

LETTER TO THE EDITOR

Dear Dr. Felton:

I am writing this letter in response to the article "Problem-based learning in undergraduate dental education: Faculty development at the University of Southern California School of Dentistry" by Drs. Tim Saunders and Shireen Dejbakhsh which appeared in the Sept./Oct. issue of the *Journal of Prosthodontics*. While the article accurately outlines the processes by which faculty development and calibration in problem-based learning (PBL) have been attempted at USC, several statements in the article are presented with absolutely no documentation to support their efficacy.

As someone who has been involved full-time in dental education for many years, I am fully aware of the many challenges we face and that traditional teaching programs have many deficiencies. I am open to and welcome any suggestions for innovative approaches that may help us meet these serious challenges. PBL was introduced at USC to meet some of the challenges described by the IOM report of 1995. While much of this report was accurate and timely, I personally believe that this report has unfortunately been accepted as gospel without challenge in much of dental academia.

As a member of the curriculum committee at USC for many years, in my role as Executive Associate Dean for Academic Affairs from 1999 to 2001, and as Chairman of the Department of Restorative Dentistry from 1984 to 1990 and from 1993 to 2002 when it was eliminated, I have been involved and witnessed the implementation and operation of PBL at USC from its inception as a small pilot program to full-blown implementation in 2002. I have listened as administrators described the program to interested faculty from other institutions and read articles describing educational outcomes of this approach. Unfortunately, the words used in both the presentations and articles describe the program that was intended to be and the results that were hoped for rather than the program that exists and the results that actually have been achieved.

One of the statements made in the above mentioned article is, "The PBL model provides a learning approach resulting in clinical excellence; life-long learning habits, a keen interest in leadership, science, and innovations in clinical dentistry." The reference for this statement is the strategic plan for the School of Dentistry. The statement describes the type of graduate USCSD (and probably every other school of dentistry) hopes to produce. The truth is there is absolutely no evidence to demonstrate that these goals have been met, and that graduates of USCSD possess these attributes. In fact, there is ample evidence (scores on National Board Part II examinations; pass rates on licensing examinations) that use of the PBL pedagogy does not improve or foster clinical excellence compared to a traditional approach. There is no evidence either for or against the proposition that PBL graduates develop life-long learning habits.

The article also describes the PBL process as it is supposed to occur, but neglects to comment on the many ramifications going to this approach has had on the School of Dentistry. One of the best features of PBL is that most of it occurs as small group learning. As Director of the Advanced Education in Prosthodontics for many years at USCSD, I can positively attest to the many benefits of small group learning. However, it is extremely inefficient and both student and faculty intensive. This has resulted in a significant reduction in the amount of pre-clinical restorative instruction the students received. This has gradually been corrected over several years, but has not been done in a thoughtful building block approach. The net result of this is that most students enter the clinical setting with diminished clinical skills in several areas. Removable prosthodontics, occlusion, pharmacology and dental materials were disciplines identified as deficient.

The article describes the four themes of the PBL approach and readers may be interested to know that the curriculum has only four courses, one for each year. Thus, students have only four grades on their academic record over 4 years of dental school. There are no lectures unless specifically requested by the students. Grades are all determined by the Associate Dean for Academic Affairs based on a large number of evaluations and

a formula that no one in the school, faculty or students, understands. Most of those evaluations are given by other students in the eight-student group, where the obvious incentive is to give everyone an excellent evaluation. Most trimesters 70% or more of the students are on the dean's list, connotating academic excellence.

The article concludes by stating, "PBL most closely simulates future practice environment and encourages students to adopt professional behaviors and approaches to patient care that model the very best in the profession." Again, where is the supporting evidence? The truth again is there is no evidence to support the statement, and the outcomes that have been measured show the opposite.

One outcome that is never mentioned by administrators when they discuss the PBL program is that it has almost entirely disenfranchised the faculty. In the traditional curriculum, most faculties had a course or courses for which they were responsible. They were given the responsibility of keeping that course current and could be held responsible if students were found lacking in the appropriate knowledge or skill. Under the current system, the students have to teach themselves. There is no check and balance to insure that core skills and knowledge are attained. As mentioned in the article, the facilitators of the problems are not "experts" and the 22 groups of eight students can conceivably come up with 22 different answers to the problem. There is little, if any, role for "experts" in this system. One prime example is Dr. Stanley Malamed, a world leader in the field of dental anesthesiology. Students at USCSD learn local anesthesia from a book, and do not get a single lecture on the topic from Dr. Malamed. I have always believed that a University consisted of the students, faculty, and the curriculum. The buildings, lecture halls, and facilities allowed these three factions to mix together in a positive way. With PBL as done at USCSD, the faculty are essentially uninvolved until it is too late.

I am making these comments not because I am against PBL or any other innovative form of education per se. I felt compelled to speak out because the article, as written, painted a utopian picture of

dental PBL as practiced at USCSD. It did describe the four workshops that have been implemented to assist faculty in becoming better facilitators. It did not evaluate the effectiveness of the four workshops and whether or not they improved the teaching. It did not describe the frustration of the clinical faculty asked to supervise students who have not yet attained basic clinical skills. It did not describe the frustration of the students who know they have great gaps in their fundamental knowledge and skills.

It is a difficult time for dental education. The traditional model has many deficiencies, and clearly has not produced the legions of critical thinkers we would like to graduate from our schools. Innovation is desirable and necessary. My plea is to be honest with one another. Let us try something different and honestly evaluate it to see if it is better, the same, or worse than the traditional method. Major changes were made at USCSD with the best of intentions. As I write this letter, a group of senior students at USCSD are consulting with lawyers and are considering legal action against the school because only 18% of the senior class graduated on time.

From conversations with educators across the country and in Canada, I know that many schools have gone to some form of PBL and others are considering it. I am neither for, nor against that. I do feel it is important that schools that are considering making a change know that there are considerable downsides to a pure PBL approach, and unfortunately, those negative aspects have not been presented in a balanced way by those promoting the USC approach. I would strongly urge any institution considering making such changes to visit USC and talk to the foot soldiers who are attempting to deliver the education. The messages you have been getting from the sages thus far is a long way from being "fair and balanced."

Sincerely,
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