

Mapping Dentists' Language Skills Using Canadian Language Benchmarks in India

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Abstract

This study examines the alignment of Canadian Language Benchmarks (CLB) with the writing competencies required by dentists in Chennai and Puducherry, India. With globalization influencing dentistry, effective communication has become essential for providing quality patient care and addressing diverse audiences. The research identifies specific writing skills vital for professional tasks, such as documenting treatment plans, preparing educational materials, and drafting academic content. A questionnaire, developed from the Essential Skills Profiles of CLB, was administered to 100 dentists to evaluate their proficiency and frequency of using these skills. The findings highlight a hierarchy of competencies, with tasks like filling forms for laboratory orders and maintaining case sheets as the most frequent, while scholarly writing is less common. These results underline the critical need for targeted training to enhance both practical and academic communication skills in the dental field. Aligning these competencies with CLB provides a framework for designing specialized English for Dental Purposes courses and in-service training modules. This study offers valuable insights for curriculum designers, communication experts, and dental educators, emphasizing the necessity of integrating language training into dental education. By equipping dentists with robust writing skills, the study aims to bridge the gap between professional requirements and existing linguistic capabilities, fostering improved patient care and professional development.

Keywords: Canadian Language Benchmarks (CLB), Curriculum Design in Dental Education, English for Dental Purposes, Globalization in Dentistry, Professional Communication Skills, Writing Competencies.

Introduction

Globalization influences the general well-being in a variety of ways and it has significantly affected the activity and survival of organizations around the world (1); the business of dentistry has not been an exception. The rapid growth of "dental the travel industry," where patients venture to the far corners of the planet for effective dental consideration, is one of the instances of the effect of globalization on the profession (2). The establishment of effective communication between the dentist and patient is increasingly significant in the present scenario to increase the effectiveness of treatment (3, 4). They were less investigated among dental students/practitioners in our country. Teaching these communicative competencies as a part of the dentistry curriculum leads to an increase in the dentist's ability to understand the patient's needs, comments, and responses to these needs. The nature of the treatment given by dentists is often associated with the patients' stress. Effective communication

skills with patients reduce the patient's anxiety and increase the patients' interest to accept dental treatments and carry out the dentists' instructions (5). Dentists are the people who deal with various individuals during their practice and have to explain the treatment plans, and instructions if any to the patients (6). During the dental health unit, one immigrant in Pondicherry described his culture's belief about how dental caries (decay) occurs. Patients with multicultural backgrounds need to be explained in the common connecting language, in our country English is the connecting language. The difficulty faced by the dentists is that they are fluent in medical terms but have to be trained properly to explain the treatment procedures in layman's terms to the patients for their better understanding, places like Pondicherry and Chennai have patients from other countries as they are among the few places of Dental Tourism in India. Apart from this, there is no separate English communication course

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prescribed and taught for dental students during the period of study. The General English course that the students' studies till their senior secondary schooling will not be adequate to understand the English language and communicate effectively in the workplace. A specific English course has to be introduced to the Dental students so that it can be useful and prepare them for their future practice. To understand the significance and necessity of the English for Dental Purposes course, there is a felt need to identify the required communicative competencies of dentists in the workplace. It has been emphasized that the ability to communicate effectively with patients—in particular, to use active listening skills, to gather and impart information effectively, to handle patient emotions sensitively, and to demonstrate empathy, rapport, ethical awareness, and professionalism—is crucial (7). Researchers in communication studies, medicine, dentistry, and dental hygiene have stated that communication is central and fundamental to the patient-provider relationship, patient motivation, prevention behaviour, and patient satisfaction, compliance with treatments and prescriptions, and health outcomes (8, 9). Dentistry is a people-focused profession in which effective communication skills are increasingly important (10-12). This enhances patient awareness and provides patients with a comprehensive understanding of their current health status. The increasing importance of communication in the domain of dentistry has paved the way for the identification of the required communicative competencies for effective dental treatments (13). To understand the competencies required for dentists, a study has been attempted to identify the required communicative competence for the dentists working in Chennai and Puducherry by using the 'ability descriptors' from the selected Essential Skills Profiles of Human Resources and Skill Development Canada (HRSDC) and converting them into 'need to' statements. With the growing demand for the English language in the medical sector for effective treatments, the need for the acquisition of communicative competencies becomes ever more significant (14-16). This demand has created a huge market for the communicative competencies of the English language across countries. Hence, there is a felt need to align the identified sets of communicative competencies with the Canadian Language

Benchmarks (CLB). The identified communicative competencies of the Dentists are arranged in terms of which of them is the most significant and which of them is the least significant when they practice medicine. With the growing competitiveness for effective treatment in the domain of medicine and specifically dentistry, as patients complain about the quality of communication in healthcare settings, there is a real need to identify the communicative competencies required for dentists to address the medical issues of the patients and redress with the solutions utilizing treatment (17). The identified communicative competencies, derived through statistical analysis, are presented in order of significance in the workplace, from the most to the least required. These competencies can be effectively aligned with the Canadian Language Benchmarks (CLB), which offer a nationally recognized, standardized framework for assessing language proficiency in real-life, work-related contexts. The CLB is particularly suitable as it provides clear descriptors for language ability across listening, speaking, reading, and writing, which can be mapped directly onto the communicative tasks required of dentists in hospital settings. The competencies identified can inform the development of targeted course content designed to meet the specific communicative demands placed on dentists in their professional environments. These findings are valuable for creating in-service training modules tailored to the linguistic needs of practicing dentists. Moreover, communication skills experts can utilize these results to design customized language programs, while curriculum designers can develop credit-based courses that align with academic and professional expectations. By using the CLB framework, stakeholders can ensure that language instruction is practical, goal-oriented, and aligned with real-world performance standards. The process of globalization influenced the ways and means of learning the English language and its use in different domains of employment. The fact can be acknowledged that India is the second most populous country in the world, attracting global companies to invest in its human resources. Though the population is a burden to the governing, it is an excellent opportunity for the business community to open new ventures, for the buying capacity is too high for any other country (13). Since India is a commonwealth country most

people here are somehow exposed to the English language, like it is the common second language in education, connecting, and language of communication among regional governments. The need for good knowledge of communicative English is necessary for any job or workplace environment. This relevance of the Indian population, globalization, and language learning is explained in detail. As India is not the only country with good human resources, multinational companies having firms at the global level demand precision in employee skills, communication is not an exception and the “standardization” of all the skills including communicative competencies is in demand. This standardization of skill scales, language teaching, and already available global standards in language teaching are explained clearly, with particular reference to CEFR (Common European Framework of Reference), ACTFL (American Council on the Teaching of Foreign Languages), and CLB (Canadian Language Benchmarks). The structure, essential skills enlisted, assessment methodology, and description of each level are done in detail. The occupational profiles and Indian Human resource development agencies such as NSDC with a focus on the Tamil Nadu healthcare sector were also explained. It further explored EMP and its relevance with dental education such as the medical discourses of dentists, study material designing, and the importance of internalization language education. The present condition of communication skills in the context of medical and dental education was also explored. The basic idea is to depict the present condition of EMP in India, the global trends in language learning, and the rising demands for the skills of dentists at the global level regarding communication. The ways to achieve these language goals of dentists were also discussed. The consumer of today is well-informed and quality consciousness and is migrating from the single-doctor nursing home setup to a more organized hospital delivery format, analogous to the retail sector, is more able to afford the best, has benchmarks across the industry to depend on, and is looking for quality healthcare not only in urban but also the rural areas, which is a huge opportunity for existing players to diversify and the new entrants to secure a toe hold. Currently urban middle class constitutes about 52.5% of the total share of households leading to a higher

demand for tertiary care. In India, typically most people seek medical care in the neighbourhood clinics for minor ailments and multi-specialty settings for major ailments. For minor ailments, the healthcare industry in India is still doctor-centric rather than clinic-centric. The team of medical practitioners plays a great role in the selection of the multispecialty hospital when it is newly established. In urban centres, brands and teams of medical practitioners play a larger role. Given the context where the brand of the hospitals and the treatments decided by the medical practitioners such as doctors (dentists) in urban areas, it becomes increasingly important to identify the essential communicative competencies for the practitioners at their workplace. The essential communicative competencies of the doctors will play a significant role in providing efficient treatment to their patients. It is in such a context; that a study of this kind has been intended to identify the required communicative competencies of the dentists practising in Chennai and Puducherry. During the last few decades, the science of ESP has developed considerably. With the rapid expansion of various domains of human knowledge and the emergence of specialized activities of human life, individual language needs have become more specific. ESP learners are of various age groups and academic backgrounds. ESP is taught as part of the academic curriculum in educational institutions. On the other hand, ESP is also needed among experienced professionals to improve their communication (18). ESP is defined in several ways and there are various interpretations as well. ESP courses, syllabus, and teaching materials are determined by prior analysis of the learner’s communication needs (19). ESP focuses on the purposes of learners, and their successful performance in work. In ESP courses, English language learning is carried out through the acquisition of a different body of knowledge, as well as a different set of skills (20). Therefore, ESP involves learning the very same knowledge base and set of skills as learning general English, but in addition, it requires the acquisition of specialized lexicons and registers. However, various approaches to ESP emerged over some time in the recent past. It was also alarming that close attention to subject-specific language might result in a narrowness of focus and could create an unreal sense of security

in participants (21). The articles clearly explain with research data that communication training is needed for dental students and dental educators are not aware of the significance of communication; hence modifications are to be done in EMP. Even the lack of one standard assessment tool for dental communication skill assessment is mentioned. The factors affecting communication in the workplace such as the power of reinforcement in communicative practice, the power of exercising in regular intervals, age, gender, and cultural effects were discussed. Previous studies have consistently emphasized the need for strong communication skills in dental education, yet their focus varies in scope and application. Dental interns acknowledge the importance of communication, particularly in patient interactions, as reflected through the use of a modified Dental Communication Skills Attitude Scale (DCSAS) (22). While this aligns with the current emphasis on evaluating and structuring communication competencies, the focus remains more on attitudinal perspectives than on direct skill assessment. Faculty attitudes and teaching methodologies have been identified as key barriers to effective communication training, reflecting the need for structured training modules (23). While there is an emphasis on adopting innovative teaching approaches, the current study advances this by offering a detailed, competency-based framework focused specifically on enhancing writing skills. A prolonged lack of communication practice can lead to skill deterioration, reinforcing the need for continuous training modules (24-26). A progressive approach to communication training—starting with theoretical instruction and advancing to practical application—further supports the structured, gradational development of competencies emphasized in this study. While these studies stress theoretical knowledge and attitudinal shifts, the present study operationalizes writing competencies into measurable parameters, providing a more pragmatic and structured approach to integrating communication skills into dental education and professional practice. The existing research underscores the importance of communication skills in dental education but reveals gaps in several critical areas. The attitudes of dental internship students toward communication skills were compared, though the focus on only two universities in Egypt limited the

generalizability of the findings (22). It was noted that faculty attitudes and current teaching methods significantly influence communication skills training, particularly in Saudi Arabia (23). While continuous communication skills are essential for effectiveness, the literature lacks studies on long-term retention and reinforcement strategies for dental students (24). Additionally, although the need for enhanced communication training in dental education has been acknowledged, there is a lack of specific, evidence-based methods for integrating such training into existing curricula (25). A step-by-step approach to teaching clinical communication has been proposed (26); however, empirical research on the effectiveness of different instructional models in preparing students for real-world patient interactions remains limited. This research addresses these gaps by examining the writing competencies using a questionnaire adapted from Essential Skills Profiles, Canada. It arranges the required writing competencies hierarchically and is aligned with the global benchmarks. Doing so contributes to the field by offering practical, evidence-based strategies for integrating communication skills training into dental education, ensuring that students are better prepared for professional practice. This study aims to identify the essential communicative competencies required by dentists working in Chennai and Pondicherry. It seeks to prioritize these competencies from the most to the least necessary in the workplace and align them with the Canadian Language Benchmarks (CLB) to provide a structured framework for language proficiency relevant to dental practice.

Hypotheses

- H1: Dentists in Chennai and Puducherry require specific communicative competencies to interact with patients and colleagues effectively.
- H2: The importance of communicative competencies varies, with some being more critical than others in the dental workplace.
- H3: The identified communicative competencies of dentists in Chennai and Pondicherry align significantly with the proficiency levels outlined in the Canadian Language Benchmarks (CLB).

Methodology

This study uses a quantitative approach for objective measurement, statistical reliability, and generalizability, avoiding the subjectivity of qualitative methods. The research tool has been prepared with the utmost care by converting the 'ability descriptors' (self-assessment) of the selected Essential Skills Profiles of HRSDC, Canada into 'need to' statements (to conduct needs analysis). There were 24 writing competencies included in the questionnaire with four responses (Quite Often, Often, Less Often, and Not at all). The sources of information were collected from 100 dentists working in Chennai and Pondicherry region. The sample of 100 practicing dentists from Chennai and Pondicherry, selected through convenience sampling, includes only those who volunteered, ensuring willing participation. Despite some selection bias, the diversity in practice settings, specializations, and experience levels enhances representativeness. The sample size aligns with similar studies, and systematic data collection ensures reliability, making the findings indicative of broader trends despite limitations. To understand the employees' needs in

terms of reading and writing competencies, Percentage Analysis has been applied in this study through which the dentists' perceived percentages of the competencies are calculated. While this study provides valuable insights, certain limitations should be acknowledged. The sample size, though carefully selected, may limit generalizability to broader populations. Additionally, potential biases in data collection were mitigated through rigorous validation and triangulation of sources. The chosen analytical methods, while appropriate for the research objectives, have inherent assumptions that were addressed through robustness checks. Finally, time and resource constraints restricted the study's scope; however, the findings lay a strong foundation for future research to expand upon.

Results

Frequency Analysis has been deployed to identify the frequently used writing competencies by the dentists working in Chennai and Pondicherry cities. The perceived percentages of the list of Competencies of the dentists have been identified and tabulated here.

Table 1: Frequency of Writing Articles and Reports

Competency	Frequency (%)
Most Often	21
Often	55
Less Often	20
Not at all	4
Total	100

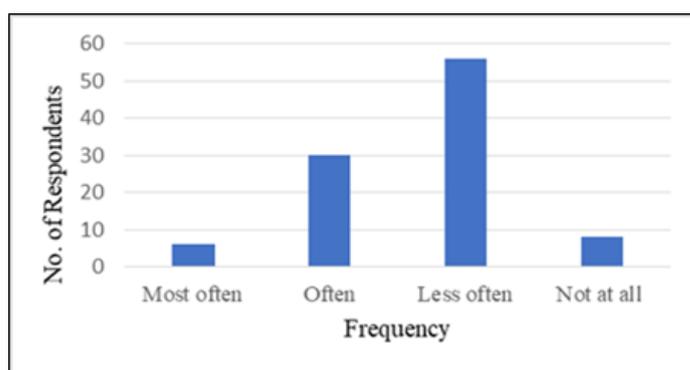


Figure 1: Writing Frequency Distribution

Table 1 presents the frequency of writing competencies among dentists working in Chennai and Pondicherry, specifically focusing on their need to produce articles and case study reports for journals and conference proceedings. The data indicates that a significant portion of these

professionals do not frequently engage in such writing tasks. Specifically, only 6% reported that they "most often" write articles and case studies, suggesting that this is not a common activity for the majority. A larger group, comprising 30% of respondents, indicated that they "often" engage in

this type of writing, while a majority of 56% admitted to doing so "less often." Notably, 8% of the respondents reported that they do not engage in these writing activities at all. This distribution in Figure 1 reveals that while some dentists do recognize the importance of writing for professional development and knowledge dissemination, a substantial majority engage in these tasks infrequently. This trend may highlight a need for targeted interventions or training programs to enhance writing competencies among dental professionals in these regions, ensuring that

more practitioners can contribute to academic and professional literature. The relatively high percentage of respondents who write "less often" suggests that while there may be some awareness of the importance of writing, it is not a regular practice for many. The 8% who do not engage in writing at all could indicate a potential gap in professional development that might warrant further investigation, particularly in understanding the barriers to writing and publishing in these contexts.

Table 2: Frequency of Writing Brochures

Competency	Frequency (%)
Most often	21
Often	55
Less often	20
Not at all	4
Total	100

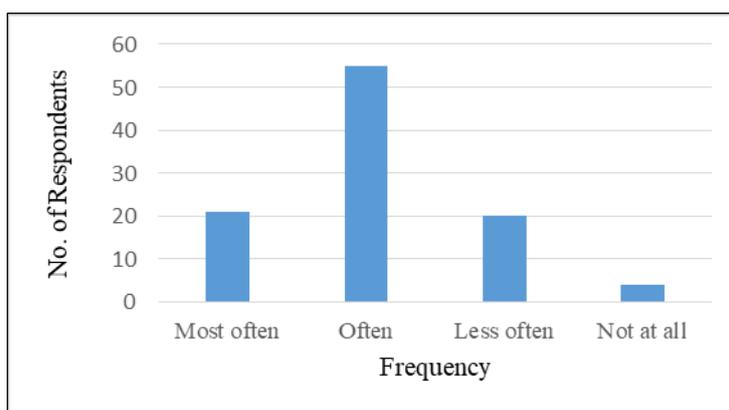


Figure 2: Frequency Distribution: Writing Brochures and Websites and Website Content

The data presented in Table 2 and Figure 2 illustrates the frequency of writing competencies employed by dentists in Chennai and Pondicherry when creating brochures, leaflets, and website content aimed at improving oral health within the community. The study's focus is on understanding how often these professionals utilize their writing skills across different target audiences, including the general public, healthcare workers, and general practitioners. According to the table, the majority of dentists (55%) reported that they often engage in writing activities related to these tasks. This indicates a strong reliance on written communication as a regular part of their professional duties, particularly in the context of public health promotion and patient education. A significant portion, 21%, indicated that they most often use these competencies, suggesting that for a subset of dentists, writing is an even more integral

aspect of their daily responsibilities. This group likely views written communication as a crucial tool in their practice, possibly due to the diverse and mixed audience they must address. Conversely, 20% of respondents stated that they use these writing competencies less often. This could imply that these dentists either delegate the task to other team members or that they rely more on verbal communication in their professional interactions. Lastly, a small percentage (4%) reported not using these competencies at all. This could be attributed to various factors, such as their specific roles within their practices, which may not require them to engage in the creation of written materials, or perhaps a lack of confidence or training in writing for diverse audiences. Overall, the table reflects a varied use of writing skills among dentists in the region, with the majority recognizing the importance of clear and effective

written communication in promoting oral health to a broad audience. The data also highlights the need for ongoing support and training to ensure that all

dentists are equipped with the necessary skills to effectively communicate through written materials.

Table 3: Frequency of Filling Data in Forms

Competency	Frequency (%)
Most often	32
Often	57
Less often	6
Not at all	5
Total	100

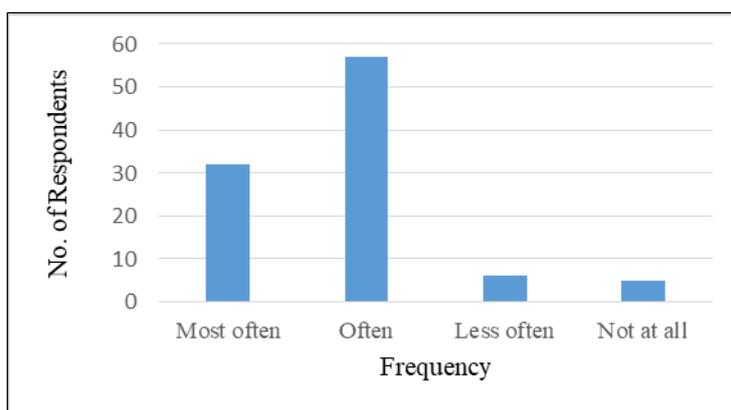


Figure 3: Form-Filling Frequency Distribution

The data presented in Table 3 and Figure 3 provides insight into the writing competencies of dentists working in Chennai and Pondicherry, specifically concerning ordering crowns, bridges, and other laboratory materials. The table reveals that a significant majority of dentists, comprising 89% of the respondents, frequently utilize writing competencies to fulfil this task. This is evident from the fact that 32% of the dentists reported using writing competencies "most often" and 57% reported using them "often". This finding suggests that writing competencies play a crucial role in the professional lives of dentists, particularly in tasks that require precise communication with laboratory technicians. The ability to effectively convey instructions and specifications through written communication is essential in ensuring

that laboratory materials meet the required standards. On the other hand, a small minority of dentists, comprising 11% of the respondents, reported using writing competencies less frequently or not at all. This may indicate a need for further training or support in developing writing competencies, particularly for those who infrequently engage in tasks that require written communication with laboratory technicians. Overall, the data presented in Table 3 highlights the importance of writing competencies in the dental profession, particularly in tasks that require precise communication with laboratory technicians. The findings of this study can inform the development of training programs and educational initiatives aimed at enhancing the writing competencies of dentists.

Table 4: Frequency of Writing Notes to Colleagues

Competency	Frequency (%)
Most often	40
Often	48
Less often	10
Not at all	2
Total	100

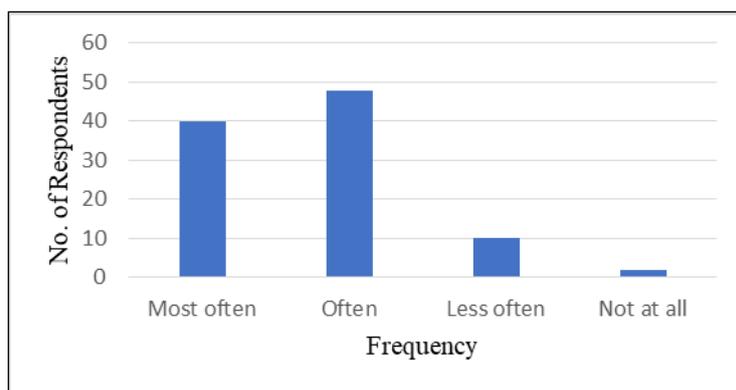


Figure 4: Note-Writing Frequency Distribution

Table 4 and Figure 4 presents the frequency of writing competencies exhibited by dentists in Chennai and Pondicherry, shedding light on their communication habits in a professional setting. The data reveals that a significant proportion of dentists, approximately 88% (40% most often and 48% often), engage in writing notes to their co-workers and colleagues regularly. These notes likely pertain to crucial information such as new treatment options, disinfection protocols, and guidelines to ensure seamless collaboration and adherence to best practices. The high frequency of writing competencies among dentists underscores the importance of effective communication in the dental profession. It suggests that dentists in Chennai and Pondicherry recognize the value of written communication in conveying critical information, facilitating teamwork, and maintaining patient care standards. The fact that a

substantial majority of dentists exhibit this competency often or most often implies that it is an integral aspect of their professional practice. In contrast, a relatively small percentage of dentists, approximately 12% (10% less often and 2% not at all), report writing notes less frequently or not at all. This disparity may indicate variations in individual communication styles, work environments, or the level of emphasis placed on written communication within specific dental practices. Overall, the table highlights the significance of writing competencies in the dental profession, particularly in the context of inter-professional communication. The findings suggest that dentists in Chennai and Pondicherry generally prioritize written communication as a vital tool for sharing knowledge, coordinating care, and upholding professional standards.

Table 5: Frequency of Writing Short Notes

Competency	Frequency (%)
Most often	34
Often	55
Less often	7
Not at all	4
Total	100

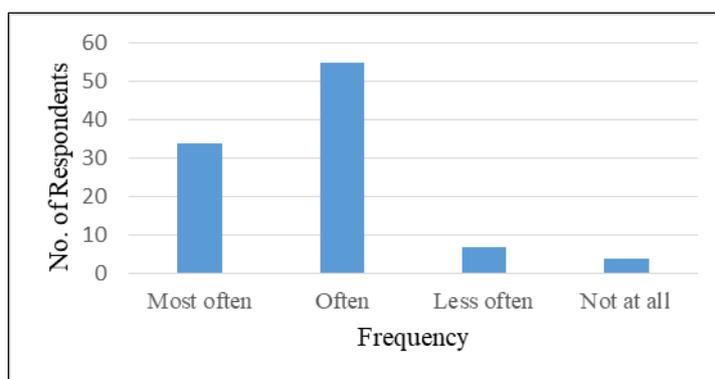


Figure 5: Short Note-Writing Frequency Distribution from Textbooks

Table 5 and Figure 5 provides valuable insights into the writing competencies of dentists working in Chennai and Pondicherry, shedding light on their habits of updating themselves to current treatment options through short notes from medical and dental textbooks, and websites. A closer examination of the data reveals that the majority of dentists engage in this activity frequently, with 55% reporting that they do so often, while 34% admit to doing so most often. This trend suggests that a significant proportion of dentists in the region recognize the importance of staying updated with the latest developments in their field and make a conscious effort to do so through writing. The fact that 89% of the respondents engage in this activity at least often underscores the value they place on ongoing learning and professional development. On the

other hand, a smaller proportion of dentists, 7%, report engaging in this activity less often, while a negligible 4% do not engage in it at all. This discrepancy may be attributed to various factors, including differences in individual learning styles, access to resources, or varying levels of motivation. Nevertheless, the overall trend suggests that the majority of dentists in the region are committed to staying updated and continually developing their skills. The findings of this study have implications for dental education and practice, highlighting the need for institutions to provide ongoing support and resources for professionals to stay updated with the latest developments in their field. Furthermore, the study underscores the importance of developing writing competencies as a critical component of professional development in the dental profession.

Table 6: Frequency of Entering Data into Tables

Competency	Frequency (%)
Most often	20
Often	68
Less often	10
Not at all	2
Total	100

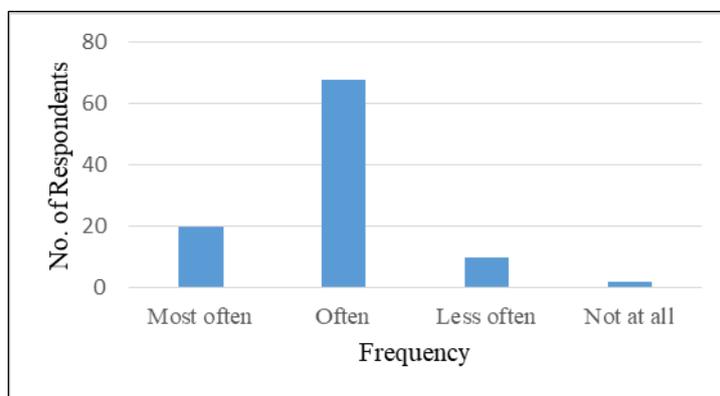


Figure 6: Data Entry Frequency Distribution

Table 6 and Figure 6 provide valuable insights into the writing competencies of dentists working in Chennai and Pondicherry, shedding light on the frequency of their documentation practices. The data reveals that a significant majority of dentists (68%) often enter data into tables and schedules in case sheets, such as treatment time, treatment given, and fee details. This suggests that documentation is an integral part of their daily work routine, and they frequently engage in writing activities to maintain accurate records. Furthermore, 20% of dentists reported that they most often enter data into tables and schedules,

indicating that documentation is a crucial aspect of their job. This finding highlights the importance of writing competencies in the dental profession, where accurate and detailed records are essential for patient care and treatment planning. On the other hand, a smaller percentage of dentists (10%) reported that they enter data into tables and schedules less often, while a negligible 2% stated that they do not engage in this activity at all. This disparity may be attributed to variations in work settings, patient load, or individual work styles. Overall, the table suggests that writing competencies are a vital aspect of the dental

profession, and dentists in Chennai and Pondicherry frequently engage in documentation activities as part of their job. These findings have implications for dental education and training programs, which should emphasize the development of writing competencies to prepare students for the demands of the profession. The results of the frequency analysis in this study have helped to understand the perceived percentages of dentists for the communicative competencies

effectively in their respective workplaces when they are engaged in treating patients related to their dental issues. The identified communicative competencies are arranged gradationally according to their mean scores. These identified communicative competencies are further arranged into the most significant to the least significant competencies for dentists when they are on the job.

Table 7: Ranking of Writing Competencies by Mean Value

Sl.No.	Competency	Mean Value	Rank
1	I need to fill in forms to order crowns, bridges, and other laboratory materials	2.36	1
2	I need to enter data into tables and schedules in case of sheets, like treatment time, treatment given, fee details	2.26	2
3	I need to write articles and case study reports for journals, and conference proceedings.	2.16	3
4	I need to write notes to co-workers and colleagues like new treatment options, new disinfection protocols, and guidelines to act.	2.13	4
5	I need to write brochures, leaflets, and websites to improve oral health in the community addressed to various mixed target readers like the common public, other health care workers, and general practitioners.	2.04	5
6	I need to write short notes from medical and dental textbooks, and websites to update myself on current treatment options	1.94	6

The ranking of writing competencies among dentists in Table 7 highlights the practical and administrative focus of their documentation needs. The highest-ranked competency, filling forms for lab orders (Mean = 2.36), and entering patient data (Mean = 2.26) emphasizes the importance of accurate record-keeping. Writing case study reports (Mean = 2.16) is also valued, though competencies like writing to colleagues (Mean = 2.13) and creating public health materials (Mean = 2.04) rank lower. The least prioritized skill, writing notes for self-updating (Mean = 1.94), suggests that learning is valued but secondary to clinical duties. These findings highlight the need for balanced training in administrative, clinical, and academic writing.

Discussion

The data across multiple tables reveals important insights into the frequency and perceived importance of writing competencies among dentists in Chennai and Pondicherry. Writing practices range from routine documentation to scholarly communication, each playing a distinct role in their professional landscape. A notable

finding is the relatively infrequent engagement with academic writing tasks, such as drafting articles and case reports for journals or conferences. These are among the least frequently performed writing activities, suggesting a gap in scholarly contributions from practitioners in these regions. This underscores the need for professional development initiatives that enhance research writing capabilities, enabling more dentists to contribute to academic discourse and evidence-based practice. Conversely, writing tasks related to public health communication—such as creating brochures, leaflets, and web content—are more common. Many dentists report frequent involvement in these activities, reflecting the importance of written communication in educating the public and promoting oral health. Similarly, writing for documentation purposes, such as entering data into case sheets and schedules, is a highly prevalent activity. These routine yet essential clerical tasks support patient care by ensuring accurate records and facilitating treatment planning. Inter-professional communication also emerges as a key area where writing plays a vital role. Dentists frequently write

notes regarding new treatment protocols or guidelines to share with colleagues, emphasizing collaboration and adherence to evolving standards of care. The alignment of these writing tasks with the Canadian Language Benchmarks (CLB) adds further depth to the analysis. Competencies such as filling out laboratory forms (Benchmark 11), recording patient data (Benchmark 6), and writing technical notes (Benchmark 10) are directly mapped to CLB descriptors, confirming the relevance of these benchmarks in assessing workplace communication skills. Notably, the most essential writing competency identified—ordering laboratory materials—demonstrates the practical, daily demands of the profession, whereas competencies tied to scholarly writing or continuing education were ranked lower, despite their long-term value.

The findings of this study reinforce the growing recognition of communication competencies as essential to effective dental practice. Strong communication skills are essential for delivering high-quality patient care, a perspective that aligns with this study's identification of key writing competencies (10-12). Additionally, the study's findings resonate with the linguistic challenges in multilingual clinical settings, and the legal importance of precise written communication, particularly in patient consent (5, 15). By proposing a gradational arrangement of writing skills, this study offers a structured approach to assessing and improving dentists' communication abilities, which can be used in both recruitment and professional training. Integrating these identified writing competencies into dental education, training, and recruitment is essential for bridging skill gaps and ensuring professional excellence. The study's findings align with the formal communication training in dental education (22-24). The need for structured training modules to enhance communication proficiency among dental students is widely recognized, underscoring the importance of systematic approaches to skill development in dental education (7, 26). The proposed competency framework provides a practical and evidence-based strategy for improving communication skills among dentists, ultimately contributing to more effective patient interactions, legal compliance, and professional development. By incorporating these competencies into dental

curricula and professional training programs, institutions can ensure that future dental professionals are well-equipped to meet the evolving demands of the field. Factors such as the availability of writing training in dental curricula, institutional support, and exposure to research may influence dentists' writing competencies. Additionally, language proficiency, particularly in non-native English-speaking contexts, could affect writing skills. While these aspects were not the primary focus of this study, recognizing their impact highlights the complexity of the issue and suggests directions for future research.

Conclusion

Effective communication, particularly strong writing skills, is crucial in dentistry for professional credibility, patient care, and legal documentation. This study identifies and structures key writing competencies, offering a framework that can enhance recruitment, training, and curriculum development in dental education. Aligning with previous research, the findings emphasize the need for structured writing training in dental institutions and continuous professional development for practitioners. Policymakers should integrate these competencies into licensing and accreditation standards, ensuring dentists meet essential communication benchmarks, while educators must embed writing skill development within dental curricula. Practising dentists should engage in on-going training to refine their communication abilities. By implementing these recommendations, the dental profession can cultivate a more competent and patient-centred workforce, leading to improved healthcare outcomes and higher professional standards. This study did not statistically compare writing skill frequency across subgroups such as experience level or specialization. Future research could incorporate these variables to identify potential differences and better understand how professional background influences writing competencies.

Abbreviations

CLB: Canadian Language Benchmarks, ESP: English for Specific Purposes, HRSDC: Human Resources and Skills Development Canada, NOC: National Occupational Classification.

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Author Contributions

T. Pushpanathan: Conceptualization, manuscript preparation, T. Senthamarai: Design, Data collection, Analysis, D. Jaichithra: Design, Data collection, Analysis, Yamini: Drafting, Reviewing.

Conflict of Interest

The authors declare no conflict of interest regarding the publication of this manuscript.

Ethics Approval

The study was conducted in accordance with ethical standards, and ethical clearance was obtained from our working institution. Written consent was secured from all participants (Dentists) involved in the study.

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References

- Hassan SA, Bhateja S, Arora G, Prathusha F. Effect globalization on dentistry. *Journal of Management Research and Analysis*. 2020;7(3):101-3.
- Donaldson ME, Gadbury-Amyot CC, Khajotia SS, Nattestad A, Norton NS, Zubiaurre, LA, Turner SP. Dental education in a flat world: advocating for increased global collaboration and standardization. *Journal of Dental Education*. 2008;72(4): 408–421.
- Prabavathi R, Nagasubramani PC. Effective oral and written communication. *Journal of Applied and Advanced Research*. 2018;3(S1): 29.
- Alauddin MS, Baharuddin AS, Mohd Ghazali MI. The Modern and Digital Transformation of Oral Health Care: A Mini Review. *Healthcare (Basel, Switzerland)*. 2021; 9(2): 118.
- Sharma A, Chhabra A, Bopiah C. Patient consent in dentistry: Are we legally safe? *Journal of Oral Health Communication Dentistry*. 2011; 5(2): 68–72. doi: 10.5005/johcd-5-2-68.
- Salim NA, Sallam M, Aldweik RH, Sawair FA, Sharaireh AM, Alabed A. Rating communication skills in dental practice: the impact of different sociodemographic factors. *BMC Medical Education*. 2023; 23(1): 950.
- Hannah A, Millichamp CJ, Ayers KM. A communication skills course for undergraduate dental students. *Journal of Dental Education*. 2004; 68(9): 970–977.
- Cobelli N, Chiarini A. Improving customer satisfaction and loyalty through mHealth service digitalization: New challenges for Italian pharmacists. *The TQM Journal*. 2020; 32(6): 1541–1560.
- Webb L. Exploring the characteristics of effective communicators in healthcare. *Nurs Stand*. 2018; 33(9): 47–51.
- Ho JC, Chai HH, Lo EC, Huang MZ, Chu CH. Strategies for effective dentist-patient communication: a Literature Review. *Patient preference and adherence*. 2024 Dec 31;18:1385–94.
- Waylen A. The importance of communication in dentistry. *Dental Update*. 2017; 44(8): 774–780.
- Parker MA. A perspective on doctor-patient communication in the dental office. *North Carolina Med J*. 2007; 68(5): 365–367.
- Sultan A. Digitalization in dentistry: An ongoing revolution shaping the future of dentistry. *IP International Journal of Maxillofac Imaging*. 2023; 9(1):1-2.
- Easson E. Communicating effectively with patients. *British Dental Journal Team*. 2020; 7(10): 21.
- Goldsmith C, Slack-Smith L, Davies G. Dentist-patient communication in the multilingual dental setting. *Australian Dental Journal*. 2005; 50(4): 235–241.
- Freeman R, Humphris G. *Communicating in Dental Practice*. UK: Quintessence Publishing Company Limited; 2019; 104. <https://www.quintessence-publishing.com/usa/en/product/communicating-in-dental-practice>
- Mellor, Anthony C, Milgrom Peter. Dentists' attitudes toward frustrating patient visits: relationship to satisfaction and malpractice complaints. 1995; 23(1): 15-19.
- Villata Emiliana. Helping professionals prepare presentations in English for International conferences. *Forum*. 2003; 41(1): 30-37.
- Munby JL. *Communicative Syllabus Design*. Cambridge: Cambridge UP; 1978.
- Robinson P. *ESP today*. UK: Prentice Hall International Ltd, 1991; Volume 12, Issue 3, Pages 263–266. DOI: 10.1016/0889-4906(93)90006-A
- Swales John. *Episodes in ESP*. Oxford: Pergamon Institute of English. 1985.
- Atteya Sara M, Saleh Suzan M, Essam Wafaa A. Attitudes of Dental Interns towards learning communication skills in Alexandria University. *Alexandria Dental Journal*. 2007; 4(2): 20-27.
- Kasabah Samer, Prakash Prashanth, Aliuddin Syed K. Teacher's perspective on the inclusion of communication skills in Dental Education Curriculum. *International Journal of oral care and research*. 2017; 5(2): 131-136.
- Laurence B, Bertera EM, Feimster T, Hollander R, Stroman C. Adaptation of the Communication Skills Attitude Scale (CSAS) to Dental Students. *Journal of Dental Education*. 2012; 76: 1629-1638.

25. American Dental Education Association. ADEA Competencies for the New General Dentist. *Journal of Dental Education*. 2011; 75 (7): 932-935.
26. Salgado Henrique, Castro-Vale Ivone. Clinical Communication Skills Training in Dental Medical Education: The Covid-19 Pandemic Challenge. *Healthcare*. 2020; 8(429): 2-6.