



ISSN: 1697-090X

Inicio Home

Indice del
volumen Volume
indexComité Editorial
Editorial BoardComité Científico
Scientific
CommitteeNormas para los
autores
Instruction to
AuthorsDerechos de autor
Copyright

Contacto/Contact:



Letters to the Editor / Cartas al Editor

MAY A PROBLEM-BASED LEARNING CURRICULUM ENTAIL PROBLEMS?

Alberto Enrique D'Ottavio.
Profesor e Investigador. Facultad de Ciencias Médicas y
Consejo de Investigaciones. Universidad Nacional de Rosario.
Rosario. Argentina

aedottavio@hotmail.com

Rev Electron Biomed / Electron J Biomed 2009;1:56-58

Sr. Editor:

Currently, there are in Argentina 26 medical schools, 10 are public and 16 are private¹. Public education is free and public universities are autonomous although entirely dependent on the government for income. Students enter to a six-year medical curriculum right after high school (average age = 17 ± 1 years old; mean \pm standard deviation) since no intermediate stages (college or similar) exist between secondary education and university. Furthermore, there exists a wide variety of admission policies resulting in a wide range of medical school admission numbers (from about 150 ± 70 to 1.500 ± 500 matriculates/year)².

When our public medical school at Rosario, Argentina, engaged in implementing a pure problem-based learning (PBL) curriculum, the basic requirements for successful implementation of that format, the difficulties that such curriculum could face, and the need for an unbiased and continuous monitoring and adjustment were made public, proposing simultaneously an alternative hybrid format in view of some arisen problems shortly after its first-year implementation^{2,3}. However, the curriculum planners' decision was to go on with the program assuming that potential impediments for PBL curriculum implementation could be overcome.

After six years of implementation, this letter refers to the fulfillment of the aforesaid basic requirements and to some teachers' working experiences dealing with the first three years of the curriculum design intending to be helpful for curriculum planners, particularly in developing countries, in terms of being aware of potential drawbacks and ways for solving them.

Earlier reports on this subject⁴⁻⁵, university database⁶ and National Commission for the Evaluation and Accreditation of Universities (CONEAU) recommendations⁷ were considered for comparing the aforesaid basic requirements with our present scenario. In parallel, a personal interview was carried out during 2007 to a representative and reliable group of 20 medical teachers of both sexes (48 ± 12 years old, mean \pm standard deviation) selected from a population of approximately 200 teachers.

The obtained results revealed that the referred basic requirements and the improvements recommended during 2005 by CONEAU could not be fulfilled at all by internal and external reasons⁸⁻¹⁰, despite some efforts made in this regard.

In turn, interviewed teachers identified a set of problems likely to be solved:

- (a) a predominance of triggering enunciates instead of real medical problems,
- (b) a reduced background for understanding physiopathology, pharmacology and its related clinical and therapeutic contents resulting from a weak morphophysiological core,

- (c) poor training for correlating and integrating bio- psycho - social contents, essential for this format. The same occurred in relation with the scientific attitudes and skills despite the inclusion of a 3-month course in scientific research methodology,
- (d) heterogeneous evaluations resulting from different pedagogical, scientific and disciplinary teachers' expertise,
- (e) frequent replacement of self-learning under expert supervision, another key issue, for self-directed learning,
- (f) lecture lacks,
- (g) inadequacy in internet-based searches in many students because of their shortcomings in reading, writing and managing native and foreign languages, and
- (h) development of cross-disciplinary areas not suitably based on well-defined and balanced disciplines. Attention must be paid to the agreement existing between our teachers' perceptions and some students' initiatives addressed to solve the aforesaid concerns.

Exceeding the bibliographic pros and cons¹¹⁻²¹ and whatever the underlying reasons for the adopted and sustained decision, an action to be faced is a quick, up-to-date and reality-grounded adjustment of the current curriculum, compatible with the CONEAU recommendations. Summing up, the best of former curricula must be retrieved, and the best of the new trends in medical education must be added, for achieving a reliable curricular hybridization.

To conclude, the lessons to take home were: (a) the greater the curriculum change the better the outcomes to be required, (b) the best ideas and purposes²² and the most promising formats may become problematic when the contextual and operational factors are not fully considered for its implementation, and (c) an advisable flexibility must prevail whatever the curricular design being proposed²³.

REFERENCIAS

1. 9th. Argentinean Conference of Medical Education. Rosario (Argentina), 2007
2. Carrera LI, Tellez TE, D'Ottavio AE. Implementing a Problem-Based Learning Curriculum in an Argentinean Medical School: Implications for Developing Countries. *Acad. Med.* 2003; 78: 798-801
3. Harden RM, Sowden S, Dunn WR. Educational strategies in curriculum development: the SPICES model. *Med Educ.* 1984;18: 284-297
4. D'Ottavio AE. On being a doctor. Thinking about medical formation and practice. In: Pérez JN, Riestra G (eds.) Rosario, Argentina: Homo Sapiens, 2001
5. D'Ottavio AE. Issues on curricular changes: are they unique to Argentina? *Singapore Med J.* 2007; 48: 704-704
6. National University of Rosario: Institutional - Statistics (2002-2007) [cited 4 January 2008] Available from <http://www.unr.edu.ar/institucional/estadisticas/estadisticas.htm>
7. National Universities Evaluation and Accreditation Commission (CONEAU): Medical Career. Rosario National University. Resolution N° 954/05 1-39, 2005 [cited 4 January 2008] Available from <http://www.coneau.edu.ar/archivos/resoluciones/Res954-05E804629.pdf>
8. Haidet P, Stein HF. The Role of the Student-Teacher Relationship in the Formation of Physicians. *The Hidden Curriculum as Process.* *Gen Intern Med.* 2006; 21: S16-20
9. Belmartino S: Reorganizing the Health Care System in Argentina. Reshaping health care in Latin America: A Comparative Analysis of Health Care Reform in Argentina, Brazil, and Mexico. In: Fleury S, Belmartino S, Baris E (eds.) The International Development Research Centre, Canada, 2000. [cited 4 January 2008] Available from http://www.idrc.ca/es/ev-9421-201-1-DO_TOPIC.html ISBN 0-88936-923-2
10. Medical College of Santa Fe Province (2nd District): Data actualized at December 31, 2007
11. Dhungel KU, Prajapati R, Pramanik T, Ghosh A, Roychowdhury P. Study habits and attitude of medical students of basic sciences. *Nepal Med Coll. J.* 2007; 9:129-131
12. Rowan CJ, McCourt C, Bick D, Beake S. Problem based learning in midwifery - the teachers' perspective *Nurse Educ. Today*; 2007, 27:131-138
13. Beachey WD. A comparison of problem-based learning and traditional curricula in baccalaureate respiratory therapy education. *Respiratory Care*; 2007, 52: 1497-1506
14. Choon-Huat Koh G, Eng Khoo H, Lian Wong M, Koh D. The effects of problem-based learning during medical school on physician competency: a systematic review. *CMAJ* 2008; 178: 34-41

15. Stockdale A. Medical education must be more patient centred: Good in theory but not in practice. *BMJ* 2006; 333: 920-d (Letter to the Editor)
16. UNESCO. International Bureau of Education (IBE). 5th Meeting of the Central American Community of Practice in Curriculum Development - Regional Workshop: "Competency-based curriculum design and evaluation". San José (Costa Rica), October 2007
17. Flegel KM, Hébert PC, MacDonald N. Is it time for another medical curriculum revolution? *CMAJ* 2008; 178: 11-13
18. Zualkernan IA. A framework and a methodology for developing authentic constructivism e-Learning environments. *Educational Technology & Society* 2006; 9: 198-212
19. Whitcomb ME. Medical Education Reform: Is It Time for a Modern Flexner Report? *Academic Medicine* 2007; 82:1-2
20. Cruess R, McIlroy JH, Cruess S, Ginsburg S, Steinert Y. The Professionalism Mini-evaluation Exercise: a preliminary investigation. *Acad. Med.* 2006; 81(10 Suppl.): S74-8
21. Crites GE, Ebert JR, Shuster RJ. Beyond the dual degree: development of a five-year program in leadership for medical undergraduates. *Acad. Med.* 2008; 83:52-58
22. Maglio F. Ethics and Teaching in Medicine [in Spanish]. *Revista del Colegio de Médicos de la Provincia de Santa Fe (2ª Circunscripción) [Santa Fe Medical College (2nd district) Journal]* 2007/08; 73: 10-19
23. Drake RL. Anatomy education in a changing medical curriculum. *The Anatomical Record* 1998; 253: 28-31

Correspondence:

Alberto Enrique D'Ottavio
Matheu 371
2000 Rosario (Santa Fe)
ARGENTINA
mail aedottavio@hotmail.com

Received: September 4, 2008. Received reviewed: January 26, 2009.
Published: January 27, 2009