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Notes on the curricular model for the training of dentists

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Abstract
The training of dentists, like that of many other specialties within the health sciences, requires an ongoing process of refinement and updating, particularly in a context marked by significant and systematic social, scientific, and technological changes. This article aims to analyze the training model for dental professionals in Quito, Ecuador. To that end, it discusses the categories of mode of action, competencies, and professional profile in light of key theoretical contributions from the pedagogical sciences. The analysis is based on a review of specialized literature using a qualitative approach with a strong heuristic component. After reviewing contemporary trends on these topics, the author raises several essential questions whose answers should guide the process of curricular model improvement.

Keywords: Mode of action, competencies, professional profile, curriculum design

Introduction

Traditional university education, up until the mid-20th century, was primarily focused on the transmission of knowledge through a discipline-based approach [1,2]. In other words, students were provided with information related to the various branches of a specific field, and in more advanced educational models, a portion of their training included practical activities [1]. However, it was common to observe that, in many cases, graduates performed poorly in professional settings [1]. Although they possessed theoretical knowledge, they often lacked the necessary skills to carry out tasks specific to their profession [1]. As a result, a significant amount of time was needed for them to acquire the required competencies [1,2].

This situation led the scientific community to conduct research aimed at analyzing and transforming this phenomenon [1,3,4]. One key outcome of such research was the identification of modes of action that is, subsets of activities that serve as milestones or core axes within each specialty [5,6]. The definition and application of these modes have become a central focus in pedagogical science studies [6]. Regarding academic debate on this concept, notes that there is general consensus that a mode of action represents a "generalization of professional methods and their realization in a system of actions" [7]. As such, it becomes a powerful tool for the training of university students [5,7].

These theoretical approaches have been adopted in the education of health science professionals, including, of course, dentists. The objective of this article is to analyze the dentist training model in Ecuador, based on the experience of the Universidad de Los Hemisferios. The findings provide a basis for outlining guidelines aimed at improving and updating the curricular design.

Materials and Methods

This study used guiding documents that regulate the curricular progression of dentistry students at several universities in Ecuador. These materials were subjected to a content analysis protocol based on a set of indicators [8]. In addition, a review was conducted of the specialized literature on the topic, including books, journal articles, monographs, and essays by various authors [9,10]. The study also incorporated interviews with key informant experts in the academic field to gather insights into the strengths, limitations, and prospects of dental education in Ecuador [10].

A qualitative methodology was employed, with a predominance of heuristic methods. The findings are presented as reflective insights to support potential lines of action for improving the dental education program.

Results

1. Background and Current Status of Dental Education in Ecuador

As in most parts of the world, dental education in Ecuador initially took place within certain medical schools [11]. Starting in the 1960s, the first faculties and schools specifically devoted to dentistry began to emerge first at the Universidad Central and later at other institutions of higher education [12].

An enlightening account of the history of dentistry in Ecuador is provided by Dr. Jaime Luna and his collaborators [13]. According to their research, the year 1693 marked the beginning of medical studies in the Quito region, initiated by Fray Ignacio de Quesada and the Royal University of Saint Thomas Aquinas of the Order of Preachers in Quito [13]. However, dental care was considered secondary. It was not until 1904 that dentistry courses were incorporated into several medical faculties across the country [13].

Over time, the number of universities offering this specialty increased. Institutions such as the Universidad Central, Universidad San Francisco, Universidad de Las Américas, Universidad Tecnológica Equinoccial, and Universidad Católica de Santiago de Guayaquil included dentistry programs within their respective health sciences faculties. In 2018, the dentistry faculties at Universidad de Los Hemisferios in Quito and Universidad Espíritu Santo in Guayaquil further expanded the landscape of higher education institutions offering this program [14]. This expansion continued in 2021 with the addition of a dentistry

program at Universidad SEK, influenced in part by the COVID-19 pandemic [14].

Perhaps due to the comparatively limited development of dentistry in relation to other medical sciences, the first university-level dentistry programs in Ecuador lasted only two or three years, and their graduates held a lower status than medical doctors [15]. Later, partnerships between specialists and universities strengthened, and following a tradition established in Europe and the United States, the Latin American Dental Federation was founded [15]. This organization played a major role in promoting the training of dentists with a high technical-professional standard and growing recognition within both the scientific community and society at large [15].

As a result of this historical evolution, the quality and rigor of dental education in Ecuador have undergone several phases [16]. Cedeño *et al*. (2019) observed that the curriculum of Ecuadorian dental programs did not reflect prevailing international trends [16]. The professional role of the dentist was largely confined to the stomatognathic system, focused on detecting pathologies, diagnosing dental and skeletal malocclusions, and applying treatments to oral and periodontal conditions [16]. However, other important aspects of the profession were overlooked.

In their critical analysis of the broadly adopted curriculum model, these authors highlighted a lack of standardization and alignment with societal needs [16]. The concept of comprehensive oral health was predominantly linked to therapeutic procedures rather than prevention [16]. There was also a noted deficiency in collaboration between dentists and other medical professionals, such as internists, obstetricians, and nurses [16]. Moreover, within clinical settings, there was an absence of strong theoretical and scientific foundations, leading dental education to lean more toward clinical pragmatism than epistemological rigor [16].

Recognizing these weaknesses, the governing bodies of Ecuadorian universities-initiated efforts in the early 21st century to improve the conceptual framework for dental training [10]. One of the cornerstones of these reforms was the anticipation of the future scenarios in dental care, which demanded an increased number of graduates with higher professional competencies, strong technological proficiency, and a firm commitment to health prevention [10,17]. Furthermore, the reforms aimed to expand opportunities for continuing education and specialization, increase the impact of scientific findings on professional practice, and improve other material incentives [17].

This improvement process was promoted and monitored by the Council for Evaluation, Accreditation, and Quality Assurance in Higher Education [CEAACES [17]]. Supported by a robust system of quality indicators, the process began around 2012 and continues to this day, striving for an excellent educational model [10].

However, this transformative effort was severely disrupted by the SARS-CoV-2 pandemic [14]. During this period, dental health services were significantly reduced or suspended due to the high risk of contagion from contact with oral mucosa [14]. Several studies, such as Álvarez *et al*. (2023), report that COVID-19 not only had a considerable impact on clinical dentistry with increased cases of oral health problems but also necessitated extreme biosecurity measures, compelling professionals to treat conditions while minimizing the risk of transmission [14].

Simultaneously, the training of dental students was also affected. As part of epidemiological control measures, academic activities at universities were suspended. The pandemic provoked negative reactions among dental students, as documented by Cedeño (2021) [16].

The experience of COVID-19 highlighted the essential role of technology as a support tool in professional education. Consequently, with the resumption of regular instruction, the integration of educational technologies was reinforced and encouraged. Likewise, the irreplaceable role of prevention and health education was underscored in a context where access to health services was limited. Promoting hygienic habits and oral care practices at the community level became a vital strategy to reduce dental pathologies.

2. Description and Foundations of the Dentistry Curriculum Design at Universidad de Los Hemisferios: A Competency-Based Approach

After the most critical phase of the pandemic, efforts to improve, evaluate, and accredit the dental curriculum resumed. In-person instruction was reinstated, and teaching activities continued with more thoughtfully designed program models.

Currently, in most Latin American countries, the curriculum model for dentistry is structured over ten semesters [18]. Throughout this period, instructional activities are organized according to the logic of the profession and academic training goals. The curriculum begins with general foundational education and increases in complexity, culminating in the comprehensive preparation of future dentists through a structured system of preclinical and clinical practical activities [18].

At Universidad de Los Hemisferios, this same structure has been adopted. The curriculum model is organized around five core areas: humanistic, basic, scientific, specialized, and complementary education. Each of these areas comprises a set of instructional activities distributed across the five years of study. The following chart illustrates the distribution of these curricular components.

Table 1: General Distribution of Content Areas in the Dentistry Curriculum at Universidad de Los Hemisferios

	1	2	3	4	5	6	7	8	9	10
Humanistic Education	[Person, sense of happiness, nature, ethics, art, and contemporary debate]									
Basic Education	Rhetoric, expression, and language									
Scientific Foundations of the Program	Microbiology, histology, biochemistry, physiology, pharmacology, embryology, anatomy, immunology, medicine, and pathology									
Program-Specific Education	Morphology, anesthesiology, dental materials, occlusion, radiology, clinical simulation, periodontics, endodontics, restorative dentistry, rehabilitation, pediatric dentistry, pathology, oral surgery, bioethics, geriatric dentistry, implantology									
Complementary Program Education	Preventive health, art and culture, psychology, sports, creativity and innovation									

Note: The subjects listed under a single heading may include multiple components or modules distributed across more than one semester.
Source: Compiled by the author, adapted from Universidad Hemisferios (2021)

3. Curriculum Design Structure and Theoretical Foundations

The curriculum comprises a total of 63 academic activities contributing 170 academic credits. Among these, 11 include clinical practice, five involve professional internships, and two are related to community service. The distribution of activities in the final two semesters emphasizes hands-on experience and degree completion projects. The content delivered during this phase is integrative in nature.

The curriculum features a foundational core composed of introductory subjects and activities, including basic and preclinical sciences as well as general cultural education and communication skills many of which are shared across other medical disciplines. This is followed by specialized coursework specific to dentistry as an autonomous science, equipping students with discipline-specific knowledge. The model also includes a set of optional and elective activities designed to enhance professional preparation through a vocational approach.

Time allocation is structured to maintain a balanced distribution across teaching hours, applied and experimental practice [in both field and laboratory settings], student independent work, pre-professional internships, and designated time for degree projects.

Now, more than six years after the launch of the dentistry program at Universidad de Los Hemisferios, it is important to assess its theoretical underpinnings. This requires examining key curricular theory concepts, particularly the categories of professional profile, mode of action, and competencies.

Numerous studies have established the theoretical basis for defining the modes of action in various academic disciplines [3]. For instance, Salas and Salas (2014) state that the professional mode of action in medicine includes "comprehensive care for individual and collective health, the application of clinical and epidemiological methods, diagnosis and treatment in the integral care of individuals, families, communities, and the environment, as well as the communication required for the effective application of these professional working methods" [3].

Within this pedagogical reform movement, the concept of professional profile has emerged as a central element in the reconstruction of university curricula [19]. Martelo *et al*. (2017) offer an insightful analysis, asserting that "the professional profile defines the graduate's competencies to achieve workplace performance in their field of study; it reflects their ability to solve problems in a dynamic and uncertain work environment, as well as their capacity to learn and adapt to new situations" [17, 19].

However, González *et al*. (2014) highlight the often indiscriminate use of the terms professional profile, mode of action, and competency [4]. These authors warn against the harmful tendency to design profiles and curricula through an overly instrumentalist lens, disregarding the constant technological, social, and axiological changes [4]. They argue that professional profiles should not be treated as static entities but must be continually re-evaluated in alignment with the educational mission, curricular model, and goals of life-long education: "always taking into account contextual and cultural relationships, since an individual is not just cognition, attitude, and perception" (p. 181) [4].

In line with this perspective, Villavicencio (2015) contends that the professional profile should go beyond mere technical competence [20]. He emphasizes the axiological components of professional dental practice, noting that values such as altruism, tolerance, human sensitivity, ethical integrity, and the ability to engage assertively with colleagues, patients, and their families are essential for graduates (20). To cultivate these qualities, he advocates for:

"the design of learning environments that promote the development of cognitive functions, the acquisition of skills and abilities, critical thinking, decision-making autonomy, leadership, collaborative work, effective communication, social sensitivity, solidarity, ethics, and tolerance for diversity" (p. 5) [20].

In practical terms, these doctrinal principles have been adopted as foundational elements in curricular theory [21]. Based on this framework, various pedagogical studies have helped define the components of the dentist's professional profile [21]. As López (2015) explains regarding the curriculum update in the dentistry program at the Universidad de la República in Montevideo, Uruguay, it is possible to distinguish different levels of generality and specificity in the professional functions of this specialty [21]. These distinctions are illustrated in Figure 1.

Table 2: Breakdown of the Functions that Constitute the Dentist's Professional Profile

Functions as a Health Professional	Operate within healthcare systems that provide universal, accessible, high-quality, and participatory coverage, with a preventive and humanistic orientation, aimed at improving the quality of life for all people.
	Act within a framework of absolute respect for human beings and the continuous defense of their rights, fully assuming the responsibilities that the practice of the profession entails, in accordance with established ethical and legal standards.
Functions as a Dental Professional	Prevent, diagnose, forecast, treat, and evaluate oral health problems affecting individuals and communities.
	Practice comprehensive dentistry, emphasizing preventive care as a fundamental pillar.
	Integrate interdisciplinary and interprofessional teams, particularly in the field of oral health.
Functions as a University Professional	Practice professionally in both public and private organizations, independently or in employment relationships.
	Uphold a professional commitment that seeks to respond to the political, social, and epidemiological dynamics of the context in which one practices.

Note: This model was constructed primarily based on the proposal of the Teaching Sector Commission of the Universidad de la República, based in Montevideo, Uruguay, but it broadly aligns with the frameworks proposed by Perodín *et al*. (2021), Herazo *et al*. (2013), Martelo *et al*. 2017), González *et al*. (2014), and Casnati and Villavicencio (2015).
Source: Adapted from López (2015)

Professional profiles imply the assimilation of knowledge, skills, and qualities required for the effective fulfillment of a professional role that is, professional competency [22]. Consequently, the training, selection, promotion, recognition, and evaluation of specialists have come to depend on how well they demonstrate mastery of cognitive components, practical abilities, and personal attributes in their professional performance. Thus emerged the human

resources management model based on competencies, which in the educational sphere prompted a revolutionary leap, manifesting in the transformation of curricular structures [23].

The study of competencies has led to multiple definitions and classifications. Initially, they were understood strictly as skills, but this view was soon replaced by a broader understanding that incorporates three dimensions: cognitive, procedural, and attitudinal or behavioral summarized as "knowing how to do, being able to do, and wanting to do" [24]. The cognitive dimension relates to mental processes involving the application of theoretical knowledge through logical reasoning and the execution of complex intellectual operations such as analysis, comparison, and classification [25]. The attitudinal or behavioral dimension concerns how individual needs, motivations, interests, convictions, and other psychological constructs drive a person's actions [1].

The procedural dimension of competencies, in turn, refers to the practical skills and expertise that result in transformation of the object of professional activity. Some sectors of production, services, economics, or technology require specific manual operations that may be repetitive or automated [26]. Others demand advanced intellectual abilities, such as programming, computation, or scientific research [7]. However, in most professional activities, competencies typically involve the integration of instrument or material manipulation with highly structured and precise methods [27].

Competency is thus understood as the possession of the necessary skills, attitudes, and knowledge to resolve a specific problem [28]. Among the most general competencies expected of health professionals are critical thinking, prognosis, treatment planning, effective communication, and preventive care, all within the context of community health education attributes common to many fields within the health sciences.

Based on the article content concerning the definition and classification of competencies, as well as related materials such as those by Beltrán and Ikeda (2004), a taxonomy was developed and is presented in Figure 2 [6]. This graphic helps elucidate the nature of this conceptual category, serving as a pathway for further exploration of the topic addressed in this article. The breakdown of competencies is organized using three classification criteria, from which eight typologies are derived

Table 1: Taxonomic Model of Professional Competencies

By Origin	Innate
	Developed
	Acquired
	Constructed
By Expression	Cognitive
	Behavioral
	Affective
By Degree of Perception	Objective
	Institutional
	Subjective
By Role in the Profession	General
	Specific

Note: In various texts, these are referred to as job competencies; however, the framework presented here is more closely aligned with the university-level training process.
Source: Author's own elaboration.

According to Beltrán and Ikeda (2004), human beings are born with certain innate skills that support survival [such as sucking, babbling, and crying] [6]. In early childhood, other abilities emerge with similar functions, such as standing, grasping objects, making sounds, and later crawling, walking, and running. As social interaction increases, children begin to communicate through gestures and form early linguistic structures, which lay the foundation for higher mental processes. Gradually, they acquire developed competencies such as verbal communication, object manipulation, rational thinking, and expressions of affection. These authors refer to developed competencies as those that evolve from innate ones. In this phase, communicative processes are refined through reading and writing, logical thinking supports increasingly complex mental operations like calculation or situational analysis, and object manipulation enables the ability to mold, assemble, or construct, either manually or with basic tools.

Competitions are the most complex. These require a combined use of motor and intellectual skills to create new tangible or intangible outcomes, building upon previously acquired competencies. This category includes the abilities needed to practice a trade or profession, conduct scientific research, or engage in artistic creation. Since these competencies activate both physical and psychological capacities and depend on a person's motivation to learn and self-develop, they are referred to as "critical-sense competencies" (p. 110) [6].

According to Miller (1990), as cited by Charría *et al*. (2011), there are four levels of competencies comprising knowledge [knowing and knowing how], which represent mastery of professional content and theoretical understanding of how to apply it [26]. In the taxonomy previously presented, these are identified as cognitive. The next level concerns behavior [showing and doing], or the ability to perform professional actions in academic and workplace settings, which are referred to as behavioral in this model. This classification is particularly useful when designing learning objectives for dental students [26].

In addition to knowing, being able, and wanting to do, Charría *et al*. (2011) drawing on the work of Echeverría (2002) and Cejas (2003) suggest that professional competencies also include the ability to assume responsibility, organize, and make decisions [1, 23, 26]. This is termed knowing how to be and corresponds to what is labeled affective in the graphical model presented earlier.

In the same article by Charría and collaborators, the authors revisit Prieto's (1997) classification of competencies into three types: observable and measurable (objective), perceived and inferred (subjective), and verifiable through formal evaluation (institutional) [26]. The first are those directly assessable by instructors; the second involve deduction, based on how students demonstrate the necessary skills to meet a learning task; and the third refer to competencies verified through examinations or final academic assessments.

When considering the role of competencies in professional performance, they are further classified as general or specific. General competencies are those that enable graduates to integrate into a professional environment, organize and plan their work, understand the processes and phenomena relevant to their field, and creatively solve complex problems. These include effective communication, resource management, collaborative work, and planning. On the other hand, specific competencies are those that allow

graduates to carry out the distinct and characteristic tasks of their particular discipline [19].

It is important to note that these classification categories are not mutually exclusive. In some cases, one may encompass another (e.g., behavioral competencies inherently require cognitive mastery), and in others, a single competency may fall into multiple categories for instance, measurable competencies may also be institutional.

The practical implementation of this theoretical framework in dental training was explored through interviews with key informants' experts in pedagogy and dental education with extensive experience in academic training processes.

According to the data collected, the pedagogical model implemented at Universidad de Los Hemisferios aligns well with the most advanced educational approaches in Latin America. Its design is based on best practices from leading universities in both the region and Ecuador. The faculty demonstrates strong scientific credentials, and the material and infrastructural resources generally meet the needs of the teaching-learning process.

Discussion

As explained by Cejas and collaborators (2018), the university curriculum is not a static body but a dynamic structure that must be subject to constant pedagogical and scientific scrutiny [1]. Curriculum improvement must consider not only the diversity of the current context but, more importantly, that of the future. In this regard, as Casanovas (2018), cited by Cabrera *et al*. (2022), points out, the curricular framework encompasses three levels: macro, meso, and micro [29].

The macro level is based on an ontological understanding of the university professional's role in society. This perspective largely shapes the qualities and values that training programs aim to develop in professionals, in alignment with the desired model of society. The meso level concerns the structural design of the curriculum, defining content, ensuring disciplinary coherence and progression, and organizing transversal activities according to the internal logic of the profession. The micro level focuses on configuring the actual teaching activities both curricular and extracurricular including the duration of modules or courses, evaluation systems, practical tasks, and all didactic aspects of the learning process.

It is at this third level where the so-called "fundamental problem of pedagogy" becomes most apparent: the conflict between professional practice and the teaching of the profession. These may appear similar but possess very different qualities and dynamics [3]. While professional practice seeks to solve real-world problems, teaching focuses on the development of professional modes of action.

A comparative review of the literature suggests that improving the dental curriculum requires addressing the following questions:

- What kind of professional does current and future dental practice in Ecuador require?
- How should the core processes of university education contribute to the goals of the National Plan for Good Living (*Plan Nacional del Buen Vivir*)?
- How is dental practice integrated into the concepts of comprehensive, total, or "One Health"?
- What is the appropriate balance between academic and practical activities?
- What role does scientific research play in professional training?
- How can syllabi be integrated in a multi-, inter-, and transdisciplinary way?
- What assessment models best support student development?
- How can key technological advances in science be meaningfully integrated through educational technology?
- How can curricular design reflect students' professional interests and preferences?
- How should the effectiveness of the curriculum be evaluated?

It would be unrealistic to attempt to answer all of these complex and multifaceted questions within the scope of this article. Each of them could serve as the foundation for independent scientific study. Therefore, the following reflections are only preliminary ideas intended to spark debate and future research.

According to the latest National Health and Nutrition Survey, at least one-fifth of Ecuador's population reports concern about medical issues, and around 3.5% require inpatient treatment [30]. Consequently, health services are currently the most in-demand sector in the country [31]. This underscores the need for dentists to be fully integrated into the national health strategy, capable of working collaboratively with other specialists to benefit the community not only in terms of treatment but, more importantly, in preventive care.

The training of dentists should ensure that graduates incorporate into their professional practice the principles of equity, universality, solidarity, interculturality, quality, efficiency, effectiveness, precaution, and bioethics, with a gender and generational perspective, as outlined in Chapter II, Title II of the Constitution of the Republic, concerning the rights of *Buen Vivir* [32].

This vision also aligns with a growing global trend to move away from defining health as merely the absence of disease. In fact, by 2009, the World Health Organization [WHO] had already redefined health as "the individual and collective condition of quality of life and well-being, resulting from biological, material, psychological, social, environmental, cultural conditions, and the organization and functioning of the health system" [33].

More contemporary approaches—especially following the COVID-19 pandemic—support the "One Health" concept. It is understood as:

"The collaborative effort of multiple health science professions, along with their related disciplines and institutions, working integratively at all levels to achieve optimal health for people, domestic animals, wildlife, plants, and our shared environment" [34].

According to this perspective, health professionals, including dentists, can no longer be confined to the narrow boundaries of their own discipline. Instead, they must extend their scope into interdisciplinary fields such as epidemiological surveillance, diagnosis, prevention and control of zoonoses, epizootics, epiphytotics, and food safety.

With regard to balancing academic and practical activities, there is a clear trend toward fostering student engagement with healthcare institutions in training contexts. However, the experience of blended learning necessitated by COVID-

19-related lockdowns demonstrated that alternative training methods—those that do not rely exclusively on traditional classroom interaction—still hold untapped potential [14]. These could free up time for increased contact with patients and communities.

As for the role of scientific research in the curriculum, while investigative activities are currently included at various levels, the development of a scientific mindset that enables students to analyze healthcare contexts and apply basic scientific reasoning [problem identification, hypothesis formulation, method application, data processing, and solution design] to real-world dental practice remains insufficient [23].

Content and skills integration is a highly debated issue in pedagogical circles. Research in this area supports structuring modules around professional modes of action, where course objectives and educational activities contribute to the development of competencies with an integrative focus [3,7, 24, 29].

Evaluation systems must also increasingly incorporate self-assessment and group assessment as developmental tools for students. In this regard, it may be beneficial to apply concepts such as "stage-based formation of mental actions" and the "zone of proximal development (ZPD)" from Lev Vygotsky's cultural-historical approach [35].

Another important area is the incorporation of educational technologies. Like other health sciences, dentistry has benefited progressively from technological advances. The development of sophisticated teaching programs, digital tools, methodologies, and instructional models based on digital platforms and networks has given rise to a host of terms, including e-learning, b-learning, mobile learning, Education 3.0, and Computer-Based Learning (CBL). While some of these terms are often used vaguely, they have contributed to the emergence of *infopedagogy*, the branch of pedagogy that focuses on the integration of information technology into teaching [2].

Many of these technological innovations have proven effective in competency-based education at various levels. Examples include eXeLearning platforms, so-called smart classrooms, physical and virtual simulators, 3D printing, nanotechnology, and virtual learning environments, among others [2, 27, 36, 39].

It is also important to acknowledge that in contemporary pedagogy, students are no longer passive recipients of instruction but active participants in their learning. Consequently, curricula should account for and foster students' professional interests and preferences. One effective approach is the inclusion of elective or optional tracks that allow students to align their training with specific areas of interest within the profession [40].

Finally, universities must continue conducting pedagogical research to evaluate how closely the planned curriculum aligns with the experienced curriculum. Some institutions have already conducted studies with graduates to assess their perception of how academic experiences influenced their later professional performance.

Conclusions

Where dental education has come from, where it currently stands, and where it ought to go, these are the foundational questions that drive a critical analysis of the curriculum design for dentistry programs. Addressing these questions requires a systematic, organized, cooperative, and purpose-driven effort on the part of pedagogical professionals committed to preparing highly qualified graduates with a strong sense of service and professional dedication.

The dynamic nature of contemporary society compels us to abandon the static traditions of curriculum design. Whereas in the past, it was common to wait at least five years to evaluate the effectiveness of a program, today there is a growing need to shift toward a more adaptive model, one that aligns with the rapid advances in science and technology that directly influence professional training.

In the field of dentistry, this need is particularly urgent. As a relatively young health science formally institutionalized just over a century ago dentistry has nonetheless undergone numerous phases of refinement to arrive at a more or less unified conception at both national and regional levels. However, the systematic incorporation of dental technologies, evolving socio-health conditions in the country, the growing embrace of holistic health approaches, the transformative experiences of nearly two years of social isolation, and the increasing emphasis on preventive medicine all highlight the necessity of maintaining continuous oversight and adjustment of educational models.

In this regard, it is essential to clearly define the modes of professional action that universities should foster, ensuring their alignment with the constitutional principle of Buen Vivir, their coherence with the One Health paradigm, the balance between academic and practical activities, the role of scientific research, interdisciplinary integration, assessment models, incorporation of educational technologies, curricular flexibility to accommodate professional preferences, and the use of measurable indicators to evaluate curricular effectiveness.

All of this demands robust training for educators and consistent, thoughtful scientific inquiry into academic practices, efforts aimed at achieving excellence in professional training that is responsive to the needs of social development.

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