Faculty Development at Ribeirão Preto School of Medicine at University of São Paulo (FMRP-USP): A contextualized historical review

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ABSTRACT
The objective of this article is to historically contextualize Faculty Development (FD) actions carried out at the Ribeirão Preto School of Medicine at University of São Paulo (FMRP-USP), since its foundation up until the creation of the Center for Faculty Development (CDDE) in Health Professions Education (HPE). CDDE is the first formal unit of the institution with the mission to support educators (Faculty Members and Preceptors) to improve their educational practices: to teach, facilitate learning, assess, design curriculum, and evaluate programs. We present here an overview for the concept of Faculty Development, the role of international funding foundations and local government regulations in the consolidation of these activities in Brazil. We also describe the school administration actions and pioneer Faculty members that created the foundations for the first Faculty Development Center at FMRP-USP. Finally, we address the context of the creation of the CDDE and the describe participants characteristics of the first five editions of the Essentials Skills Module on HPE.

Keywords: Teaching development, Teaching-learning, Professional training

INTRODUCTION

Faculty Development (FD) programs are made up of a set of activities promoted by higher education institutions (HEIs) with the aim of improving their professionals in the fields of teaching and learning, educational scientific research, teamwork, leadership, and administrative management, in order to achieve academic excellence and better community healthcare. These activities took on a more defined form in the 1950s and have undergone significant advances in recent decades in response to technological innovations, changes in assessment processes, new teaching and learning tools, and due to government demands for health management and care. There was a growing need for teacher training and, consequently, there is a significant increase in these programs in medical schools around the world.

Several internationally renowned universities such as McGill University (Canada), University of Maastricht (Netherlands), University of Illinois (Chicago/USA) and University of Newcastle (Australia) have developed and implemented FD programs that have become the reference for other institutions. In general, they are programs structured by teams involved with teaching in health areas, organized with workshops, seminars, distance education courses through virtual platforms, or even longitudinal intervention programs.

In addition to these universities, the “Foundation for Advancement of International Medical Education and Research” (FAIMER), a non-governmental and non-profit organization, was created in September 2000 by the “Educational Commission for Foreign Medical Graduates (ECFMG®)” in the United States to promote international excellence in the education of the health professions through an educational programme (FAIMER Institute) and research activities. FAIMER focuses its efforts on low-income regions in Asia, Africa and Latin America, and focuses on three specific strategies: FD on health professions education (HPE),
targeted research that informs health workforce policy and practice, and data development, all of which promote decisions to improve educational quality. The general objective is to improve population healthcare by increasing human resources in HPE. It currently includes more than 40 countries and in Brazil the first group of Fellows started in 2007, together with Brazilian FAIMER Regional Institute (FAIMER-Brazil). Approximately 300 teachers from all over the country had participated coming from different areas of health professions. This has contributed to improving teacher training in the country, since several of its participants have implemented their projects during and after the training program. This movement was amplified all over the country in many Universities and supported a great number of professionals with an interest in FD and, consequently, in improving the assistance to students and the community in general.

At the governmental level, in 2005, the Brazilian Ministry of Health created the National Program for Reorientation of Professional Training in Health - PRÓ-SAÚDE, with the aim of reformulating the training bases of education in the health areas to adapt to the real population needs. This program was based on three axes: theoretical orientation, practice scenarios and pedagogical orientation, in which relevant points were considered, i.e., the permanent education of health educators and changes in educational strategies for effective methodologies in adult learning, such as, for example, problem-solving strategies. In the same sense, in 2008, the Education Program for Health Work (PET Saúde) was also created, aiming at enabling the improvement and specialization in services, as well as the initiation to work, and to do internships and experiences, aimed at professionals, students in the health area and users of health services, according to the needs of the Brazilian Unified Health System (SUS). The purpose of the program was to promote teaching-service-community integration, with the mission of strengthening education through health work, with the provision of financial support for teachers, university professors, tutors (service professionals) and undergraduate students from the HPE. Both were public policies for the promotion of teacher training. Another initiative was started in 2010 by the Coordination for the Improvement of Higher Education Personnel (CAPES), with the approval of 31 projects involving post-graduate training (MSc and PhD) in HPE in different institutions around the country.

In 2014, the Brazilian Ministry of Education approved resolution no. 3 instituted by the new National Curriculum Guidelines (NCGs) for Undergraduate Medicine Courses, with the establishment of the principles, foundations and purposes of medical training. It should be noted that in article 33 of chapter III (Curricular Contents and the Pedagogical Project of the Undergraduate Course in Medicine) of the NCGs, it was established that:

"the medical course must have a Structured Teaching Coordination Team, responsible for the process of conception, consolidation, evaluation and continuous updating and improvement of the Pedagogical Project of the Course".

In article 34 of that same chapter, it was stated that:

"The undergraduate course in medicine must maintain a permanent Faculty Development Program for teaching in Health Professions Education, to value the teaching workforce at undergraduate level, for greater involvement of professors with the Pedagogical Project of the Course and its improvement in relation to the training proposal contained in the document, through the conceptual and pedagogical domain, which encompasses active teaching strategies, based on interdisciplinary practices, in order to assume greater commitment to the transformation of the medical school, to be integrated into the daily lives of teachers, students, workers and users of health services".

Article 35 states that:

"Undergraduate medical courses should develop and encourage the participation of health professionals in these training and development programs, in order to improve the teaching and learning processes in the practice scenarios of SUS and to increase the quality of assistance to the population".
Thus, with the growing demand for the training of professors and tutors to meet the educational needs of medical school and in other HPE programs, the creation and structuring of Faculty Development programs became an institutional obligation.

**Faculty development initiatives at FMRP-USP**

At the Ribeirão Preto School of Medicine in the University of São Paulo (FMRP-USP), founded in 1952, the concern with teacher training has always been present in its history. Newly opened in 1956, the college had its curricular structure and the organization of full-time teaching work highlighted at the I Congress of the Brazilian Medical Association (AMB), which was chaired by Professor Hilton Rocha, from Belo Horizonte, and held at the FMRP-USP, to honor this innovative school in the centenary year of the city of Ribeirão Preto. In the initial period of the Medical School’s life, some pioneers from FMRP encouraged their assistants to carry out studies in the field of medical education. Among these, Professor Almiro Pinto de Azeredo stands out, founder of the current Department of Ophthalmology, Otorhinolaryngology and Head and Neck Surgery.

Since its creation, FMRP-USP had the support of the Rockefeller Foundation, which is a North American philanthropic institution, founded in 1910 and which has acted on several fronts related to the global health of underdeveloped countries, including financial support to the expansion of internalization projects of Brazilian universities. Among them, FMRP-USP stands out. In the 1950s and 1960s, Rockefeller Foundation financed study trips for Faculty members to the United States of America, to improve their areas of knowledge and also to study models for structuring departments and other subjects, some of which were later used in Medical Residencies. Two examples are Ruy Escorel Ferreira-Santos and José Lima Pedreira de Freitas. Professor Azeredo, who also went on this study trip, focused on the acquisition of knowledge on medical education. Moreover, in the mid-1970s, José Antunes Rodrigues (Physiology) and Roberto Passetto Falcão (Internal Medicine) visited several foreign institutions.

At the end of that decade, in the context of discussions about the curriculum of the Medicine, the institution organized “Medical Teaching Seminars” with activities available at a preparatory stage and others of actual realization. This occurred in the beginning of 1980, with both conferences and discussions that had a great impact on the school. Also, during this period, a group of professors received incentives to participate in courses at the Center for Educational Technology for Health/Latin American Center for Educational Technology for Health, of the Pan American Health Organization (NUTES-CLATES), at the Federal University of Rio de Janeiro (UFRJ), on curriculum planning, educational objectives and teaching strategies. Among the professors who had participated in these courses we should mention Jarbas Leite Nogueira, Cláudio Roberto Carvalho Rodrigues, Maria de Lourdes Veronese Rodrigues, Roberto Passetto Falcão, Antonio Carlos Pereira Martins, José Antônio Marin Neto, Ricardo Brandt de Oliveira, Milton César Foss and Nivaldo Vieira de Souza.

The participation of this group of professors in these courses later facilitated a new institutional incentive, which subsidized the arrival of professors from NUTES-CLATES to teach courses at the Faculty of Medicine, with the participation of a greater number of professors and also of postgraduate students, among whom was Luiz Ernesto de Almeida Troncon. In 1982 FMRP hosted the Brazilian Congress of Medical Education, which had in its organizing committee Professors José Eduardo Dutra de Oliveira, Nagib Haddad and Jarbas Leite Nogueira, the latter acting as Secretary General of the congress, in addition to another seventeen professors and three students from FMRP.

In the late 1980s, the President of FMRP-USP Undergraduate Committee, Professor Dr Cláudio Roberto Carvalho Rodrigues, was sponsored to attend the program of Masters in Medical Education, which had in its organizing committee Professors José Eduardo Dutra de Oliveira, Nagib Haddad and Jarbas Leite Nogueira, the latter acting as Secretary General of the congress, in addition to another seventeen professors and three students from FMRP.

In 1990, through an agreement with the IDB (Inter-American Development Bank), the University of São Paulo selected 20 projects from all the areas of knowledge among its faculties with the intention to finance internships.
abroad, aiming at professional training for teaching. The only project selected from FMRP was coordinated by Professor Maria de Lourdes Veronese Rodrigues, who used the funding to improve the area of health education by going on visits to universities that had specialized in at least one of the trends at that time in the teaching of health sciences, these included: University Autonoma of Mexico (teaching-care integration); McMaster and Sherbroke in Canada (Problem-based Learning – PBL) and Harvard, in the United States of America (PBL). All these schools, as well as others visited, had sectors for FD and student support. In 1991, the experiences were shared in a multidisciplinary event of the university called: “Contribution of other areas of knowledge to the teaching of undergraduate medicine in Ribeirão Preto” 9.

It was also in the 1980s that the Undergraduate Committee approved the creation of the FMRP Psychopedagogical Support Center (PSC), which in 1994 was renamed to the Educational and Psychological Support Center (EPSC). The primary objectives of the center were to provide pedagogical and psychological support to FMRP students, then only studying undergraduate courses in Medicine and Biological Sciences, through to professionals specialized in the areas of pedagogy, psychology, and psychiatry. But, in addition, it also had an important role as a consulting body and the leaders of the “Working Group for the Terminal Assessment of Competencies of Medical Graduates”, implemented after the curricular change established at that time. Thus, there was the involvement of a greater number of professors in the space of the EPSC, which allowed for the formation of a group of professionals interested in the study and production of knowledge on educational matters in the areas of health 9,10,11. The participation of the EPSC in the organization of events aimed at training FMRP teachers for teaching and education in the health professions continued to grow in the 2000s, until the creation of the Center for Faculty Development (CDDE) in HPE in 2016.

In the 1990s, the FMRP maintained its sponsorship program for teachers to carry out training in education abroad, such as training courses in problem-based curriculums (PBL), carried out by Professors Maria de Lourdes Veronese Rodrigues and José Fernando de Castro Figueiredo, and a training course on the use of simulated patients in the teaching and assessment of clinical skills, carried out by Professor Luiz Ernesto de Almeida Troncon, at the Southern Illinois University School of Medicine, in the United States of America. As of 1995, some professors began to participate in international medical education congresses with the presentation of scientific papers. The most important of these is the annual congress of AMEE (originally Association for Medical Education in Europe, now The International Association for Medical Education).

With the same stimulus and institutional support, in the second half of the 1990s, the Undergraduate Committee promoted initiatives of courses, events and specific workshops on topics in health education, including the presence of international professors, such as the PBL workshop with Professor Pamela Moriearty, from the University of Southern Illinois (USA), and in the 2000s with Professor Madalena Patrício, from the University of Lisbon, among other invited foreign professors 9,10,11.

In the 2000s, the EPSC started to have more regular initiatives on topics on medical education and in the areas of health, with training programs for professors and graduate students of the institution. In 2010, the FMRP was one of the 31 national institutions awarded the approval of the postgraduate project entitled “Training in Higher Education in Health Professions”, in line with a specific CAPES public notice called “Pro-Education in Health” (Pró Ensino na Saúde). The project presented by the FMRP involved 16 professors from seven different departments and three professionals from the technical team 12. Due to the diversity of interests of the teachers involved, all the themes indicated in the afore mentioned public notice were included in the project: Curriculum and teaching-learning processes; Student assessment; Teacher training and development; Integration of universities and health services; Integration policies between health, education, science and technology; and face-to-face and distance technologies. The availability of resources began in 2011 and continued until 2016. During
this period, a room was set up with multimedia resources used for different on-site and distance training assessments. Presentations of works produced by the group at conferences were financed; the Health Education research line was approved at the institution, linked to the Department of Internal Medicine (which concentrated most of the professionals involved) and enrollments for master’s and doctoral degrees on the subject were carried out. The creation of specific subjects in health education was also made possible, such as “Topics of Education in Health Professions (I and II)”, effective until the present day, in the postgraduate program of clinical medicine, aiming at didactic training for teaching postgraduate students from all postgraduate programs at the FMRP. In addition, the group also played an important role in advising on the preparation of selection exams and on the organization of evaluations of performance exams for resident physicians. Even after its completion, this project consistently engaged the teachers involved, with some of them being motivated to later participate in the FAIMER-Brazil program, contributing even more to the process of valuing teacher training in the institution.

Despite the theme of teacher training permeating the discussions of the institution’s official bodies, the initiatives in relation to the training itself were still isolated and not regulated by the institution, as was recommended in the 2014 NCGs, and that had been a reality for some years in reputable universities around the world. In this context, in 2016, FMRP-USP created a working group that proposed the creation of its first Center for Faculty Development on health professions education based on teacher training guided by the best scientific evidence and good practices in HPE. The Essential skills module on HPE was created and offered regularly for Faculty members and preceptors at FMRP-USP and Hospital das Clínicas Complex.

The purpose of this initiative is to help the institution’s professors and tutors in their daily teaching practices and in the supervision of students and residents, encouraging them to actively participate in new teaching-learning projects in their departments for the global improvement of training in the areas of health at the university and at the Clinical Hospital of the FMRP-USP.

Currently, in addition to the Essential skills module on HPE, CDDE offers regular and on-demand workshops on specific topics, such as best practices for conducting multiple-choice tests, interactive classes, flipped classrooms, Team-Based Learning (TBL) and, more recently, on synchronous and asynchronous remote teaching, offering support to teachers in the face of the new teaching reality imposed by the period of the COVID-19 pandemic, which made face-to-face activities in the years 2020 and 2021 unfeasible. Most of the experiences related to emergency remote teaching and learning at FMRP-USP and other Brazilian institutions were brought together and published in a special issue of Revista Medicina Ribeirão Preto. During this period, a channel was also created on the YouTube platform, with teaching and learning materials related to HPE. After participating in the activities of the essential skills module, professors become part of our community of practice.

CENTER FOR FACULTY DEVELOPMENT

ESSENTIAL SKILLS MODULE ON HEALTH PROFESSIONS EDUCATION

CDDE was created in 2016, following the recommendation of a working group (WG) constituted by the FMRP board composed of the Medical School Dean, Professor Dr Margaret de Castro, the Chair of the Graduation Committee, Professor Dr Eduardo Ferrioli and Professors Dr Luiz Ernesto de A. Troncon and Dr Valdes Roberto Bollela. It is the first unit of permanent professional education for HPE at the Ribeirão Preto School of Medicine at University of São Paulo. It was only possible due to the broad and unrestricted institutional support under the management of Professor Dr Margaret de Castro and Professor Dr Rui Alberto Ferriani, and due to the idealization and planning made by professors with expertise in the subject. The Center has a Management Council composed of three professors (the first composition of this management Council was made up of Professors Dr Luiz Ernesto de A. Troncon, Dr Valdes Roberto Bollela...
and Dr Maria Paula Panuncio Pinto); and 12 facilitators (Faculty members) associated with different Departments of the FMRP. The initial group was composed of: Professor Dr Aline Epifhanio Wolf, Professor Dr Anamaria Siriani de Oliveira, Professor Dr Anderson Marliere Navarro, Professor Dr Fausto Bruno dos Reis Almeida, Professor Dr Jorge Elias Jr., Professor Dr Fábio Antonio Perecim Volpe, Professor Dr Fábio Carmona, Professor Dr Francisco José C. dos Reis, Professor Dr Marcos de Carvalho Borges, Professor Dr Silvana Maria Quintana and Pedagogue Rodrigo Humberto Flauzino. CDDE administrative support was provided by Ms Lúcia Rezende and Mrs Wladineia A. Castilho de Oliveira.

In 2017, the CDDE implemented the first essentials skills module in HPE. From January 2017 to December 2019, five editions of this course were held, with a duration of five weeks each, with eight hours of weekly workload (4 hours in person and 4 hours of distance activities through the virtual platform Moodle). The realization periods were: - Module 1/2017: from 05/24 to 07/15/2017; Module 2/2017: from 09/06 to 11/15/2017; Module 3: from 04/26 to 05/24/2018; Module 4/2019: from 03/27 to 04/24/2019; and Module 5/2019: from 10/04 to 11/01/2019. The periods and days of the face-to-face sessions were different for each module to provide opportunities for the participation of a greater number of professionals from the institution. The modules were previously announced on the institution’s official channels and all the faculty members and preceptors were invited to participate.

The topics covered in the program include Adult Learning Principles and Basic Curriculum Concepts; Effective Teaching and Learning Strategies; Student Assessment and Program Evaluation and Educational Management, divided into five face-to-face sessions.

The course was organized with the following pedagogical division: 1) previous availability of didactic material (articles, classes, comic strips) on the virtual platform (Moodle) for reading and reflection by the participants; 2) discussion on the subject in a virtual forum among the participants, mediated by one of the facilitators in the week before the face-to-face meeting; 3) face-to-face class, in which the participants were randomly divided into small discussion groups, in order to promote greater interaction and active participation, with alternating mini-conferences between the facilitating teachers, who also used other educational tools, such as interactive classes and the “think, pair, share” strategy, demonstrating, in practice, the didactic-pedagogical possibilities to the participants; 4) evaluation of the activity at the end of each face-to-face class, with short open-ended questions: “what was good? What could be better next time? Tell us how it could be improved? Participants were encouraged to list the positive and negative points and give their suggestions for improving the experience, which guided changes for the next offers; and 5) At the end of the module participants were invited to answer a Pre- & Post-questionnaire on the virtual platform, saying how they feel about the topics discussed in the module, before and after it finished.

Each participant had to write an intervention proposal using one of the topics we discussed in the program. This writing proposal for a possible pedagogical intervention in the participant discipline or rotation using one to the things they’ve learnt during the workshops. The proposal should be posted on the virtual platform up to 30 days after completing the module. Each work posted was evaluated by one of the facilitators who provided individualized feedback through the Moodle platform, also making themselves available for pedagogical assistance in case there was a need at the time of a possible execution of the proposed educational intervention project.

PARTICIPANTS OF THE ESSENTIAL SKILLS MODULE ON HPE

The Faculty of Medicine of Ribeirão Preto is currently composed of 16 departments, which have 330 contracted professors. In addition to the professors linked to the FMRP, the invitation to participate in the Essential Skills Module on HPE promoted by CDDE was extended to professionals from the Hospital das Clínicas Complex, attached to the university or those units supported by the Foundation for Support for Teaching,
Research and Assistance at the Hospital das Clínicas of the (FAEPA) from Ribeirão Preto School of Medicine.

In the first five editions of the Essential Skills Module, 146 professionals participated, involving all the departments of FMRP-USP. In 2017, two editions were held, with the total participation of 49 professors (31 in the 1st semester and 18 in the 2nd semester); In 2018, 33 professionals participated and in 2019, 64 professionals participated (34 in the 1st semester and 30 in the 2nd semester). The distribution of the participation of FMRP professors, professionals with other links to the FMRP complex and external professionals is represented in graph 1 and graph 2, showing this distribution by edition.

**Graph 1:** Links of participating professionals (%)

**Graph 2:** Links of Participants/module (in absolute numbers)
When analyzing the active length of time in teaching, 33% of the participants had between 5 and 10 years, followed by 29.12% between 11 and 20 years; 23% under 5 years and 14.5% over 20 years. Regarding academic degrees, 67% of the participants were PhDs, followed by 14% full professors, 11% masters, 8% were completing their masters, and 2% were specialists.

When analyzing the pedagogical intervention projects proposed at the end of each module, it was found that 65% of the participants addressed the area of teaching-learning strategies, 16% student evaluation, 12% student evaluation and teaching-learning strategies, 6% curriculum, and 1% curriculum and teaching-learning strategies, all shown in graph 3. Among the teaching-learning strategies addressed, the following stand out: the flipped classroom, the interactive class, TBL (Team Based Learning), and the jigsaw (strategy of working in groups on “puzzles”). Regarding assessments, those that stood out were the proposals for expanding formative assessments and practical assessments, such as OSCE (Objective Structured Clinical Examination) and Mini-CEx (Mini Clinical Exercise)²⁰,²¹.

Graph 3: Areas of intervention projects

CONCLUSION

In the past, the good clinical training of physicians and other health professionals was considered sufficient for their teaching activities at the university. Currently, this concept is outdated, since the new pedagogical proposals in force put the teacher in the position of mediator in the process of training the health professional, in which they must carry out the structuring of significant learning scenarios and problems of professional practice, which demands preparation and awareness of the complexity of these activities, and also involve teaching, learning and assistance ²³,²⁴.

The central goal of FD programs is to help teachers and other professional educators to develop skills relevant to the institution, appropriate to the position occupied, in addition to sustaining their vitality in the present and future ²⁴,²⁵. This is based on the principle that preparation for the teaching role does not only mean technical instrumentation, but, fundamentally, a critical reflection on this practice and the reality in which it takes place²⁵.
Observing the participation data, the high academic qualifications of most participants stand out and it can be noted that, proportionally, the number of professors was higher in the first two editions, being replaced by professionals with other links to the institution in subsequent editions. The maintenance of teaching participation in these programs is a challenge for several reasons, which include the overlapping of functions of most of these professionals, who are divided between teaching, research and extension and also due to the culture of low appreciation of pedagogical activities in relation to production activities, which is still present in most Brazilian universities.

On the other hand, the proposals of the pedagogical intervention projects presented by the participants at the end of the courses, an activity that was not mandatory, demonstrates the reflective practice and the commitment of these participating professionals with the improvement of the teaching-learning process in their work environments. This in turn expands the scope of the didactic-pedagogical approaches worked on with the changes in behavior in practice scenarios, and which are thus able to influence other professionals and contribute to the students’ learning process and, consequently, improve the assistance provided to the community. In addition, the interaction of professionals from different departments during the course allowed for the exchange of experience and the establishment of a “community of practice” among them, providing a constant sharing of information about the pedagogical activities. The influence that the Basic Module may have had on the practical activities of the participating professionals is being analyzed through a qualitative methodology and will be the object of another study.

Current government regulations have enabled and encouraged the formalization of several teacher training centers in medical schools and in health areas in the country, including the CDDE of FMRP-USP and its “Basic Module”. However, this reality has only materialized due to the historical culture of the need for professional improvement within the institution since its foundation.

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