and local relevance. Mustafa et al. (2024) warns that the educational value of technology depends on purpose, evidence and equitable access, while Msambwa et al. (2024) describes the systems and capacities needed for effective digital education. Gottschalk and Weise (2023) foreground digital equity, indicating that equipment provision alone is insufficient without connectivity, accessibility and teachers' capacity. Namibian research highlights difficulties with revised-curriculum implementation (Josua et al., 2022; Katshuna & Shikalepo, 2023), and Nghitoolwa and Ntandokamenzi (2025) address implementation challenges in Ohangwena mathematics classrooms. These studies help explain why digital innovation may lag behind collaboration, but they do not establish the specific instructional leadership practices of the sampled HoDs.

Synthesis across leadership studies. Lipscombe et al. (2021) describe school middle leadership as context-dependent; Lipscombe et al. (2023) trace its contribution through facilitated team learning, and Highfield et al. (2024) distinguish the practices undertaken by curriculum middle leaders from their perceived effectiveness. The convergence is that curriculum change depends on the quality of professional interaction. Their emphases differ, however: role definition, collaborative processes and teacher appraisal of effectiveness are not interchangeable outcomes. This distinction motivates analysing HoDs' reported planning, observation and coaching separately instead of treating overall leadership scores as evidence of successful curriculum innovation.

Assessment and agency in comparative perspective. Shaked (2023) addresses instructional leadership as exercised by middle leaders, while He et al. (2024) investigate leadership and

teacher professional development at the principal level. Those settings offer mechanisms rather than direct estimates for Namibian HoDs. Bremner et al. (2022) and Sakata et al. (2022) jointly show why the implementation and educational consequences of learner-centred instruction must be evaluated separately. Foster and Piacentini (2023) and Tayem and Bourgeois (2024) add the complementary assessment question: without high-quality learner work and interpretable data, departments may monitor examination performance while missing creativity or collaborative reasoning.

Structural and technological conditions. Mustafa et al. (2024) frames technology access as an issue of educational purpose, equity and evidence; Msambwa et al. (2024) describes system components supporting digital education, and Gottschalk and Weise (2023) focus on inclusion and access across learners. Read alongside Namibian curriculum studies (Josua et al., 2022; Katshuna & Shikalepo, 2023; Nghitoolwa & Ntandokamenzi, 2025), these perspectives suggest that the effectiveness of leadership routines is partly conditioned by materials, connectivity and teacher capability. They do not, by themselves, reveal how HoDs rank competing demands or negotiate constrained authority in the Ohangwena context.

Knowledge gap. Although scholarship addresses middle leadership, teacher learning, learner-centred pedagogy, digital inclusion and Namibian curriculum implementation, these literatures largely examine different levels of the education system or different outcomes. Less is known about how HoDs in secondary schools in Ohangwena combine collaborative planning, observation, professional development, assessment and digital support within the same constrained leadership role. The literature also rarely compares HoDs' relative priorities, the practical barriers they describe and their proposed remedies within one convergent mixed-methods account. By combining a census of the defined 60-HoD population with focus groups of 30 experienced HoDs, the present study addresses this contextual and integrative gap while refraining from claims about causal effects or independently assessed learner attainment.

Theoretical framework

The study uses an adapted instructional leadership lens informed by Hallinger and Murphy's three domains and a distributed leadership perspective. In a department, defining the mission means collectively interpreting school curriculum priorities into subject plans; managing the instructional programme means lesson-plan review, non-punitive observations, formative assessment moderation and feedback; and promoting the learning-climate means arranging peer support, mentoring and professional learning. Unlike a principal, a HoD has bounded authority: school-wide budgets, recruitment and examination regulations typically lie beyond departmental control. Distributed leadership makes visible how teachers contribute expertise and how department practices are negotiated rather than solely directed (Lipscombe et al., 2021; Shaked, 2023).

This combined lens is an interpretive organising framework, not a tested causal model. Survey indicators illuminate the reported prevalence of departmental routines; focus group discussions explain how these activities unfold and where structural constraints restrict them. The framework therefore guides discussion of the three questions without implying that interdependence among domains or improvements in learner outcomes were statistically demonstrated.

Method

A convergent parallel mixed-methods design informed by pragmatism was employed to examine the reported prevalence of HoD practices alongside participants' explanations of their institutional context (Creswell & Plano Clark, 2025). The quantitative strand comprised questionnaire responses from all 60 HoDs; the qualitative strand comprised three focus group discussions with 10 HoDs in each group (n = 30). Questionnaire and focus group data were analysed separately before integration by research question, attending to convergence and tension. Both strands draw on HoD accounts, including 30 participants who contributed to both; their agreement cannot be treated as independent triangulation with classroom observations, teacher reports or learner outcomes.

Study setting, population and sampling. The study targeted Heads of Department (HoDs) currently heading different departments at secondary schools in the Ohangwena Region, Namibia. The total target population was 60 HoDs (N = 60), and all 60 participated in the questionnaire survey. Accordingly, the quantitative strand used total population sampling (a census), yielding a 100% survey participation rate (60/60). Eligibility for the survey required currently serving as an HoD at a secondary school in the Ohangwena Region with departmental responsibility for instructional leadership, curriculum coordination or teacher supervision. Teachers who were not HoDs, primary-school personnel and employees without departmental leadership responsibilities were excluded. For the qualitative strand, criterion-based purposive sampling was used to recruit 30 HoDs from among those who had completed the survey. Eligibility for focus group participation required at least five years of experience serving as an HoD and prior participation in the study questionnaire. The 30 eligible and recruited participants took part in three focus group discussions of 10 HoDs each. The unit of analysis was HoDs' reported instructional leadership experiences; the survey covered the specified population, whereas the focus group findings reflect a criterion-selected subset and are not statistical estimates for all HoDs.

Data collection. The quantitative strand used a five-point Likert-scale questionnaire (1 = strongly disagree; 5 = strongly agree) on departmental planning, supervision, professional learning, pedagogy, ICT integration and assessment; all 60 HoDs completed the survey. The qualitative strand used three focus group discussions, each comprising 10 survey respondents with at least five years' experience as an HoD (30 participants in total). The focus groups explored shared and contrasting experiences of instructional leadership routines, constraints and proposed strategies relevant to the three research questions. These were group discussions, not individual semi-structured interviews; contributions may have been shaped by group interaction and varying willingness to speak.

Frequencies, percentages, weighted means and sample standard deviations (denominator n − 1) were recalculated directly from the five response-category counts in Appendices 1 and 2. Agreement percentages equal (strongly agree + agree)/60 × 100 and must not be interpreted as normalised means. Focus group material was analysed through familiarisation, coding, theme development and review using reflexive thematic analysis (Braun & Clarke, 2021), attending to common and contrasting views across the three groups. A joint interpretation compared each reported survey practice and barrier with relevant focus group accounts; themes added

contextual explanation rather than providing independent observational verification. No inferential comparison or statistical claim of causal influence was made.

Research ethics were addressed through voluntary participation, informed consent, confidentiality, secure handling of records and the right to withdraw. Permission to conduct the research was obtained from the Director of Education in the Ohangwena Region. Names of participants and schools are withheld to protect confidentiality.

Results

Participant profile

All 60 HoDs completed the questionnaire (100% of the defined study population); 30 were women and 30 men. Three focus group discussions involved 30 survey participants with at least five years of HoD experience (10 per group). Findings report HoDs' perceptions rather than independent measures of classroom enactment or learner outcomes. The focus group extracts reproduced below appear in the manuscript, but their verbatim accuracy and speaker identities require checking against original transcripts; shared FGD labels do not establish an individual speaker.

Research question 1: Instructional leadership practices and competencies

Appendix 1 presents the full distribution of questionnaire responses on instructional leadership practices. Collaborative departmental planning attracted the highest agreement (51/60; 85.0%; M = 4.20, SD = 1.01), followed by classroom observation and feedback (49/60; 81.7%; M = 4.10, SD = 1.04) and HoD-organised professional development (48/60; 80.0%; M = 4.12, SD = 1.06). These practices were described as mutually reinforcing: meetings coordinated lesson design, observations identified instructional needs, and mentoring enabled teachers to try more participatory methods. Agreement proportions are distinct from five-point means.

"Collaborative planning allows experienced teachers to support those who are struggling with the new curriculum. During our departmental meetings, we share teaching materials, discuss learners' difficulties and develop activities that encourage learners to participate actively rather than simply memorising information." FGD2 and FGD3

Project-, inquiry- and collaborative learning was supported by 76.7% (46/60; M = 3.98); competency-based assessment by 70.0% (42/60; M = 3.80); and use of learner-performance evidence by 75.0% (45/60; M = 3.92). Focus group accounts described group investigation, presentations and reflective feedback, but distinguished planning such activities from consistently delivering them. Digital integration received the lowest endorsement (38/60; 63.3%; M = 3.60), while 23.3% disagreed or strongly disagreed. Participants related this contrast to insufficient devices, connectivity and practical teacher training.

"As Heads of Department, we encourage teachers to integrate technology into their lessons, but this is difficult because our schools have insufficient computers and unreliable internet connectivity."FGD1

Figure 1 summarises competencies that respondents perceived as strengthened: critical thinking and problem-solving (81.7%), communication (78.3%), collaboration (75.0%), creativity and innovation (70.0%) and digital literacy (58.3%). These percentages represent HoD reports, not assessed learner attainment. The relatively low digital literacy rating was consistent with reported infrastructure constraints.

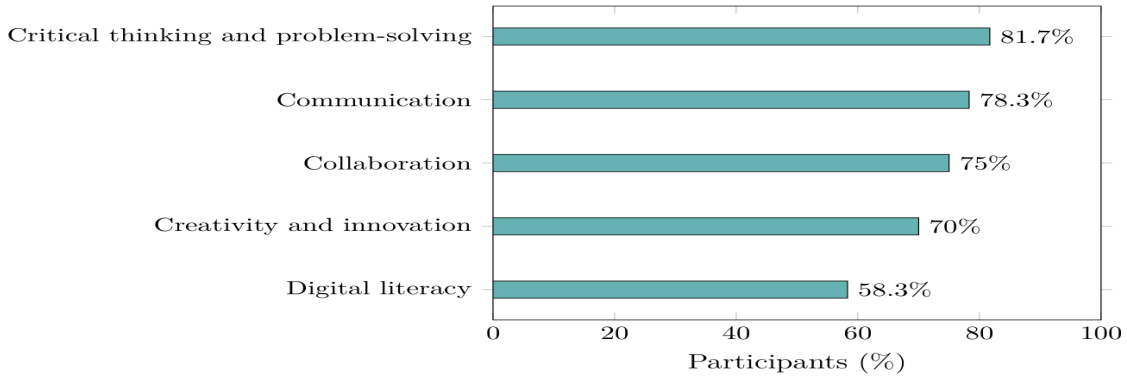


Figure 1: Competencies reportedly strengthened through curriculum innovation

Research question 2: Constraints on curriculum innovation

The HoD reported constraints were heavy teaching workload (53/60; 88.3%), inadequate teaching and learning resources (52/60; 86.7%), limited supervisory time (83.3%), weak ICT infrastructure (49/60; 81.7%), insufficient professional development (80.0%), teacher reluctance (73.3%) and examination pressure (73.3%). Figure 2 depicts the percentages of HoDs reporting these constraints. Survey and focus group accounts converged on a central problem: HoDs were expected to coach and coordinate teachers while continuing extensive classroom teaching, and their advice was often difficult to implement without materials or connectivity.

"As Heads of Department, we are expected to teach and manage the department at the same time. We often postpone classroom observations because we have our own lessons to attend." FGD2

"Sometimes teachers prepare interesting practical activities, but they cannot implement them because the required materials are unavailable. They eventually return to traditional teaching methods." FGD2

In the accounts, digital limitations also restricted access to computer-supported tasks, whereas examination pressure encouraged syllabus coverage and recall-oriented teaching. Teacher reluctance was presented partly as uncertainty about unfamiliar practices, suggesting that developmental feedback and adequate preparation may matter more than additional inspection. These constraints overlap: limited time reduces mentoring, weak resources restrict inquiry, and examination expectations reduce the perceived feasibility of experimentation.

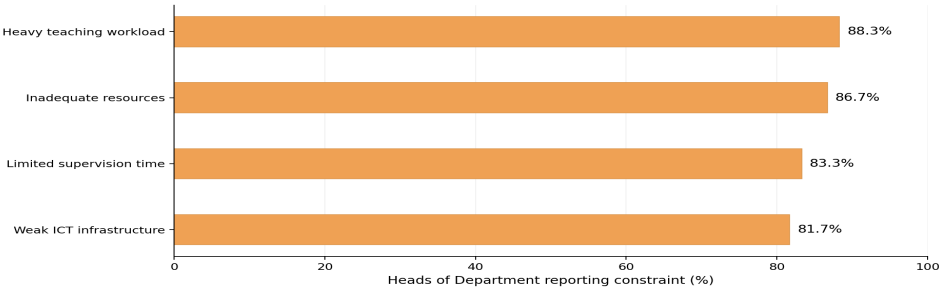


Figure 2: Principal constraints encountered by Heads of Department (N = 60)

Research question 3: Strategies for strengthening curriculum transformation

Appendix 2 reports all questionnaire categories for proposed improvement strategies. Continuous professional development received the strongest endorsement (55/60; 91.7%; M = 4.47), followed by workload reduction (54/60; 90.0%; M = 4.43) and collaborative planning (54/60; 90.0%; M = 4.38 in the appendix frequency table). Support was also high for professional learning communities (53/60; 88.3%; M = 4.28), dedicated time for mentoring and coaching (53/60; 88.3%; M = 4.35), improved ICT infrastructure (53/60; 88.3%; M = 4.38), competency-based assessment (52/60; 86.7%; M = 4.28) and data-informed improvement (52/60; 86.7%; M = 4.23). Rather than a single remedy, respondents supported a coordinated package of time, training, collaboration, resources and assessment reform.

"Instructional leadership requires time. Reducing our teaching load would allow us to support teachers more consistently through classroom observation, mentoring and departmental planning." FGD1

"We need more practical professional development programmes where teachers demonstrate lessons, observe their colleagues and discuss how to improve teaching methods that develop critical thinking and problem-solving skills." FGD3

Participants proposed departmental learning communities with scheduled planning, peer observation and feedback, alongside equipment investment and teacher preparation for digital teaching. Assessment reform was also considered necessary so that tasks capture reasoning, creativity and application rather than only recall. A data-informed approach would examine learners' errors and samples of their work, agree on targeted interventions and review the impact of these changes in subsequent lessons. The strategies therefore address both HoDs' immediate professional routines and the institutional conditions required to sustain them.

Discussion

Instructional leadership practices and curriculum innovation

The first objective examined how HoDs' instructional leadership practices support curriculum innovation and 21st-century competencies. Collaborative planning attracted the strongest agreement (51/60; 85.0%; M = 4.20), followed by observation and feedback (49/60; 81.7%; M = 4.10) and department-based professional development (48/60; 80.0%; M = 4.12). Read together, these results indicate that HoDs perceived instructional leadership principally as a collective professional activity rather than solely as formal inspection. Focus group descriptions of shared lesson design, discussion of learners' difficulties, constructive feedback and peer mentoring offer plausible explanations for this pattern. However, agreement indicates reported support for these practices; it does not measure their frequency, quality or effect on achievement.

This pattern converges with Lipscombe et al. (2021), whose review treats middle leadership as relational and situated, and with Lipscombe et al. (2023), who emphasise the facilitation of teacher learning through collaborative teams. Highfield et al. (2024) further distinguish middle leaders' reported practices from teachers' perceptions of effectiveness, which cautions against equating visible departmental routines with instructional improvement. Shaked (2023) situates instructional leadership within the middle-leader role; taken together, these studies suggest that the distinctive contribution of a HoD lies in translating curriculum priorities into collective pedagogical judgement. The Ohangwena findings extend this argument to a setting in which

shared planning may be more achievable than capital-intensive innovation, while still depending on protected time and purposeful agendas.

The reported encouragement of project-, inquiry- and collaborative learning (46/60; 76.7%; M = 3.98) was less pronounced than agreement with planning. This gap is consequential: departmental commitment to reform is not equivalent to implementation of demanding pedagogy. Bremner et al. (2022) consider the outcomes associated with learner-centred approaches, whereas Sakata et al. (2022) identify implementation conditions in low- and middle-income contexts. In synthesis, the reviews suggest that classroom inquiry requires explicit guidance, teacher capability, assessment alignment and practical resources, not merely the adoption of learner-centred terminology. Within the present study, HoDs' perceptions that critical thinking and problem-solving (81.7%), communication (78.3%) and collaboration (75.0%) were strengthened should therefore be interpreted as perceptions of opportunities for competency development, not direct tests of learner mastery.

Assessment and evidence use point to a second implementation gap. Although 75.0% (45/60; M = 3.92) supported using learner-performance evidence, only 70.0% (42/60; M = 3.80) endorsed assessment of creativity, critical thinking and problem-solving. Foster and Piacentini (2023) examine the complexity of assessing transferable skills, while Tayem and Bourgeois (2024) emphasise the interpretive and organisational work required for data-informed decisions. Together, they indicate that test scores and pass-rate summaries are insufficient proxies for complex competencies. Departmental moderation should therefore interrogate task design, samples of learner reasoning, rubrics and feedback, rather than stopping at coverage statistics. The findings also indicate that teacher autonomy (66.7%; M = 3.72) is more qualified than endorsement of joint planning: collaborative leadership must create space for pedagogical experimentation rather than only standardising compliance.

The lowest agreement concerned digital integration (38/60; 63.3%; M = 3.60), while reported digital literacy development was even lower (58.3%). The distinction between professional coordination and technology-dependent change is central to interpreting this finding. Mustafa et al. (2024) questions technology adoption without attention to educational purpose and access; Msambwa et al. (2024) and Gottschalk and Weise (2023) describe complementary requirements involving devices, connectivity, accessibility, technical systems and educator capability. The evidence aligns with the HoDs' accounts of unreliable internet access, limited equipment and lack of practical digital training. It does not establish that technology necessarily improves learning; rather, it shows why encouragement by middle leaders alone cannot create equitable digital learning opportunities.

Challenges encountered in leading curriculum innovation

The second objective identified barriers that restrict HoDs' ability to enact instructional leadership. Heavy teaching workload (53/60; 88.3%) and inadequate teaching and learning resources (52/60; 86.7%) were the most strongly endorsed, followed by limited supervisory time (83.3%) and weak ICT infrastructure (49/60; 81.7%). These figures should be read together rather than as independent problems. HoDs who retain substantial classroom timetables have less time for observation, coaching and follow-up; teachers who lack equipment or materials cannot readily implement the enquiries those coaching sessions might recommend. The focus

group narratives illustrate this combination through reports of postponed observations, limited departmental support and learning activities that revert to textbook-based instruction when materials are unavailable.

Sakata et al. (2022) explain how material constraints, teacher preparation and assessment structures jointly shape reform implementation, while Bremner et al. (2022) caution that observed or reported learner-centred approaches cannot be assumed to yield uniformly positive outcomes. The Namibian studies of Josua et al. (2022) and Katshuna and Shikalepo (2023) similarly locate curriculum implementation difficulties within preparedness and school-level capacity. Unlike interpretations that place responsibility exclusively on teacher commitment, the convergence of this literature with the current results suggests a structural constraint on departmental agency. HoDs may coordinate teaching, but they ordinarily do not control staffing allocations, infrastructure budgets or examination policy.

Professional development shortages (48/60; 80.0%) and teacher reluctance (44/60; 73.3%) also need a relational interpretation. The reported emphasis on encouraging rather than criticising teachers suggests that reluctance may reflect uncertainty about new approaches, limited exposure to demonstration lessons or fear of evaluation. Shaked (2023) and He et al. (2024) situate supervision and professional learning within leadership practice, whereas Lipscombe et al. (2023) focus on learning through collective teacher work. Synthesised, these studies favour a developmental sequence of observation, dialogue, modelling, supported trial and reassessment. The survey design cannot establish whether reluctance was caused by lack of training, and participants' perceptions should not be converted into causal conclusions.

Examination pressure was endorsed by 73.3% (44/60). This is not merely a competing task; it shapes what teachers regard as legitimate classroom time and valuable learner-performance. Foster and Piacentini (2023) show why complex skills demand more nuanced assessment approaches, while Bremner et al. (2022) and Sakata et al. (2022) demonstrate the importance of aligning pedagogy with assessment demands. When high-stakes examinations privilege recall, teachers may reasonably direct time to revision at the expense of slower enquiry tasks. The finding exposes a policy–practice tension: HoDs are asked to promote communication, creativity and problem-solving, yet much of their monitoring may still be organised around syllabus completion and pass rates.

Strategies for strengthening curriculum transformation

The third objective examined HoDs' priorities for addressing these barriers. Continuous professional development received the highest support (55/60; 91.7%; M = 4.47), followed by workload reduction (54/60; 90.0%; M = 4.43) and collaborative planning (54/60; 90.0%; M = 4.42). Professional learning communities, time for mentoring and coaching, and improved ICT infrastructure each received 88.3% support. The close clustering of these responses suggests that participants did not view a single intervention as sufficient. Rather, the preferred response linked professional capacity, leadership time, collaborative routines and resources. The qualitative accounts likewise propose regular workshops, peer demonstration, supportive observation and practical access to technology.

This package responds to different mechanisms. Protected leadership time addresses the opportunity cost of supervision; school-based professional development addresses teachers'

practical confidence; collaborative planning and professional learning communities provide an organisational setting for applying new approaches; and infrastructure investment targets an external constraint beyond HoDs' immediate control. Lipscombe et al. (2021, 2023) and Highfield et al. (2024) together point to the importance of role clarity, collaborative teams and the quality of middle leadership practices. Msambwa et al. (2024), Gottschalk and Weise (2023) and Mustafa et al. (2024), by contrast, show why digital improvement must be accompanied by sustainable access and pedagogical support. Combining these bodies of evidence supports a sequenced approach: establish feasible time and collaborative structures, develop practice through coaching, then align resources and assessment with intended competencies.

Support for competency-based assessment and data-informed improvement was also substantial (52/60; 86.7% for each; M = 4.28 and M = 4.23, respectively). Their importance lies in closing the distance between curriculum ambition and what classroom evidence can demonstrate. Foster and Piacentini (2023) address how complex skills may be assessed, and Tayem and Bourgeois (2024) review teachers' use of data for decision-making. Together, they support departmental moderation of authentic tasks, learner work samples and explicit performance criteria. Such routines could help distinguish apparent syllabus progress from demonstrated reasoning, collaboration and applied understanding. They should be piloted and evaluated rather than presented as proven improvements arising from this cross-sectional study.

Integrated interpretation and theoretical contribution

Across the three objectives, the findings suggest an asymmetry between coordination-based leadership and resource-dependent curricular change. The adapted instructional leadership framework offers an interpretive explanation: collaborative goal setting corresponds to defining the mission; observation, feedback and assessment moderation to managing the instructional programme; and mentoring and joint professional learning to promoting a positive learning-climate. Distributed leadership further explains why subject teachers' expertise and peer influence matter within departmental routines (Lipscombe et al., 2021; Shaked, 2023). Yet the limited digital results and the prominence of workload demonstrate that these dimensions operate inside institutional boundaries. The study thus adds a context-specific account of conditional middle-leader agency in Ohangwena, not evidence of a causal relationship between HoD leadership and pupil achievement.

The convergent parallel design adds interpretive value because the 60-person census identifies the relative salience of reported practices and the three focus groups provide reasons, qualifications and suggested responses. Nevertheless, the 30 focus group participants were a criterion-selected subset of survey respondents, so the strands are not independent evidence from different stakeholder groups. The findings should be read as a coherent account of HoDs' experiences, requiring future corroboration through classroom observation, teacher perspectives, examination-task analysis and samples of learners' work. In particular, prospective evaluation should test whether protected HoD time combined with coaching and assessment moderation improves the quality of classroom tasks and observable student competencies.

The combination of consensus in the questionnaire and contextual explanation in the focus groups is particularly valuable because practices that can be undertaken through existing departmental arrangements appeared more feasible than changes requiring sustained infrastructure spending. However, the two strands draw on overlapping HoD participants; their consistency cannot substitute for observing lessons, inspecting learner portfolios or collecting independent teacher accounts.

The study therefore differentiates reported organisational routines from demonstrated instructional change. Collaborative meetings may improve the coherence of departmental plans, but their value depends on the learning activities that follow, the opportunities teachers have to adapt them and whether learners subsequently demonstrate the intended competencies in assessable work.

For practical implementation, school management teams could develop a modest termly cycle: collaboratively identify an instructional priority, jointly plan an enquiry task, conduct supportive lesson observations, moderate learner work and review the resulting evidence. Such a cycle would make professional learning cumulative while keeping responsibility shared among teachers and their Heads of Department.

Across the three objectives, the central implication is that leadership practices, organisational capacity and the curriculum assessment system must be addressed together. Future school-based evaluation should examine lesson plans, observation records and samples of learner work alongside teacher accounts. This would clarify whether reported departmental collaboration produces sustained changes in teaching and developing complex competencies.

Limitations

The quantitative findings reflect questionnaire participation by all 60 HoDs in the defined study population; the qualitative strand involved 30 eligible questionnaire respondents across three focus group discussions of 10 participants each. The qualitative findings represent group-discussion accounts, not individual interviews, and are subject to group interaction and social-desirability effects. Quotations already appearing in the manuscript have been retained as unattributed extracts for author verification; without the actual FGD transcripts, their verbatim status and group/speaker identifiers cannot be established. The study did not independently observe lessons or directly measure learner competency gains.

Conclusion

In selected secondary schools in Ohangwena, HoDs reported stronger engagement in collaborative planning, observation and professional learning than in digital integration. Focus group accounts help explain this difference: established departmental routines require fewer material inputs, while technology-rich pedagogy is constrained by infrastructure, preparation and time. The findings contribute a context-specific account of middle leadership as curriculum mediation under bounded authority. Rather than asserting a new causal leadership model, the study identifies organisational conditions that warrant further observation-based and multi-actor research.

Schools and regional education authorities could consider piloting protected HoD coaching and planning time, recurring professional learning communities, targeted ICT support with teacher training and locally workable competency-oriented assessment tasks. They could evaluate these

interventions against classroom evidence before expanding them. Reported examination pressure warrants dialogue with assessment stakeholders, not a directive national policy change from the defined regional population of 60 HoDs. Such recommendations are provisional, context-sensitive and subject to feasibility and resource assessment.

Declarations

Ethics approval and consent. The Research obtained a permission to carry out this research from the Director of Education in the Ohangwena Region, and the participants were provided with informed consent letter.

Data availability. De-identified data may be requested from the corresponding author, subject to ethical and confidentiality restrictions.

Use of AI-assisted technologies. AI-assisted tools were used for language refinement and formatting. The authors reviewed all scholarly claims, interpretations and citations and retain responsibility for the manuscript's integrity.

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Appendix 1

Table 1A: Instructional leadership practices influencing curriculum innovation (N = 60)

Instructional leadership practice	SA n (%)	A n (%)	N n (%)	D n (%)	SD n (%)	M	SD
Collaborative departmental planning promotes innovative teaching approaches	28 (46.7)	23 (38.3)	4 (6.7)	3 (5.0)	2 (3.3)	4.20	1.01
Classroom observation and feedback encourage teachers to improve instructional practices	25 (41.7)	24 (40.0)	5 (8.3)	4 (6.7)	2 (3.3)	4.10	1.04
Professional development organised by HoDs strengthens teachers' ability to teach 21st-century competencies	27 (45.0)	21 (35.0)	6 (10.0)	4 (6.7)	2 (3.3)	4.12	1.06
HoDs encourage project-based, inquiry-based and collaborative learning	22 (36.7)	24 (40.0)	7 (11.7)	5 (8.3)	2 (3.3)	3.98	1.07
HoDs support the integration of digital technologies into teaching and learning	17 (28.3)	21 (35.0)	8 (13.3)	9 (15.0)	5 (8.3)	3.60	1.28
HoDs promote assessment practices that measure critical thinking, creativity and problem-solving	19 (31.7)	23 (38.3)	8 (13.3)	7 (11.7)	3 (5.0)	3.80	1.16
HoDs use learner-performance evidence to guide curriculum improvement	21 (35.0)	24 (40.0)	7 (11.7)	5 (8.3)	3 (5.0)	3.92	1.12
Teachers are given sufficient professional autonomy to experiment with new teaching methods	18 (30.0)	22 (36.7)	9 (15.0)	7 (11.7)	4 (6.7)	3.72	1.21
Overall instructional leadership influence						3.93	0.79

Note. SA = strongly agree; A = agree; N = neutral; D = disagree; SD = strongly disagree. M = weighted mean on a five-point scale; the final SD column is the sample standard deviation (n − 1). Percentages elsewhere are percentages of respondents agreeing or strongly agreeing (SA + A), not rescaled means. Calculated values use the tabulated counts (N = 60).

Appendix 2

Instructional leadership strategies for strengthening curriculum transformation (N = 60)

Note. SA = strongly agree; A = agree; N = neutral; D = disagree; SD = strongly disagree. Means and sample standard deviations are reported on a five-point response scale.

Instructional leadership practice	**SA n (%)**	**A n (%)**	**N n (%)**	**D n (%)**	**SD n (%)**	**M**	**SD**
Collaborative departmental planning promotes innovative teaching approaches	28 (46.7)	23 (38.3)	4 (6.7)	3 (5.0)	2 (3.3)	4.20	1.01
Classroom observation and feedback encourage teachers to improve instructional practices	25 (41.7)	24 (40.0)	5 (8.3)	4 (6.7)	2 (3.3)	4.10	1.04
Professional development organised by HoDs strengthens teachers' ability to teach 21st-century competencies	27 (45.0)	21 (35.0)	6 (10.0)	4 (6.7)	2 (3.3)	4.12	1.06
HoDs encourage project-based, inquiry-based and collaborative learning	22 (36.7)	24 (40.0)	7 (11.7)	5 (8.3)	2 (3.3)	3.98	1.07
HoDs support the integration of digital technologies into teaching and learning	17 (28.3)	21 (35.0)	8 (13.3)	9 (15.0)	5 (8.3)	3.60	1.28
HoDs promote assessment practices that measure critical thinking, creativity and problem-solving	19 (31.7)	23 (38.3)	8 (13.3)	7 (11.7)	3 (5.0)	3.80	1.16
HoDs use learner-performance evidence to guide curriculum improvement	21 (35.0)	24 (40.0)	7 (11.7)	5 (8.3)	3 (5.0)	3.92	1.12
Teachers are given sufficient professional autonomy to experiment with new teaching methods	18 (30.0)	22 (36.7)	9 (15.0)	7 (11.7)	4 (6.7)	3.72	1.21
Overall instructional leadership influence						3.93	0.79
Strategy	SA n (%)	A n (%)	N n (%)	D n (%)	SD n (%)	M	SD
Strengthen continuous teacher professional development	35 (58.3)	20 (33.3)	3 (5.0)	2 (3.3)	0 (0.0)	4.47	0.75
Increase collaborative curriculum planning among teachers	33 (55.0)	21 (35.0)	3 (5.0)	2 (3.3)	1 (1.7)	4.38	0.87
Allocate more time for classroom observation, mentoring and coaching	32 (53.3)	21 (35.0)	4 (6.7)	2 (3.3)	1 (1.7)	4.35	0.88
Improve access to ICT infrastructure and digital learning resources	34 (56.7)	19 (31.7)	4 (6.7)	2 (3.3)	1 (1.7)	4.38	0.88

Promote competency-based assessment practices	30 (50.0)	22 (36.7)	4 (6.7)	3 (5.0)	1 (1.7)	4.28	0.92
Establish Professional Learning Communities (PLCs)	29 (48.3)	24 (40.0)	3 (5.0)	3 (5.0)	1 (1.7)	4.28	0.90
Use learner-performance data to guide instructional improvement	27 (45.0)	25 (41.7)	4 (6.7)	3 (5.0)	1 (1.7)	4.23	0.91
Reduce teaching and administrative workload of HoDs	36 (60.0)	18 (30.0)	3 (5.0)	2 (3.3)	1 (1.7)	4.43	0.87
Overall mean						4.36	0.69