

Brief history of Faculty Development for Medical Education in United States.

Breve storia del Faculty Development in Medicina negli Stati Uniti

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ABSTRACT

This paper highlights Faculty Development in Medical Education, its creation and evolution, approaches, main strategies and content.

Faculty Development in Medical Education started at Buffalo University (USA) in the Fifties and the paper describes the important role of George Miller, the collaboration between School of Medicine and School of Education, the first projects of teacher training and the first research in this domain, the creation of first Centres of Medical Education in USA and worldwide, the disseminating role of World Health Organization.

ABSTRACT

Questo articolo descrive il *Faculty Development* in Medicina, la sua creazione ed evoluzione, approcci, strategie e contenuti principali.

Il *Faculty Development* in Medicina, o *Medical Education*, è iniziato alla Buffalo University (USA) negli anni Cinquanta e l'articolo descrive l'importante ruolo giocato da George Miller, la collaborazione tra la Facoltà di Medicina e la Facoltà di Scienze dell'Educazione, i primi progetti di formazione dei docenti e le iniziali ricerche in questo campo, la creazione dei primi Centri di *Medical Education* negli USA e nel mondo, il ruolo di divulgazione dell'Organizzazione Mondiale della Sanità.

TAKE-HOME MESSAGE

Faculty Development in Medicine, or Medical Education, started in the Fifties at Buffalo University with the collaboration of School of Medicine and School of Education.

INTRODUCTION

Faculty Development (FD) is a focused term that covers a range of activities designed to improve student learning and to help faculty to improve their competence as teachers. (Eble & McKeachie, 1985).

This paper tries to answer the question “When did Faculty Development start in recent history in the field of Medical Education?” and proposes that Medical Education began its activities at Buffalo University in the Fifties with a small group of Faculty Members coming from the School of Medicine and the School of Education decided to collaborate to improve medical education.

THE ROOTS OF MEDICAL EDUCATION AT BUFFALO UNIVERSITY

The beginning was a mild-mannered paediatrician turned pharmacologist.

(Miller, 1980)

Edward Bridge was a clinician at the John Hopkins School of medicine when, in 1948, he joined University of Buffalo faculty. His professional interests were primarily in functional disabilities of children with

convulsive disorders, so he had increasingly confined to the laboratory rather than clinic and thus he had the opportunity to see students during the early years of their medical education. Bridge was troubled by what he saw:

“Students come to a medical school eager to learn, motivated strongly, and with unusual high average abilities as measured in terms of college achievement. ... Within 2-4 weeks the large majority feels overpowered, knows he cannot possibly absorb all the material described in Gray’s Anatomy, ... he is likely to fail at the very outset of a hoped-for career. The advisor now finds the student in a state of confusion, sometimes amounting to near panic, wondering what to study, how to proportion his time, what is important.”

(Miller, 1980)

Such questions caused Bridge to think increasingly about the nature of medical schools’ program and consulted dr. Lester Evans, executive of Commonwealth Fund. In 1950 Evans proposed to simply divide the freshman class into small groups and pick from any place in the faculty good

young teachers who could be interested in meeting with these groups of freshmen students once every two weeks.

1. Introduction to Medicine

Bridge accepted Evans's suggestion and found 15 young faculty members who proposed an elective to their students with two objectives: 1) to provide opportunities for the students to talk without inhibitions regarding themselves, their interests and the medical curriculum; 2) to expose students to a variety of experiences illustrating the human and social aspects of disease. Among these Young Turks there was George E. Miller.

The student/tutor groups were scheduled to meet for about two hours every other week. On the alternate weeks Bridge proposed that the tutors came together to discuss their observations and to consider methods of applying modern principles of education to their own instructional problems. In this way the Seminar on Medical Education began and it continued without interruption for five academic years with the formal title of Introduction to Medicine (Miller, 1980).

Since the first year, the entire project was successful: at first tutors struggled to find appropriate content and format for the meetings and asked for help.

Bridge introduced resource persons drawn from other university divisions, experts who were professionally qualified to speak authoritatively about such matters as student selections, student evaluation, student study habits, the nature of learning and the use and abuse of laboratory teaching. These contributors included professor of education, psychology, sociology and English. Great care was exercised to maintain the focus of the seminar on the real educational problems they faced in order to avoid any suspicion that it was a pre-planned course of instruction. The bi-monthly meetings were held in Dean's office conference room

On the other side students asked a closer relationship with the profession for which they were preparing for and they had the opportunity for encounters with patients and practitioners, visits to hospitals and physicians' offices, observation of surgical and obstetrical procedures.

All the project was published in a paper entitled *Bedside teaching for first year students* (Miller, 1954).

Bridge also found time to continue his exploration of new ideas and potential sources of stimulus outside the university of Buffalo and during a trip he spent some time with Benjamin Bloom at the university of Chicago who suggested the kind of col-

laborative study between professionals in education and those in medicine.

2. Adventure in Pedagogy

Bridge proposed to Nathaniel Cantor, chairman of the Department of Sociology and Anthropology, to lead the group of tutors a step further in the field of adult education and to plan ten 2-hour seminars at weekly intervals. The purposed text was Cantor's book *The Teaching Learning Process* (Cantor, 1953) but the real text was tutors' own experience as teachers and learners examined under Cantor's masterful leadership.

Cantor had been much influenced by the work of Carl Rogers and he proposed an unforgettable learning experience to all the participants who defined it as "Experience of such pivotal importance in further evolution of the Buffalo program ..." that is impossible to synthesize it. They learned that people learn what they want to learn and the role of motivation; that learning and knowledge are different: significant learning is an emotional as well as an intellectual experience; that true learning implies change and, finally, that true learning requires freedom. (Miller, 1956).

At the end of Cantor's seminar, the group was aware that the sciences of education could give an important help to become

better teachers, and consequently they were ready to develop a more elaborate training program for medical teachers, that will be defined "the first known example of faculty development in medical education" by Hilliard Jason (Guilbert, 2007).

3. Project in Medical Education

George Miller writes that they planned "a year-long faculty fellowship, a work-study program designed to provide the philosophical base, the cognitive structure and the technical skills that should characterize a professional faculty member" (Miller, 1980).

Five broad areas seemed appropriate for study in sufficient depth to assure perspective and understanding: teaching-learning process, the nature of medical student, materials and methods of instruction, evaluation, general background of higher education.

Although the initiative came from the School of Medicine, the program was mounted with the active participation of the School of Education. In 1954 a committee was created to plan in detail the project that was presented to some Funds to be financed and was accepted by the Commonwealth Fund where Lester Evans was really encouraging.

The project had, among others, these goals: 1) to determine the importance to

the education of medical students of an increased awareness among medical teachers of fundamental educational principles; 2) to determine the feasibility of a continuing cooperative effort between a school of medicine and other university divisions in the development of more effective teachers in medicine; 3) to assess the effect of changes in mode of instruction that may result from this teacher training program upon medical student learning .

In the Project in Medical Education a minimum of four University of Buffalo School of Medicine faculty members and four visiting faculty from comparable departments had to take part in a work/study program. All were selected on the basis of their interest in teaching. At the end of the year each Faculty would have returned to their regular activities. Faculty fellows had to devote themselves fully to a year long work/study program which was planned to begin two weeks before the regular academic year.

During the first week an introductory seminar on one of the five proposed topics would be held in the afternoon. The second week would have been devoted to an intensive consideration of the teaching learning process in a two-hour seminar each morning and afternoon. For the remainder of the year one half of each day would be given to regular departmental activities, the other half to independent

study and seminar discussion of the selected educational topics. (Miller, 1980).

The Commonwealth Fund's response was positive because they found that this project was unique and something quite different from anything in the field of medical education. They appreciated the interdisciplinary contributions from education, sociology and psychology; the focus on the learning process and the quality of people involved. They allocated \$131,400 to support the Project from December 1955 to August 1958.

Once the support was assured, the planning committee started the main tasks: preparation of seminar content and leaders; recruitment of participants, and development of an evaluation system for the entire project.

For seminar content and leaders, it was decided to have a joint couple of leaders:

1. *The teaching-learning process*: Nathaniel Cantor, chairman of the Department of Sociology and Anthropology and Phillip Wels, instructor in Surgery.
2. *The nature of the medical student*: Ira Cohen head of psychology clinic and Harold Graser, instructor of psychiatry in the school of medicine.
3. *Evaluation*: Stephen Abrahamson, associate professor of education and Director of the educational research centre in the

college of education, and Ivan Bunnell, assistant professor of Physiology.

4. *Communication, including techniques of instruction.* Robert Harnack, associate professor of education and specialist in curriculum and instruction, and George Miller, assistant professor of Medicine, and director of house staff education at Buffalo General Hospital and coordinator of the Project in Medical Education.

5. *The evolution of higher education:* Lester Anderson, vice chancellor for educational affairs and professor of higher education and Edward Bridge, professor of pharmacology.

Miller says that the worth of joint medical and nonmedical seminar leadership was demonstrated again and again during all the year: many of the pairs of leaders spent long hours together observing medical school lectures, laboratory exercises, ward and clinic teaching. They visited other universities such as Cornell, New York University, Columbia and Rochester.

There were also monthly meetings of the entire group during which individual seminar planning became a shared experience.

The recruitment brought eight medical teachers coming from bacteriology, obstetrics and gynaecology, pharmacology and surgery and one third-year medical student who had decided to work simultaneously

toward a doctoral degree in education: Hilliard Jason.

The evaluation system was planned by Stephen Abrahamson who wanted to test the hypothesis that an increased awareness of educational principles would lead to changes in the attitudes of medical teachers toward the process of medical education and in their instructional practices. He detailed the sub-objectives of the research and identified methods and tools: interviews, daily log and diary, periodic observations of participants, anecdotal records. An Abrahamson's young graduate student, Edwin Rosinski, had the responsibility for study the attitude change and Hilliard Jason carried similar responsibility for the study of teaching practices. Rosinski created an attitude inventory of 120 statements distributed among six areas and Jason created a comprehensive list of teaching characteristics derived from a review of literature.

In 1956 after Labor Day the visiting faculty members arrived and the program started. By June a vast quantity of information about the program had been accumulated from participants and seminar leaders and all led to the same conclusion: it had been a remarkably successful undertaking.

The good news spread fast and very qualified persons valued the Buffalo experience. Former secretary of AAMC said that Buffa-

lo was clearly exploring new territory in medical education and the dean of Yale University school of Medicine noted : “Based on the experience gained in this experiment at Buffalo, I can see great value in the development of a syllabus or outline for a series of bi-weekly conferences over an academic year for new faculty members at any medical school”.

Although the first round had been very successful, the second year was more difficult. Nathaniel Cantor died after a short illness and the new six participants were more aloof and never succeeded in establishing a group identity.

Rosinski conducted a one-year follow-up on twelve of the thirteen participants, their department heads, a random sample of teaching colleagues and the medical school dean. He found that the project experience has resulted in discernible, significant and persistent change in performance as faculty member. *More rapid maturation, greater confidence, willingness to test alternatives and to accept differences, encouragement of students to discover what they needed rather than to absorb what they were told, a more questioning and less dogmatic approach to educational planning and implementation.* (Miller, 1980)

At the end of the Project, Commonwealth Fund offered an extra two-year grant for a

new phase aimed to develop seminars and workshops in education for larger numbers of interested faculty from other schools and to develop reference materials and workbooks. AAMC joined in sponsoring the University of Buffalo Summer Institute on Medical teaching, a two-weeks retreat dedicated to medical education for 25 faculty members coming from 21 universities. George Miller edited the book *Teaching and Learning in Medical School* (Miller, 1961).

Ironically by the time *Teaching and Learning in Medical School* was published the program that was spawned it was moribund, because Dean Kimball died and none of the deans who succeeded were very supportive; many implicated persons were invited to disseminate their experience in other universities, ready to start the first centres for faculty development in Medicine.

4. Colonization

In 1959 Commonwealth Fund financed a new study to determine the impact of an educational consultant on a medical school. The research proposal had four objectives: to prepare a professional educator in the field of medicine; to do a match between a school and the educator; to implement through seminars and consultations and, finally, to evaluate its impact.

Commonwealth Fund decided to pay the subsidy for an educational consultant-in-residence and the choice was Edwin Rosinski for the Medical College of Virginia, where he went and worked for seven years.

Stephen Abrahamson established the second colony in 1959 at Stanford University, which was engaged in a major curriculum revision. Here Abrahamson introduced individualized educational program and worked collaboratively with Andrew Hunt, a paediatrician who moved later to become the founding dean of the Michigan State University School of Human Medicine, where firstly he established the Office of Medical Education Research and Development (OMERAD).

Abrahamson returned to Buffalo after a year and then he moved to University of Southern California for the rest of his life, where he directed one of the most prominent medical education unit in USA; at USC he created the first simulations and standardized patients, together with Howard Barrows, the world famous father of Problem Based Learning.

George Miller went to University of Illinois College of Medicine to lead a research project and the establishment of a permanent centre: the Office of Research in Medical Education (ORME). He decided to create a very interdisciplinary endeavour and took

as associate program director an educationalist, Lawrence Fisher, trained by Ralph Tyler (one of the top-ranking professionals in curriculum and evaluation) and Christine McGuire.

Commonwealth Fund provided financial assistance to establish the OMERAD at Michigan State University and dean Hunt chose Hilliard Jason as first director of the unit. OMERAD was planned as a vital part of the faculty, both functionally and organizationally: a faculty member from each academic department was part of it. "*Insinuation of this unfamiliar resource into all planning, implementation and evaluation was assured*" (Miller, 1980). OMERAD was also represented in all major educational policy committee. The Office developed degree and non degree programs for those anticipating careers in medical education. Hilliard Jason worked hard in a very open-minded endeavour and he could introduce new ideas as simulated (standardized) patients and video recordings for first year students.

This very stimulating new medical program attracted visitors from abroad and among them a mention is dedicated to Harmen Tiddens, founding Dean of Maastricht university and Vic Neufeld from McMaster University.

In his experience at MSU, Hilliard Jason understood how important cross-

fertilization among members of the group was: they used weekly meetings in which everyone took turns presenting their work, their vision, their successes and their challenges in a non-judgmental atmosphere. After some years, in 1974, AAMC invited Hilliard Jason to become Director of the Division of Curriculum, and he accepted with one condition: the elevation of the faculty members who design and implement curricula. They agreed and converted their Division of Curriculum into the Division of Faculty Development. Jason remembers: *“As far as I know, that was the first time the phrase “faculty development” was used in a medical education context. I felt it marked the beginning of a needed transformation in the thinking of some of our country’s medical education leaders, toward accepting faculty development as a foundation requirement in medical education”* (Guilbert, 2007).

During his fourth year at AAMC, Jason offered workshops on various aspects of faculty development. Due to the budgetary constraints, AAMC couldn’t keep Jason for longer so he moved to the University of Miami where he created, with his wife Jane Westberg, the National Centre for Faculty Development where they remained for 12 years until 1992.

In those years they continued to offer, with many collaborators from medical schools

around U.S., workshops for faculty and produced a large collection of resources for use in faculty development including booklets, instructional videos and self-study documents. They also pursued a large federally funded 5-year faculty development project involving faculty and residents of all 9 family medicine residency programs in Florida (Jason and Westberg, 1984).

5. The disseminating role of World Health Organization

In the same years World Health Organization had been dealing with the problem of teacher-training and in 1952 its Expert Committee on Professional and Technical education of medical and auxiliary personnel made specific reference to formal pedagogic preparation of faculty members. WHO studied the Buffalo School of Medicine and School of Education project and asked to George Miller to design an international program to train medical teachers in the five continents. George Miller proposed to identify an Interregional Centre in Chicago which could offer training in education to health professions personnel who will man Regional Centres that will in turn spawn National Teacher Training Centres. Miller’s proposal was accepted and implemented, and many regional and national centres were created worldwide. The Inter-

regional Centre was established in the Centre for Educational Development at the University of Illinois, the Regional Centres were designated in Africa (Makerere University in Kampala, Uganda as English-speaking centre and University centre for the health sciences in Yaoundé, Cameroon for a French-language centre); in Eastern Mediterranean Region at Pahlavi University School of Medicine in Shiraz, Iran; in Western Pacific Region at the University of New South Wales; in South Asia Region at the University of Sri Lanka and at Chulalongkorn University in Bangkok; in the American Region there were designed a centre at the Federal University of Rio de Janeiro and one in Mexico City. In Europe there were many health professions educational research and development groups: the Center for Medical Education in Dundee, Scotland; the medical education staff at the University of Maastricht, the Netherlands, the British Life Assurance Test Centre for Health and Medical Education in London, the faculty of medical Education in the central Institute for postgraduate studies in Moscow.

The WHO Headquarters Division of Health Manpower Development was headed by Tamas Fulop, original driving force for the sequential worldwide program.

Tamas Fulop, Chief medical officer for postgraduate education at the WHO Head-

quarter in Geneva, said at the 4th World Conference on Medical Education held in Copenhagen in 1972, that considerable progress was made in the period 1962-65 since a total of 320 teachers from 33 countries from the Americas received training in pedagogy applied to medicine (Medical teaching). Seminars, workshops and study tours also had been organized by WHO Regional Offices to promote the same subject (Fulop & Millker, 1972).

In the conduct of teacher training workshops, Jean-Jacques Guilbert (WHO Chief Medical Officer for educational planning) a physician who won his doctorate in Education at the University of Southern California Division of Research in Medical Education, was without peer. Guilbert had both refined the workshop format and created an educational handbook designed as a centrepiece for the individual and small-group study that characterized most of workshops. (Guilbert, 1998)

The Pan American Health Organization later engaged Edward Bridge, who had planted the seed that grew in Buffalo University, and he trained nearly 1200 medical schoolteachers in a decade in Latin America.

Miller led a survey in 1977 and he identified seventy-two medical schools in the United States and Canada that seemed to have clearly established unit of educational

research and development. The units ranged in size from two with no-full time professional to three with more than fifty, the median number was 5. All units offered assistance to faculty in the design and development of curriculum, instructional materials and evaluation procedures as the improvement of teaching practices.

6. *The role of Associations*

Many associations played a role in disseminating medical education principles: among them it is important to cite Association of American Medical Colleges (AAMC), American Health Association (AHA), Association of Education and Research in America (AERA) with their Special interest group dedicated to Medical Education like Conference on Research in Medical Education (R.I.M.E.) at the AAMC, S.I.G. Health Professions Education as formal AERA division (then called Division of Education in the Professions).

An extraordinary role was also played also by the Network of Community oriented Institutions for Health, gathering the most innovative medical schools in the world under the auspices of WHO, which was founded in 1979.

In 1972 AMEE was founded in 1972 in Copenhagen¹, to foster communication

among medical educators and to help promote national associations for medical education throughout Europe (Wojtczac, 2013). AMEE is the European regional association of the World Federation for Medical Education and a member of the WFME Executive Council. Several European national medical education associations are corporate members of AMEE. Over the past decade AMEE has developed steadily both in size and in the sphere of its activities and is now a worldwide association with members and contacts in over 90 countries.

Many journals and conferences worldwide wit the lively activity of this field today in the world.

CONCLUSIONS

Faculty Development has an important role in Medical Education and its roots can be easily found in a group of passionate medical doctors and educationalists who worked together, as pioneers, in Buffalo University in the Fifties leaving a remarkable and inspiring footprint.

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