

## **Reflections on remaining obstacles in a primary-care oriented pure PBL curriculum after twelve years of implementation**

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### **ABSTRACT**

*A pioneer primary-care oriented pure PBL curriculum, based on constructivism and adult learning theories combined with Morin's complex thinking, was implemented in our medical school since 2002. Regardless of warnings opportunely made because the basic requirements for its successful implementation could not be fully fulfilled in practice, the experience was carried out and, while partially amended, still endures. This allows revealing several obstacles in many operational aspects, here recalled and/or characterized. Besides becoming helpful not only for counseling again to our own medical school about them but for warning and informing to those institutions with similar problems, the present analysis leads to a preventive final reflection: when designing and implementing a medical curriculum in general and particularly a pure PBL one, a thorough analysis of the contextual and operational factors, a flexible procedure and continuous objective evaluations for further adjustments become keystones for guaranteeing its fruitful implementation.*

### ***Context and theoretical-pedagogical framework***

A pioneer primary-care oriented pure PBL curriculum, based on constructivism and adult learning theories combined with Morin's complex thinking, was implemented in our medical school since 2002<sup>1-4</sup>.

In this regard, warnings were opportunely made because, to our knowledge, the basic requirements for its successful implementation could not be fully fulfilled in practice<sup>5</sup>.

After twelve years of development together with some partial amendments, several enduring obstacles have regrettably hampered its pursued but not satisfactorily reached implementation.

### ***Aim of this communication***

As a pure PBL curriculum may be partially or entirely chosen by medical schools still developing a traditional format, we believe that recalling and/or characterizing the main obstacles faced during this long – term experience may become helpful not only for counseling once more to our own medical school but also for warning and informing to those institutions with problems similar to ours.

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### **Results**

To our knowledge, we appraise that the accent needs to be firstly placed on formerly referred problems<sup>6</sup>: (a) High number of students ( $1500 \pm 500$ /year) directly admitted from high school without a previous college (or substitute) and a selection exam, both ensuring a suitable educative background; (b) Lack of an adequate number of tutors and experts in biological, psychological and socio-anthropological areas with a proper scientific background for facing this challenge and accomplishing a suitable quantitative and qualitative teacher-student relationship; (c) Unprepared achievement of the process of integrating learning development; (e) Uncoordinated pool of electives; (d) Lack of continuous, systematic and objective curriculum assessment for further adjustments.

Furthermore, the following set of complementary troubles timely identified by 20 medical teachers of both sexes ( $48 \pm 12$  years old, mean  $\pm$  standard deviation) and different academic hierarchy, randomly selected from a population of approximately 200 teachers, has not been significantly modified yet:

- Difficulties in problem design since triggering enunciates usually prevails over real medical problems
- Inadequate background for understanding physiopathology, pharmacology and its related clinical and therapeutic contents resulting from an insufficient morphological and physiological core
- Limited training in scientific competences since the existing 3-month course in scientific research methodology would have to be changed by its progressive development throughout the medical curriculum
- Heterogeneous formative and summative evaluations resulting from different pedagogical, scientific and disciplinary teachers' expertise
- Insufficient basic-clinic integration
- Development of cross-disciplinary areas not suitably based on well-defined and balanced disciplines
- Risky replacement of self-learning under expert supervision for *self-education or autodidactism*
- Inadequacy for NTICs in most of students (approximately 85% of them) because of their shortcomings in reading, writing and managing native and foreign languages

The last two issues are directly related with the tricky position occupied by Argentinean students in 2009 PISA report on reading subscales<sup>7</sup>.

If we also recall the training contradiction between the complex and varied Argentinean health care system forcing specialization and the medical schools' attempts to train primary-care-oriented generalists<sup>5</sup>, the problematic landscape discloses quite clear.

### **Final reflection**

Considering the abovementioned obstacles, whose lack of solution departs our PBL curriculum from its theoretical-pedagogical framework, together with our and other claims about the convenience of a hybrid model for developing countries<sup>5,8</sup>, the main lesson to take home may be: *when designing and implementing a medical curriculum in general and particularly a pure PBL one, a thorough analysis of the contextual and operational factors, a flexible procedure and continuous objective evaluations for further adjustments become keystones for guaranteeing its fruitful implementation. Otherwise, the first victims may be students and next the recipient of our efforts: patients.*

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