



Foreign-Language Dental Terminology and the Development of Professional Communication Skills in Dental Students

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Abstract. *The globalization of healthcare education has heightened the need for foreign language competence in specialized disciplines such as dentistry. For dental students, learning clinical terminology in a foreign language extends beyond accessing international textbooks; it is integrally connected to the development of professional communicative competence in multilingual academic and clinical contexts. This study investigates the relationship between foreign-language dental terminology acquisition and the development of professional communication skills among undergraduate dental students. Using a mixed-method design that incorporates a questionnaire survey and qualitative discourse analysis, the research examines how students perceive the relevance of foreign-language terminology to their academic progress, clinical confidence, and patient-centered communication. The findings indicate that familiarity with foreign-language dental terminology enables students to explain procedures more clearly, comprehend clinical materials more effectively, and communicate with greater confidence in simulated patient interactions. The study argues that foreign-language dental terminology should not be treated as a peripheral vocabulary component but as a pedagogical instrument central to professional identity formation in dental education.*

Keywords: *dental terminology, English for specific purposes, professional communication, communicative competence, dental education, patient-centered communication*

1. Introduction

In contemporary healthcare education, communication has become nearly as central as clinical competence. Future dentists must not only diagnose and treat oral conditions but must also explain findings, manage patient anxiety, negotiate treatment plans, and engage in professional discourse in an increasingly multilingual and multicultural environment (Street et al., 2009; Ho et al., 2025). Research on dentist-patient relationships has consistently identified communication and trust as

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primary determinants of care quality and patient satisfaction (Choi et al., 2024). It is within this broader context that foreign-language competence has gained strategic significance, particularly in areas touching on technical vocabulary, patient communication, and professional discourse.

Dental students encounter English-medium textbooks, international lectures, mobile learning applications, and online clinical demonstrations, meaning that foreign-language proficiency is no longer supplementary but integral to academic and professional training (Anthony, 2018; Otsuka et al., 2025). Historically, terminology instruction in professionally oriented language courses has relied heavily on memorization: students are expected to learn lists of anatomical terms, instrument names, procedures, and pathologies. While lexical knowledge is a prerequisite, this vocabulary-focused approach risks overlooking a more substantive pedagogical question: how does knowledge of specialized vocabulary shape the broader professional communicative competence of dental students?

English for Specific Purposes (ESP) scholarship has long argued that communicative purposes, not isolated vocabulary accumulation, should drive language teaching (Hutchinson & Waters, 1987; Anthony, 2018). Similarly, research on ESP vocabulary emphasizes that specialized lexis becomes meaningful only when it is embedded in context, usage, and discourse function (Coxhead, 2017). This concern is particularly acute in dental education, where students must constantly shift between registers: deploying technical vocabulary in textbook reading and case presentations, while simplifying explanations for patient interaction. From a discourse-analytic perspective, professional language is not a collection of words but a means of enacting role, identity, expertise, and relationship in practice (Gee, 2014; Imafuku et al., 2022).

Patient-centered communication adds further complexity. Research consistently demonstrates that clinician-patient communication influences health outcomes through enhanced understanding, increased trust, improved shared decision-making, and better emotional management (Street et al., 2009). In dentistry specifically, effective communication has been linked to reduced patient anxiety, improved treatment adherence, greater satisfaction, and reduced misunderstanding (Ho et al., 2025). Oral health literacy research further highlights that patients vary widely in their comprehension of health information, requiring practitioners to adapt their communication accordingly (Nurash et al., 2020; Lu et al., 2025; Yu et al., 2024). Ethical dimensions are equally significant: informed consent in dentistry requires not merely a signed document but a communicative process grounded in patient autonomy and genuine understanding (Kakar et al., 2014; Reid, 2017). Inclusive and person-centered language has also been identified as essential to equitable professional care (Haley & Doubleday, 2025).

Despite the growing relevance of these issues, relatively little research has directly examined the relationship between foreign-language dental terminology acquisition and the development of professional communication skills among dental students. Existing instruction often separates terminology learning from communicative practice, even though research suggests that dental



students' empathy, attitudes toward communication skill learning, and patient-centered orientation are closely interconnected in the learning environment (Lee & Ihm, 2021; McKenzie, 2014). This study therefore investigates whether foreign-language dental terminology functions not merely as specialized vocabulary but as a foundation for the development of professional communication in dental students.

2. Theoretical Framework

This study is grounded in three intersecting theoretical traditions: English for Specific Purposes, discourse analysis, and patient-centered communication theory. ESP theory, as articulated by Hutchinson and Waters (1987) and extended by Anthony (2018), holds that language teaching should be organized around the communicative demands of specific professional or academic contexts rather than around general linguistic structures. Applied to dental education, this principle implies that terminology instruction should be embedded within the discursive practices of dental professionals rather than treated as a discrete vocabulary exercise.

Discourse analysis, particularly as developed by Gee (2014) and applied in medical education contexts by Imafuku et al. (2022), provides a framework for understanding how language functions as social action. In this view, professional communication is not merely the transmission of information but the enactment of identity, expertise, and relationship. For dental students, this means that acquiring foreign-language terminology is inseparable from learning to perform the role of a dental professional in interaction. Coxhead's (2017) work on specialized vocabulary further supports the view that lexical knowledge becomes meaningful only when learners understand how terms function within disciplinary discourse.

Patient-centered communication theory, as synthesized by Street et al. (2009), emphasizes that effective clinical communication requires not technical precision alone but adaptability, clarity, and shared understanding. This framework has been extended in the dental education literature by research demonstrating that communication competence, empathy, and patient-centered orientation develop interdependently in dental students (Lee & Ihm, 2021; McKenzie, 2014). Taken together, these three theoretical traditions suggest that foreign-language dental terminology should be conceptualized not as peripheral vocabulary knowledge but as a communicative and professional competence that requires integrated, context-sensitive instruction.

3. Methodology

This study employed a mixed-method design incorporating a questionnaire survey and qualitative discourse analysis. The mixed-method approach was selected because the research problem encompasses both quantifiable patterns in student perceptions and situation-dependent language use that requires qualitative interpretation. The questionnaire was designed to capture general trends in student attitudes toward terminology and communication, while discourse analysis enabled a more detailed examination of how specialized language was deployed in both verbal and written communication tasks.



The qualitative component was informed by discourse-analytic methodology, which conceptualizes language use as social action rather than a neutral system of words (Gee, 2014; Imafuku et al., 2022). This approach was particularly appropriate for the present study, which investigated not merely whether dental students could recall foreign-language terminology but whether they could deploy it in professionally appropriate and communicatively effective ways. Participants were undergraduate dental students enrolled in a professionally oriented English language course. All participants had prior exposure to core dental subjects in their degree program but reported limited confidence in English-medium academic and clinical communication. This participant profile is consistent with that used in prior dental education research investigating communication competence, empathy, and patient-centered attitudes (Lee & Ihm, 2021; McKenzie, 2014).

The questionnaire addressed perceived difficulty of dental terminology, perceived usefulness of foreign-language vocabulary, confidence in explaining procedures, participation in classroom discussion, and comfort in simulated patient interaction. Students also completed oral role-play tasks and short written explanation tasks designed to elicit authentic communicative performance. These task types reflect broader evidence in dental education research indicating that communication training is most effective when it combines practice-oriented and reflective strategies rather than relying on theoretical instruction alone (Nurash et al., 2020; Ho et al., 2025). Data from the questionnaire were analyzed descriptively to identify patterns across the group, while role-play and written task data were analyzed using discourse-analytic categories including register, audience orientation, and lexical precision.

4. Results

The findings indicated that the majority of students regarded foreign-language dental terminology as an essential component of their professional development. Students associated terminology knowledge with three primary benefits: access to international textbooks and digital resources, improved understanding of dental subject matter, and increased confidence in professional communication. These perceptions are consistent with ESP scholarship, which positions specialized vocabulary as central to disciplinary participation and professional literacy (Anthony, 2018; Coxhead, 2017).

At the same time, students did not describe terminology learning as straightforward. Many reported difficulty in retaining dental terms, particularly when multiple closely related clinical or anatomical concepts appeared together. Notably, however, this perceived difficulty did not diminish the perceived value of terminology; rather, students tended to interpret difficulty as evidence of professional significance. A clear pattern also emerged in relation to communicative confidence: students who reported greater familiarity with foreign-language dental terminology also tended to report greater confidence in explaining procedures, discussing clinical content, and participating in role-play scenarios. This pattern aligns with prior research demonstrating that



positive attitudes toward communication skill learning are associated with more patient-centered professional orientation in dental students (Lee & Ihm, 2021).

The discourse analysis of oral role-play tasks revealed three distinct communicative patterns. In stronger performances, students used technical terms accurately and then reformulated them in simpler language for the listener, demonstrating both lexical control and audience awareness. This approach is consistent with patient-centered communication principles, which emphasize clarity, adaptation, and shared understanding over unmodified technical display (Street et al., 2009; Ho et al., 2025). In weaker performances, some students used specialized terms without adjusting them to the listener's level of comprehension; although their discourse sounded more technical, it was often less interactive and less communicatively effective. A third group avoided terminology almost entirely when uncertain, relying on vague substitutes that reduced professional precision. These contrasting patterns suggest that terminology knowledge is necessary but not sufficient: its educational value depends on whether students can integrate it into context-sensitive, audience-aware communication.

The written explanation tasks produced analogous findings. Students with stronger terminology command generally produced clearer, more structured explanations and were more likely to define specialized terms for non-specialist readers. The most effective written texts were not those containing the greatest number of technical terms but those that balanced accuracy with accessibility — a finding consistent with oral health literacy research emphasizing the importance of adapting communication to patient comprehension levels (Nurash et al., 2020; Lu et al., 2025; Yu et al., 2024).

5. Discussion

The results indicate that foreign-language dental terminology plays a meaningful and multidimensional role in the development of professional communication skills among dental students. More importantly, the findings suggest that terminology should not be conceptualized as an isolated vocabulary list detached from practice but as a communicative scaffold that helps students organize explanations, project professional identity, and navigate between disciplinary and patient-facing registers. This reframing is significant because it connects terminology instruction directly to professional identity formation: students in the present study consistently associated correct terminology use with sounding and feeling more like future dental professionals.

However, discourse analysis revealed that professionalism was expressed most effectively not when technical vocabulary was displayed for its own sake but when it was combined with clarity, tact, and audience awareness. This finding is supported by discourse-analytic theory, which treats language as a means of identity enactment, and by patient-centered communication research, which prioritizes shared understanding over technical density (Gee, 2014; Street et al., 2009). It also aligns with the broader ESP principle that language teaching should reflect the communicative



realities of the target discipline rather than linguistic form alone (Hutchinson & Waters, 1987; Anthony, 2018).

The pedagogical implications are substantial. If dental terminology is taught exclusively through memorization or translation exercises, students may be able to recognize terms without developing the capacity to use them communicatively. Communication-oriented terminology instruction — integrating role-play, case-based discussion, register shifting, and written explanation tasks — is more likely to develop both lexical precision and communicative adaptability. This instructional approach is supported by dental education research demonstrating the effectiveness of practice-oriented and reflective communication training (McKenzie, 2014; Nurash et al., 2020; Ho et al., 2025). Harden and Crosby (2000) similarly argue that effective professional education requires the integration of declarative knowledge with the performative competencies needed in authentic practice settings.

The ethical dimensions of the findings are equally significant. In dental settings, practitioners must explain diagnoses, risks, and treatment procedures in ways that support valid informed consent. Overuse of terminology without explanation risks undermining patient comprehension; avoidance of terminology risks imprecision. Ethical dental communication therefore requires balance: sufficient technical precision to be accurate, and sufficient linguistic flexibility to remain accessible. This interpretation is consistent with informed consent literature and inclusive language research in dentistry (Kakar et al., 2014; Reid, 2017; Haley & Doubleday, 2025). Dudley-Evans and St John (1998) further emphasize that ESP instruction must develop not only receptive vocabulary knowledge but also the productive discourse competence needed to communicate effectively across professional contexts.

6. Conclusion

This study has demonstrated that foreign-language dental terminology exerts a significant and multidimensional influence on the professional communicative development of dental students. Its value extends beyond technical vocabulary acquisition to encompass communicative confidence, register flexibility, and the capacity for patient-centered explanation. Students who developed familiarity with foreign-language dental terminology were better equipped not only to access international academic resources but also to engage in classroom discourse, describe clinical procedures, and communicate appropriately in simulated dentist-patient interactions.

At the same time, the study makes clear that terminology knowledge alone is insufficient. Communication was most effective when students could integrate technical accuracy with clarity, audience awareness, and interactive sensitivity. Foreign-language dental terminology should therefore be understood not as an isolated lexical item but as a component of a broader communicative competence encompassing register control, pragmatic appropriateness, and ethical responsibility. The language of future dental professionals must include the capacity to move flexibly between specialist discourse and patient-accessible explanation.



The study confirms the pedagogical value of integrating terminology instruction with communication-based practice. Isolated word learning may produce awareness of professional language without producing readiness to use it in authentic interaction. A more effective pedagogical strategy bridges terminology instruction with role-play, case-based discussion, written explanation tasks, and patient-centered communication training, enabling students to develop linguistic competence and professional identity in tandem. Future research should examine these relationships across larger and more diverse samples, and investigate how different instructional approaches to ESP in dental education influence communicative development over time.

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