



NON-SPECIALIST TEACHING AND TRANSVERSAL COMPETENCY DEVELOPMENT: INFORMAL PROFESSIONAL LEARNING AND PERSONNEL PLANNING AT THE FACULTY OF ARTS, LETTERS AND HUMAN SCIENCES, UNIVERSITY OF BERTOUA, CAMEROON

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Abstract:

The expansion and massification of higher education in Cameroon have intensified the demand for qualified academic staff across disciplines. In emerging universities, this situation often leads to the assignment of lecturers to teaching units outside their initial fields of specialisation. Although non-specialist or out-of-field teaching may create pedagogical, cognitive, logistical, and emotional challenges, it may also serve as an opportunity for informal professional learning and transversal competency development. This study examined how non-specialist teaching contributes to transversal competency development among lecturers at the Faculty of Arts, Letters and Human Sciences of the University of Bertoua, with particular emphasis on informal professional learning and institutional personnel planning. The study adopted an exploratory mixed-methods survey design. Data were collected through a semi-structured questionnaire titled "Out-of-Field Teaching and Transversal Competence Planning Questionnaire" administered to 30 permanent and part-time lecturers selected purposively from different departments of the faculty. Quantitative data were analysed using frequency counts, percentages and means while qualitative responses were analysed thematically. Findings revealed that lecturers rely on self-directed research, mentoring, digital tools, peer collaboration, pedagogical translation, and competency-based assessment strategies to manage non-specialist teaching. The study also found that non-specialist teaching contributes to transversal competencies such as adaptability, digital literacy, collaboration, and self-regulation. However, institutional planning remains insufficient, particularly in relation to pedagogical guides, workload reduction, early course allocation, and formal interdisciplinary mentoring. The study concludes that non-specialist teaching can become a productive professional development pathway only

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when supported by deliberate personnel planning, structured mentoring, institutional resources, and recognition of informal learning.

Keywords: non-specialist teaching; out-of-field teaching; transversal competencies; informal professional learning; personnel planning; higher education; University of Bertoua; Cameroon

1. Introduction

Universities are central institutions for knowledge production, professional formation, social transformation, and sustainable development. In the contemporary knowledge economy, universities are no longer expected merely to transmit disciplinary knowledge; they are also required to develop transversal competencies that enable individuals to adapt, collaborate, innovate, communicate, and solve complex problems across academic and professional contexts. This expectation is consistent with Sustainable Development Goal 4, which emphasises inclusive and equitable quality education as well as lifelong learning opportunities for all (UNESCO, 2016; UNDP, 2023).

In Cameroon, the expansion of higher education has created new opportunities for access but has also generated institutional challenges related to staffing, infrastructure, quality assurance, curriculum implementation, and academic workload. The massification of higher education has not always been accompanied by proportional recruitment of specialised academic staff. Consequently, lecturers are sometimes assigned to teach courses outside their original fields of specialisation. This phenomenon, commonly referred to as non-specialist teaching or out-of-field teaching, is increasingly visible in contexts where universities seek to ensure continuity of academic programmes despite limited human resources.

Non-specialist teaching may be understood as the assignment of a lecturer to teach a subject, course, or teaching unit for which they do not possess direct disciplinary preparation or formal qualification. Teaching outside one's specialty involves delivering instruction in areas that do not correspond directly to the teacher's initial academic training (Bunster *et al.*, 2024). Similarly, out-of-field teaching may be understood as a situation in which teachers are required to teach subjects for which they have inadequate training or qualifications (Perpignan *et al.*, 2020). This situation can create difficulties because effective teaching requires strong content knowledge, pedagogical content knowledge, and familiarity with the epistemological structure of the discipline being taught (Manigbas *et al.*, 2023).

However, non-specialist teaching should not be understood only as a deficit or institutional weakness. It may also create opportunities for lecturers to develop transversal competencies through informal professional learning. When lecturers teach outside their specialisation, they are compelled to search for new information, consult colleagues, use digital tools, simplify unfamiliar concepts, redesign assessments, and

connect prior disciplinary knowledge to new teaching contexts. These practices can strengthen adaptability, digital literacy, collaboration, self-regulation, communication, and interdisciplinary thinking.

The Faculty of Arts, Letters and Human Sciences at the University of Bertoua provides a relevant context for examining this issue. The faculty recorded 112 lecturers in 2024-2025, including 21 permanent lecturers and 91 temporary lecturers. In 2025-2026, the number increased to 141 lecturers, including 51 permanent lecturers and 90 temporary lecturers, with 2,245 students recorded for that academic year. This staffing and student context demonstrates the importance of personnel planning in ensuring teaching quality, workload balance, and professional development.

Personnel planning is a core function of educational management. It involves the systematic allocation of human resources in ways that align institutional needs with staff qualifications, availability, competencies, and training needs. In higher education, personnel planning should not only ensure that courses are covered; it should also protect academic quality and support lecturer development. When non-specialist teaching is poorly planned, lecturers may experience anxiety, isolation, excessive preparation time, reduced research productivity, and difficulty maintaining academic standards. Conversely, when it is supported through mentoring, pedagogical guides, workload adjustment, and interdisciplinary collaboration, it may become a pathway for professional growth.

2. Statement of the Problem

Although higher education institutions are expected to provide quality teaching through qualified and competent academic staff, the realities of staff shortages, programme expansion, and increasing student enrolment often compel universities to assign lecturers to courses outside their areas of specialisation. At the Faculty of Arts, Letters and Human Sciences of the University of Bertoua, lecturers may be required to teach subjects for which they have limited direct disciplinary preparation. This raises concerns regarding teaching effectiveness, academic quality, student learning, lecturer confidence, workload, and professional identity.

The central problem is that non-specialist teaching appears to occur more as an administrative response to staffing constraints than as a structured professional development strategy. Questionnaire evidence suggests weak agreement with the existence of clear pedagogical guides, workload reduction, and formal interdisciplinary mentoring for lecturers teaching outside their fields. This indicates a gap between the practice of assigning non-specialist courses and the institutional support required to ensure effective teaching.

At the same time, lecturers appear to develop informal strategies to manage non-specialist teaching, including self-directed research, digital tools, mentoring, and peer collaboration. These strategies may contribute to transversal competency development.

However, without deliberate planning, such learning remains individualised, uneven, and insufficiently recognised by the institution. The problem addressed in this study is therefore the inadequate alignment between non-specialist teaching assignments, informal professional learning, transversal competency development, and institutional personnel planning at the University of Bertoua.

3. Research Objectives

The general objective of this study was to examine how non-specialist teaching contributes to transversal competency development through informal professional learning and personnel planning at the Faculty of Arts, Letters and Human Sciences of the University of Bertoua.

The specific objectives were to:

- 1) identify the informal professional learning strategies used by lecturers teaching outside their fields of specialisation;
- 2) examine the difficulties encountered by lecturers involved in non-specialist teaching; and
- 3) determine the planning and implementation strategies that university management can adopt to support transversal competency development among non-specialist lecturers.

4. Research Questions

The study was guided by the following research questions:

- 1) What informal professional learning strategies do non-specialist lecturers use to develop transversal competencies?
- 2) What difficulties do lecturers encounter when teaching outside their fields of specialisation?
- 3) What planning and implementation strategies can university management put in place to encourage the development of lecturers' transversal competencies?

5. Literature Review

5.1 Non-Specialist Teaching in Higher Education

Non-specialist teaching, also known as out-of-field teaching, refers to the assignment of a teacher or lecturer to a course outside their primary academic discipline or professional training. This phenomenon is usually associated with staff shortages, timetable constraints, unequal distribution of teachers, institutional expansion, and the administrative need to ensure course coverage (Leon-Henri, 2019). In many education systems, teachers are trained as specialists but are later required to teach beyond their areas of preparation due to systemic pressures.

The literature suggests that out-of-field teaching can negatively affect curriculum implementation and teaching quality when teachers lack adequate content knowledge and pedagogical preparation (Childs & McNicholl, 2007; Du Plessis, 2015). Teachers require strong content knowledge and pedagogy to deliver effective instruction (Manigbas *et al.*, 2023). Without such preparation, non-specialist teachers may struggle to organise content, answer learners' questions, develop valid assessments, and maintain confidence.

However, out-of-field teaching can also act as a boundary-crossing experience that reshapes teacher identity and promotes professional learning (Hobbs, 2013). When teachers move beyond familiar disciplinary boundaries, they may develop new forms of knowledge, professional flexibility, and interdisciplinary awareness. This is particularly relevant in universities, where interdisciplinary teaching and research are increasingly valued.

5.2 Transversal Competencies and Higher Education

Transversal competencies are skills and dispositions that are applicable across disciplines, professions, and life contexts. They include critical thinking, communication, collaboration, adaptability, digital literacy, creativity, problem-solving, ethical reasoning, and self-regulated learning. These competencies are essential in a rapidly changing world shaped by technological, economic, social, and environmental transformations (Barry *et al.*, 2025; Leon-Henri, 2020; Manigbas *et al.*, 2023).

UNESCO (2025) describes transversal competencies as skills that are not confined to a single discipline but are applicable across multiple learning and professional situations. Similarly, the OECD (2021) emphasises future-oriented competencies that prepare individuals for citizenship, employability, and lifelong learning in complex societies. The Sustainable Development Goals also highlight the need for education systems to develop competencies that support sustainable development, global citizenship, and inclusive societies (UNESCO, 2016; UNDP, 2023).

In the context of non-specialist teaching, transversal competencies are developed not only among students but also among lecturers. A lecturer who teaches outside their field must adapt to unfamiliar content, engage in independent research, collaborate with specialists, use digital resources, communicate clearly, and regulate their own learning process. These activities are closely linked to transversal competency development.

5.3 Informal Professional Learning

Informal professional learning refers to professional development that occurs outside formal training programmes. It includes learning through experience, peer collaboration, mentoring, self-directed research, online resources, reflective practice, and workplace problem-solving. In higher education, informal learning is especially important because lecturers often face new teaching demands without receiving formal preparation.

The 70-20-10 model of professional learning suggests that a large proportion of professional knowledge is acquired through job-related experience, social interaction, and formal training. Although this model should not be applied mechanically, it highlights the importance of experiential and social learning in professional development. In the case of non-specialist teaching, lecturers learn by preparing unfamiliar lessons, consulting colleagues, using digital tools, and responding to students' questions.

Teacher retention and professional effectiveness improve when teachers develop strong knowledge capital (Vaidya & Hanna, 2023). This is relevant to non-specialist teaching because lecturers who receive support to develop new knowledge and skills may transform a challenging assignment into a professional growth opportunity. However, informal learning is most effective when supported by institutional structures such as mentoring, documentation, workload management, and communities of practice.

5.4 Personnel Planning and Academic Management

Personnel planning is the process of ensuring that the right people are assigned to the right tasks at the right time, with appropriate support and resources. In universities, personnel planning includes recruitment, workload allocation, course assignment, mentoring, staff development, performance appraisal, and succession planning. Effective personnel planning contributes to teaching quality, staff motivation, institutional efficiency, and student success.

University management requires strategic planning and accountability in resource allocation (Burke, 2002). Institutional capacity is also necessary for responding to financial and organisational challenges in higher education (Pottick *et al.*, 2015). In the context of non-specialist teaching, personnel planning should ensure that course assignments are not random but based on lecturer competence, disciplinary affinity, development needs, and available support.

Where personnel planning is weak, non-specialist teaching may become a source of stress and reduced quality. Where planning is strong, it may become a structured opportunity for interdisciplinary professional development. Therefore, institutional leaders such as rectors, deans, heads of department, and programme coordinators have a responsibility to create mechanisms that support lecturers assigned to unfamiliar courses.

6. Theoretical Framework

6.1 Dewey's Experiential Learning Theory

Dewey's experiential learning theory emphasises that learning occurs through interaction between individuals and their environment. Experience becomes educative when it leads to reflection, inquiry, reconstruction of knowledge, and improved action. Learning is

therefore not limited to formal instruction; it occurs through active engagement with real-life problems.

In this study, non-specialist teaching is considered an experiential learning situation. Lecturers learn because they are confronted with unfamiliar teaching responsibilities. They must identify knowledge gaps, search for information, consult colleagues, prepare lessons, teach students, evaluate learning, and reflect on their practice. Through this cycle, they develop new professional competencies.

6.2 Medley's Teacher Competence Theory

Medley's teacher competence theory holds that teachers develop knowledge, skills, and attitudes through workplace experience and professional engagement. These competencies influence teaching effectiveness and student learning outcomes. In the context of this study, lecturers who teach outside their specialisation may develop new competencies through interaction with colleagues, departments, students, resources, and institutional expectations.

Medley's theory is relevant because it frames competence as dynamic rather than fixed. A lecturer's competence can expand when they are exposed to new teaching challenges and supported through professional learning opportunities. Thus, non-specialist teaching can contribute to transversal competency development if managed through appropriate institutional planning.

7. Methodology

7.1 Research Design

The study adopted an exploratory mixed-methods survey design. This design was appropriate because the study sought to understand both the quantitative patterns of lecturers' perceptions and the qualitative meanings attached to their experiences. The quantitative component provided measurable evidence on planning, competency development, and challenges, while the qualitative component provided deeper explanations through open-ended responses.

7.2 Area of the Study

The study was conducted at the Faculty of Arts, Letters and Human Sciences of the University of Bertoua, located in the East Region of Cameroon. The University of Bertoua is one of Cameroon's emerging state universities and operates in a context of programme expansion, increasing student enrolment, and growing demand for qualified academic personnel.

7.3 Population of the Study

The population consisted of permanent and temporary lecturers of the Faculty of Arts, Letters and Human Sciences. Institutional data showed that the faculty had 112 lecturers

in 2024-2025, including 21 permanent lecturers and 91 temporary lecturers. In 2025-2026, the faculty had 141 lecturers, including 51 permanent lecturers and 90 temporary lecturers, with 2,245 students enrolled.

Academic Year	Permanent Lecturers	Temporary Lecturers	Total Lecturers	No. of Students
2024-2025	21	91	112	1118
2025-2026	51	90	141	2245

7.4 Sample and Sampling Technique

The sample consisted of 30 lecturers selected from different departments of the faculty. Purposive sampling was used because the study targeted lecturers who had experience teaching outside their original field of training. This sampling technique was appropriate because the study required participants who had direct experience of the phenomenon under investigation.

7.5 Instrument for Data Collection

Data were collected using a semi-structured questionnaire titled “Out-of-Field Teaching and Transversal Competence Planning Questionnaire”. The instrument contained Likert-scale items and open-ended questions. The Likert-scale items were organized into four sections: strategic and institutional planning, individual pedagogical planning, transversal competency outcomes, and challenges linked to teaching outside specialization.

The response scale ranged from 1 to 5, where 1 represented very low agreement, 2 represented low agreement, 3 represented moderate agreement, 4 represented high agreement, and 5 represented very high agreement. The open-ended section asked lecturers to identify effective planning tools, propose improvements in teaching assignment planning, and describe challenges experienced when teaching outside their specialty.

7.6 Method of Data Analysis

Quantitative data were analysed using frequency counts, percentages, mean scores, and standard deviations. Qualitative data from the open-ended questions were analysed thematically. Responses were grouped into major themes such as mentoring, digital tools, course allocation, workload, pedagogical guides, specialist recruitment, language difficulty, conceptual difficulty, student absenteeism, and resource constraints.

Mean Range	Interpretation
1.00-1.49	Very low agreement
1.50-2.49	Low agreement
2.50-3.49	Moderate agreement
3.50-4.49	High agreement
4.50-5.00	Very high agreement

8. Results

8.1 Strategic and Institutional Planning

The first research dimension examined how institutional planning supports or constrains lecturers' ability to teach outside their areas of specialisation. The findings indicate that lecturers generally agreed that departments consider disciplinary affinity or related skills when allocating teaching units. However, the low mean for workload reduction and moderate means for pedagogical guides and mentoring suggest that institutional support remains limited. The data imply that course allocation may consider lecturer background to some extent, but there is insufficient systematic support after the allocation is made.

Items	Statements	Mean	Interpretation
A1	The department allocation of teaching units considers existing affinity or related skills.	3.63	High agreement
A2	The university provides a clear pedagogical guide or syllabus for non-specialist subjects.	2.50	Moderate agreement
A3	Administrative planning allows reduced workload when assigned outside field.	2.47	Low agreement
A4	There is a formal institutional plan for interdisciplinary mentoring.	2.50	Moderate agreement

8.2 Individual Pedagogical Planning Strategies

The second research dimension examined the strategies lecturers personally use to manage non-specialist teaching. The findings show that lecturers actively engage in individual pedagogical planning. The strongest indicator was the perception that teaching outside one's specialty is a professional development opportunity. This was followed by competency-based assessment planning and structured self-training routines. These results suggest that lecturers respond to non-specialist teaching by adopting informal learning strategies and pedagogical adaptation.

Items	Statements	Mean	Interpretation
A5	I deliberately plan lessons to include transversal activities.	3.70	High agreement
A6	I allocate self-training and self-directed research time.	3.70	High agreement
A7	My planning involves pedagogical translation linking my specialty to the new subject.	3.62	High agreement
A8	I use digital tools as planning resources for unfamiliar topics.	3.21	Moderate agreement
A9	I plan assessments to focus on student competencies.	3.97	High agreement
A10	I participate in interdepartmental meetings to align teaching with programme goals.	3.10	Moderate agreement
A11	I view teaching outside my specialty as professional development.	4.00	High agreement
A12	I have developed a structured self-training routine.	3.77	High agreement

8.3 Transversal Competency Outcomes

The third research dimension examined whether informal planning contributes to transversal competency development. The findings indicate that non-specialist teaching contributes to transversal competency development, particularly digital literacy and self-regulation. Adaptability and collaboration were moderately developed, suggesting that individual learning is stronger than institutionalised collaboration.

Items	Statements	Mean	Interpretation
A13	I feel more capable of shifting between academic disciplines.	3.37	Moderate agreement
A14	My planning has forced me to master new technologies for information retrieval.	3.86	High agreement
A15	I have developed stronger professional networks across departments.	3.37	Moderate agreement
A16	I have become more efficient at managing cognitive load.	3.61	High agreement

8.4 Challenges Linked to Non-Specialist Teaching

The fourth research dimension examined the challenges experienced by lecturers. The quantitative findings show moderate agreement regarding the challenges of time constraints, resource deficits, and isolation. The qualitative data provide stronger detail. Respondents identified language difficulties, unfamiliar higher education concepts, student absenteeism, difficulty simplifying concepts, student doubts, long research time, and language barriers as major challenges.

Items	Statements	Mean	Interpretation
A17	Courses are distributed only a few days or weeks before teaching, limiting planning.	3.32	Moderate agreement
A18	Lack of specialised libraries or high-speed internet hinders preparation.	3.33	Moderate agreement
A19	I plan alone without enough feedback from subject-matter experts.	3.13	Moderate agreement

8.5 Qualitative Findings from Open-Ended Responses

The open-ended responses revealed three main themes.

First, respondents identified mentors, Google, specific software, and artificial intelligence tools as the most effective planning tools used during the semester. This confirms that lecturers depend heavily on both human and digital resources to manage non-specialist teaching.

Second, when asked what should be changed in how the University of Bertoua plans teaching assignments, lecturers suggested earlier course allocation, respect for specialty, additional teaching hours, recruitment of specialists, more documents for consultation, more attention to English-speaking students, online classes, pedagogical guides, seminars, workshops, tutorials, projectors, and consideration of specialty affinity.

Third, respondents identified language difficulties, new concepts in higher education, student absenteeism, difficulty breaking down some concepts, doubts from students, long research time, and language barriers as the greatest challenges faced when teaching outside their specialty.

9. Discussion

The findings show that non-specialist teaching at the Faculty of Arts, Letters and Human Sciences of the University of Bertoua operates at the intersection of institutional necessity and professional learning. While lecturers experience significant challenges, they also develop adaptive strategies that contribute to transversal competency development.

First, the study found that institutional planning remains insufficient. Although departments appear to consider affinity or related skills when allocating teaching units, there is limited evidence of systematic workload adjustment, pedagogical guide provision, or formal interdisciplinary mentoring. This supports the argument that out-of-field teaching often emerges from systemic staff shortages and institutional constraints rather than deliberate professional development planning (Leon-Henri, 2019; Du Plessis, 2015). Without strong personnel planning, non-specialist teaching may affect teaching quality and lecturer well-being.

Second, lecturers demonstrate strong individual agency. They use self-directed research, pedagogical translation, mentoring, digital tools, and competency-based assessment to manage unfamiliar courses. This aligns with Dewey's experiential learning theory, which holds that learning occurs through reflective engagement with practical problems. In this study, lecturers learn because they are required to solve the pedagogical problem of teaching unfamiliar content. They reconstruct their professional knowledge through experience, inquiry, and reflection.

Third, the study confirms that non-specialist teaching contributes to transversal competency development. Digital literacy was particularly strong, suggesting that lecturers increasingly rely on online resources, artificial intelligence, digital platforms, and electronic documents to prepare lessons. This supports UNESCO's view that transversal competencies are applicable across disciplinary and professional contexts (UNESCO, 2025). The development of self-regulation also shows that lecturers learn to manage the cognitive and emotional demands of teaching and learning simultaneously.

Fourth, collaboration was only moderately developed. This indicates that although lecturers may consult mentors and colleagues informally, formal interdepartmental collaboration remains limited. This finding is important because professional learning is stronger when supported by communities of practice, mentoring systems, and institutional recognition. Out-of-field teaching can become a boundary-crossing event that reshapes professional identity, but such boundary crossing requires support, dialogue, and validation (Hobbs, 2013).

Fifth, the challenges reported by lecturers are consistent with previous literature on out-of-field teaching. Cognitive challenges include difficulty mastering unfamiliar concepts; logistical challenges include insufficient preparation time and lack of resources; social challenges include isolation from specialists; and emotional challenges include anxiety and doubts from students. These challenges confirm that non-specialist teaching should not be treated casually. It requires deliberate planning, supervision, and support. Overall, the study suggests that non-specialist teaching can be transformed into a professional development pathway if universities move from reactive course allocation to strategic competency-based personnel planning. Such planning should connect institutional needs with lecturer growth, teaching quality, and student learning outcomes.

10. Proposed Institutional Planning Model

Based on the findings, the study proposes a seven-stage model for managing non-specialist teaching. First, departments should develop competency profiles for lecturers, indicating their core specialisation, related disciplines, teaching experience, research interests, language capacity, digital skills, and professional development needs. Second, teaching units should be assigned based on disciplinary affinity rather than mere availability. Third, courses should be distributed before the semester begins to allow adequate preparation, consultation, reading, and instructional design.

Fourth, every non-specialist teaching assignment should be accompanied by a course guide containing learning outcomes, weekly content, readings, assessment methods, teaching activities, and core concepts. Fifth, non-specialist lecturers should be paired with specialist mentors who can validate course outlines, suggest resources, clarify difficult concepts, and review assessments. Sixth, because non-specialist teaching requires additional preparation, departments should consider workload flexibility. Seventh, at the end of the semester, lecturers should submit a reflective course transformation report documenting challenges, strategies, resources used, student feedback, and competencies developed. Such reports can serve as evidence of continuous professional development.

11. Conclusion

This study examined non-specialist teaching and transversal competency development at the Faculty of Arts, Letters and Human Sciences of the University of Bertoua. The findings indicate that lecturers teaching outside their fields of specialisation engage in significant informal professional learning. They rely on self-directed research, digital tools, mentoring, pedagogical translation, peer consultation, and competency-based assessment to manage unfamiliar courses.

The study also found that non-specialist teaching contributes to transversal competencies such as digital literacy, self-regulation, adaptability, and collaboration. However, the development of these competencies is not automatic. It depends on the quality of institutional planning and support. The weakest areas identified were workload reduction, formal mentoring, pedagogical guide provision, and early course allocation.

The study concludes that non-specialist teaching should not be treated merely as an emergency administrative response to staff shortages. Instead, it should be integrated into a strategic personnel planning framework that supports academic quality, lecturer development, and interdisciplinary professional learning.

12. Recommendations

Based on the findings, the study recommends that the University of Bertoua should adopt competency-based personnel planning to ensure that teaching assignments are aligned with lecturer expertise and disciplinary affinity. Departments should distribute courses early enough to allow lecturers adequate time for preparation, and pedagogical guides should be prepared for all courses assigned to non-specialist lecturers.

Formal interdisciplinary mentoring should be introduced to support lecturers teaching outside their fields. Workload adjustment should also be considered for lecturers assigned to unfamiliar courses. The university should organise seminars and workshops on non-specialist teaching, transversal competencies, and interdisciplinary pedagogy. Digital and documentary resources should be strengthened, including access to online libraries, internet, projectors, and digital teaching tools.

Course transformation reports should be recognised as evidence of continuous professional development. Specialist recruitment should be prioritised in departments where non-specialist teaching is frequent. Finally, bilingual pedagogical support should be strengthened to address language-related challenges in teaching and learning.

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Conflict of Interest Statement

The authors declare no conflicts of interest.

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