Odontología (Montevideo). 2024; 2:130
doi: 10.62486/agodonto2024130
ISSN: 3046-4102

REVIEW

Caracterización de la Disciplina Principal Integradora de la Carrera de Estomatología en el Plan E

Characterization of the Main Integrating Discipline of the Stomatology Career in Plan E

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Cite as: Afre-Socorro AL, Labrador-Falero DM, García-Molina Y, Alonso-Herrera A, Wong-Silva J. Characterization of the Main Integrating Discipline of the Stomatology Career in Plan E. Odontologia (Montevideo). 2024; 2:130. https://doi.org/10.62486/agodonto2024130

Submitted: 06-02-2024 **Revised:** 01-05-2024 **Accepted:** 14-08-2024 **Published:** 15-08-2024

Editor: Nairobi Hernández Bridón

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ABSTRACT

Introduction: study programs are continually improved in Higher Education Centers. The current E curriculum retains the positive aspects of previous programs, while reinforcing the Integrative Core Discipline.
Objective: characterize the Main Integrating Discipline of the Dentistry Career in Plan E.
Method: descriptive research with a qualitative approach. Theoretical methods were used: analysis-synthesis and induction-deduction and empirical: documentary analysis to obtain information about the characteristics of the program and group work (workshops), in the Discipline Collective.
Development: the implementation of the discipline facilitates the integration of knowledge, skills and values expressed in the modes of action of the student, who works with the object of his profession from the first year; Self-management of the student's knowledge predominates in each subject of the discipline and education at work is ratified as the main form of teaching. Teachers' understanding of the characteristics of the discipline was achieved through methodological workshops.
Conclusions: the Main Integrative Discipline is characterized by training oriented towards professional skills from the beginning of the career. The discipline and curricular strategies extend throughout the degree and are integrated with the components of the teaching-learning process. Students must construct their learning in an active and independent way. The teachers deepened their knowledge of the components of the teaching-learning process contemplated by the discipline.

Keywords: Stomatology; Discipline; Teachers; Students; Self-Management; Medical Education; Education at Work.

RESUMEN

Introducción: los programas de estudio se perfeccionan continuamente en los Centros de Educación Superior. El plan de estudios E actual conserva los aspectos positivos de programas anteriores, al tiempo que refuerza la Disciplina Principal Integradora.
Objetivo: caracterizar la Disciplina Principal Integradora de la Carrera de Estomatología en el Plan E.
Método: investigación descriptiva con enfoque cualitativo. Se utilizaron métodos teóricos: análisis-síntesis e

inducción-deducción y empíricos: análisis documental para obtener información sobre las características del programa y trabajo grupal (talleres), en el Colectivo de la Disciplina.
Desarrollo: la implementación de la disciplina facilita la integración de conocimientos, habilidades y valores expresados en los modos de actuación del estudiante, que trabaja con el objeto de su profesión desde el primer año; predomina la autogestión del conocimiento del estudiante en cada asignatura de la disciplina y se ratifica la educación en el trabajo como principal forma de enseñanza. Se logró la comprensión de los profesores sobre las características de la disciplina a través de talleres metodológicos.
Conclusiones: la Disciplina Principal Integradora se caracteriza por una formación orientada a las competencias profesionales desde el inicio de la carrera. La disciplina y estrategias curriculares se extienden a lo largo de la carrera y se integran con los componentes del proceso de enseñanza aprendizaje. Los estudiantes deben construir su aprendizaje de un modo activo e independiente. Los profesores profundizaron el conocimiento de los componentes del proceso de enseñanza aprendizaje que contempla la disciplina.

Palabras clave: Estomatología; Disciplina; Profesores; Estudiantes; Autogestión; Educación Médica; Educación en el Trabajo.

INTRODUCTION

Social changes impact higher education, which means that study plans and programs are constantly undergoing modifications. This constitutes an ongoing task for higher education institutions, fulfilling their social mandate.[1]

Over the last five years, medical schools in Cuba have been redefining their objectives, linking themselves to identifying and solving health problems in the community. In the case of the dentistry program, the aim is to train high-quality dentists with advanced scientific and technical training and a strong social commitment to the population's health.[2]

Within the principles and strategies of the National Health System (SNS), the process of training human resources in health has been constantly improved, with a degree of updating and application of working methods in line with public health projections at the national and international levels.[2]

From this perspective, curricular transformations require the comprehensive training of highly skilled professionals with the competencies and performance expected to fulfill the functions required by their context of action, as defined in their professional profile. Therefore, curricular designs must be in line with social changes.[3]

One of the challenges facing Cuban medical universities today is maintaining a constant transformation process to keep pace with new knowledge and scientific and technical advances in line with the growing demands of society's development. The improvement processes in higher education impact the relevance and quality of teaching programs, providing teachers with tools that facilitate the development of the teaching-learning process in a dynamic, inclusive, interactive, participatory, and integrative manner.[4]

The curriculum has evolved in response to different historical contexts within the Stomatology program. As the oral epidemiological profile has changed, the model of stomatological care has been modified to meet the population's health needs. As a result, the training model for stomatologists has also been modified so that the curricula respond to the demands of society and remain relevant.[5]

In 1982, a commission was created at the Faculty of Stomatology in Havana to analyze the then-existing Curriculum A. Based on the experience gained, Curriculum B was designed and implemented in 1984.[6]

In the late 1980s and early 1990s, the need arose for a comprehensive approach to dental care, requiring a program with a clinical, epidemiological, and social focus that would respond to the population's health problems. Curriculum C was implemented in the 1992–1993 academic year and remained in effect for more than 15 years. Plan C required modifications to the contents of Computer Science and Cuban History, so an improved Plan C was implemented in the 2004–2005 academic year.[7]

In the 2011-2012 academic year, the implementation of Study Plan D began in response to significant transformations in the education sector and Cuban society, which demanded changes in student attitudes, such as researching and managing information of scientific interest, all through self-preparation. As a result, the organizational forms of teaching were modified, and the productive method was based on a teacher who guides, leads, informs, and guides the student. [8]

This plan was designed with a community focus that links students from their first year with primary health care (PHC) as a fundamental setting for the training of general dentists. The D curriculum designed the Main Integrative Discipline (MID), called Comprehensive Stomatology, which groups together all subjects that include education in the workplace to contribute to the training of professional practices.[8]

When the first group of students graduated from Plan D, it became necessary to analyze their achievements

and shortcomings. Therefore, in May 2017, a document was issued listing several changes to the names of some subjects, their distribution by semester, and the evaluation system.[8]

Despite the high level of acceptance and appreciation of Study Plan D for the Stomatology degree program by the faculty of the various centers throughout the country and by the students, Study Plan E was implemented in 2020 in response to new health needs, new technologies, the globalization of knowledge, and multidisciplinary teamwork, among other aspects.[8,9,10]

Recognizing the importance of knowledge of the primary integrating discipline by all the professors who teach it, the authors were motivated to conduct a study with the following objective: to characterize the Main Integrating Discipline of the Stomatology Degree Program in Plan E.

METHOD

A descriptive investigation with a qualitative approach was carried out. Theoretical methods, such as analysis-synthesis and induction-deduction, and empirical methods, such as documentary analysis, were used to obtain information on the characteristics of the program and group work (workshops) in the Discipline Collective.

DEVELOPMENT

Currently, the design of the E curriculum for the Dentistry degree considers the positive aspects of previous curricula. It ratifies and refines the DPI, maintaining that it does not respond to a particular science but to the profession's purpose. It also ratifies work-based learning as the primary teaching paradigm of medical education in Cuba. The DPI continues to be called Comprehensive Stomatology and includes subjects whose main form of teaching is education in the workplace.[9,11]

Like the DPI, it works with a single objective (the professional). Still, in practice, it functions as an interdisciplinary field, which needs to be promoted and developed in university courses in line with the trends in higher education in recent decades. Therefore, this discipline, together with the curriculum strategies, extends throughout the degree program and systematically integrates its subjects' objectives, content, methods, means, and evaluation system by the model of the professional to be graduated.[12]

The integrative nature of this discipline is expressed in the professional practices that students develop as they progress through the various subjects that comprise it; therefore, the acquisition of knowledge starts from the productive and moves to the creative; its evaluation is problematic and takes shape in work-based education, where students must demonstrate the performance they achieve when applying their professional practices to solving problems in the professional activity in teaching and healthcare settings and provide a theoretical basis for this.[13]

This discipline is included in all years of the degree program, according to the course planning adopted by each center. The gradual and systematic development of the objectives, content, teaching methods, and means of teaching, as well as the system for evaluating the subjects, is intended to enable students to acquire the necessary and sufficient knowledge to contribute to the achievement of the model of the professional to be graduated, both in terms of professional skills and the formation of the values and ethical principles in which students are educated, which must be incorporated into their natural way of professional practice.[14]

The discipline aims to recognize the importance of community dentistry in solving the main health problems of individuals, families, and the community and to promote early familiarization with the graduate profile.[14]

Regarding the general objectives of the discipline and the essential knowledge to be acquired, during the methodological workshop held with the teachers who make up the discipline's teaching staff, a developmental objective was drawn up that integrated the three goals of the program, which facilitated the mastery, synthesis, and understanding of the subject by the faculty, with both topics summarized as follows:

General objectives of the discipline

To provide comprehensive dental care to the population to solve oral health problems from a scientific and political-ideological perspective, based on the principles of the National Health System (SNS) through the application of the clinical-epidemiological method.

Basic contents of the discipline. (skills, knowledge, and values)

a) Essential knowledge to be acquired

These are extensive: community; factors that influence the health-disease process in the context of PHC; clinical content, Operative, Prosthetics, Orthodontics, Periodontics, and Surgery, with the particularities of each specialty.

b) Main skills to be mastered

- General skills.

- Specific skills of the discipline according to functions.
- Skills related to the teaching function.
- Skills related to the administrative function.

c) Value system

The profession demands a high level of social commitment to Cuba and the world, which is why the program is designed to foster a system of values in line with current requirements: dignity, patriotism, humanism, solidarity, responsibility, hard work, honesty, justice, and anti-imperialism.

d) *Contribution of the discipline to curricular strategies*

All the strategies developed so far are maintained, with the addition of the mother tongue as a new strategy to promote the correct use of Spanish, favoring the development of oral and written expression in the professional sphere, reading, analysis, and construction of academic and scientific discourse.

- Educational and ethical work of students.
- English language.
- Research and information technology.
- Training in disaster response and environmental protection.
- Natural and Traditional Medicine (NTM).
- Development of administrative skills and economic and legal training.
- Mother tongue.

IV- Methodological and organizational guidelines for the discipline

e) Curriculum

To achieve the professional skills stated in the degree program, the DPI establishes a training strategy in accordance with the system of objectives for each academic year. Compliance with this strategy allows students to acquire knowledge and develop skills each academic year, the depth and mastery of which will increase in subsequent years.

This discipline fosters the student's connection with the subjects that contribute to their professional training from the moment they begin their degree program. Thus, from the first year, students work toward their professional goal, which has the advantage of orienting them from the outset to the content and social importance of their degree program, its fundamental characteristics, the roles they can play as graduates and other aspects that can contribute to increasing their motivation.

A total of 2,702 hours are dedicated to work-based education, representing 80,8 % of the total hours of the DPI. This is the characteristic teaching organization of Comprehensive Stomatology as the primary integrating discipline, meaning that a professor accompanies students throughout the process. This takes the form of guidance and supervision of student performance.

The DPI stands out for the hours dedicated to education at work so that, depending on the year the student is in, they will be able to apply methods and techniques of promotion, health education, and prevention in individuals, families, and human groups in the stomatological clinic and the community, as well as provide comprehensive stomatological care to the population in the stomatological clinic, considering the biological, psychological, and social factors involved in the health-disease process when explaining the epidemiology of the behavior of the primary oral diseases, contributing the oral component to the analysis of the health situation and using the methods and modes of action in primary care when exercising their functions of promotion, prevention, cure, and rehabilitation by the objectives of the national comprehensive stomatological care program in the sphere of Primary Health Care.

Comprehensive Stomatology in the E study plan comprises 3,344 hours, of which 2,702 hours are dedicated to on-the-job training. It consists of sixteen 16 subjects distributed over academic years as follows: (table 1)[9]

This discipline's subjects are mainly taught through work-based learning. All subjects are identified by names that correspond to their content and the skills they develop.

The consolidation of modes of action must be developed in primary and secondary healthcare settings, so the organization of rotations during the fifth year, when pre-professional practice will occur, must be considered.

The integration of knowledge, skills, and values achieved is expressed in the modes of action that students will demonstrate, further developing their constantly evolving professional competencies. Therefore, this discipline is crucial because it allows for training oriented toward professional competencies from the beginning of the degree program.

Table 1. Daytime course

Subject	Curriculum	Hours	Year	Weeks	Assessment
Introduction to Comprehensive Stomatology	Basic	60	1	1	
Technical Procedures	Basic	160	2	4	
Propaedeutics and Stomatological Semiology	Basic	132	2	4	EF
Clinical Procedures	Basic	144	3	5	EF
Oral Medicine I	Basic	132	3	5	EF
Prosthetic Rehabilitation I	Basic	144	3	5	
Dental and Restorative Procedures	Basic	144	3	6	EF
Prosthetic Rehabilitation II	Basic	144	3	6	
Periodontics	Basic	144	3	6	
Comprehensive Family Care	Basic	160	4	7	EF
Pediatric Dentistry	Basic	160	4	7	
Oral Surgery	Basic	96	4	7	
Endodontics	Basic	288	4	8	EF
Oral Medicine II	Basic	96	4	8	EF
Orthodontics	Basic	80	4	8	
Comprehensive Stomatological Care	Curriculum	1260	5	9-10	EF
Total hours		3344			

f) Teaching methods.

- Lectures.
- Workshops.
- Practical classes.
- Seminars.
- Work-based learning (all types)

g) *Compulsory and optional subjects*

The discipline group will promote the offering of compulsory and optional courses to update the curriculum in line with dentistry students' basic and fundamental needs in their training. The specific and elective courses will present the advances in research made by the faculty members, increase the students' knowledge in aspects vital to their training, and enable the general humanistic education of dentistry students.

h) *Independent work*

It is indicated that teaching groups should develop study guides for students with relevant guidance so that they can carry out the planned teaching tasks, specifying that the sources for obtaining information should include interviews, surveys, online searches, electronic or printed scientific journals, and books, among others. The use of the virtual classroom should be encouraged, with a solid methodological basis that motivates students towards this type of virtual environment, as well as being the fundamental support for distance learning, which should be increased and improved.

i) *Teaching methods and means*

The methods used should guide students in their search for knowledge, which they should construct actively and independently based on the recommended literature and bibliography. They should also gradually develop all skills during their education at work.

Simulators will be used in those subjects that require them. The importance of using available resources in teaching and care settings is highlighted. Digital educational resources available in virtual environments are recommended, as are the development of teaching materials and the use of other digital resources such as books, magazines, and posters, among others.

j) *Subject evaluation system*

The DPI evaluation system must focus on student performance, be known to students, and express their ability to solve professional problems through an integrative process of theory and practice, basic biomedical and clinical sciences in scientific thinking, expressed in their performance and supported by the ethical foundations of the profession. Performance in solving teaching problems in real conditions will be evaluated, assessing how they achieve the theoretical-practical link to the ethical foundations of the profession.

Frequent assessment: the teacher defines the types of frequent evaluations for each subject. Due to their incredible versatility, the most commonly used types are observation of students' work, oral and written

questions, and group discussions.

Partial assessment: this is done through partial tests on some subjects, among other methods. Introducing interdisciplinary extra-class work into the assessment systems for subjects that assume academic leadership in their planning and implementation is exciting.

Final assessment: the fundamental purpose of the final assessment is to verify the degree of achievement of the discipline's general objectives. This may or may not involve an assessment. It is important that students are assessed on their performance in solving teaching problems in real conditions, the complexity of which will correspond to the stage of the course they are at, as well as on the theoretical basis for their performance.

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CONCLUSIONS

The Main Integrating Discipline is characterized by training focused on professional competencies from the beginning of the degree program. The discipline and curricular strategies extend throughout the degree program and are integrated with the components of the teaching-learning process. Students must construct their learning actively and independently. Teachers deepened their knowledge of the elements of the teaching-learning process covered by the discipline.

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FUNDING

No funding was received for this study.

CONFLICT OF INTEREST

The authors declare that there is no conflict of interest.

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