



Producing the next generation of professional educators in pediatric dentistry

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Through experience gained in three decades of academic dentistry, I approach the problem at hand with optimism but with a plea for creativity and flexibility. As pediatric dentists, we should all have considerable training in these two essential skills, but we must put flexibility and creativity to use in academics and administration as truly as we use them effectively in the clinic.

I have worked in academics in two prestigious universities, watched the evolution of tenure standards, trained academic and clinical dentists, and recruited and hired new faculty into both tenure track and clinical track positions. My comments today arise from the experience of these collective adventures. I also acknowledge ideas and suggestions from experienced colleagues at both universities — particularly, Michael Till of the University of Minnesota.

Statement of purpose

There is a strong case for establishing an educators' environment in our training programs but only a weak case for establishing a formal "educators' curriculum" in our training programs. As for the educational environment, there are very tangible ways to stimulate, encourage, and model young students who show a proclivity for a career in education. After the environment has worked effectively, it can be followed with an educators' curriculum (outside of our programs) aimed at new and aspiring educators who are in need of the practical skills of teaching in the modern, technology-driven classroom.

Problem

The problem to be addressed in this portion of our workshop is one of shortage driven by layers of complexity. How do we continue to suffuse the training/academic environment with a sufficient number of new teachers who have the talents and skills to effectively and creatively carry on pediatric dentistry education? How do we accomplish this goal in a competitive marketplace involving an academic environment in which survival is increasingly difficult?

On one level, this is simply a problem of numbers. As has been the case for generations, only a small percent-

age of students yearn to be teachers, fewer still aspire to be professors. The critical issue continues to be, "how to make sure this humble percentage is peopled by the best and the brightest?"

Underlying the simple number problem is marketplace competition. Faced with the increasing burden of debt incurred in a long, professional education, few students are able to choose academic life with decidedly lower salaries than those offered by today's multitude of available practice opportunities.

If these number and dollar issues weren't enough, we are presently faced with a problem of institutional schizophrenia of unprecedented proportion. The modern dental school is required to "serve" two masters. To survive in the university's scholarly environment, schools must uphold the highest of academic standards, including research and publishing expectations for all their faculty. These standards dramatically affect the life of the young educator as she/he races the clock toward the tenure decision. At the same time, the dental school yearns for master clinician-teachers who fully understand the intricacies of a clinical discipline so that teaching is contemporary and useful. Schools also seek a master clinician who can produce dentistry (translated - make money) for the institution.

In truth, few true renaissance men and women exist, and even if they do exist, there are only twenty four hours in each day. The contemporary dental school expectations far exceed the available hours. The most talented young professionals we produce are the very ones who possess the skills necessary to establish them rapidly in one of the available, lucrative practice opportunities—and often, practice is the career choice.

Educators curriculum: a two phase approach

A problem with the complexity just defined is not solved by simple answers. Establishing an "educators' curriculum" certainly will not suffice to address the multitude of challenges facing dental education. Is there value in considering an educators' curriculum in our training program for its recruitment value or the value such a curriculum may have in preparing our graduate students for the educational job ahead? I sug-

gest very little would be served by formalizing an educators' curriculum within our existing programs.

Curriculum requirements of a training program in pediatric dentistry fill the available time in a 2+ year schedule. In this 2+ year schedule we try to teach the requirements for accreditation as well as convey our own understanding of the important elements of the specialty. Didactic course work, clinical practice, special rotations, seminars, and research all are vital aspects of training. Combined, they amount to more than a full-time curriculum. Few of us would be willing to sacrifice any aspect of our programs to insert an educators' curriculum.

We continue to need teachers who understand the subtleties and intricacies of our discipline (i.e. people who can communicate with students the important issues of care for children). What we most certainly don't need are people with excellent teaching/testing skills who don't understand the subtleties of pediatric dentistry. The danger is that such educators would teach, with great efficiency and effectiveness, an imperfect version of our discipline, leading to poor specialty education for a great number of people.

I suggest an educators' curriculum with a different slant - a two-phase plan of encouragement and teaching that relies on good example and mentoring during our specialty program curriculum with skill development occurring largely after a specialty program. My suggestion is based on two observations. First, young dental and specialty students are often attracted to an academic career path. Second, very few young professionals are ready to succeed at the end of a specialty program regardless of their career choice. A young dentist takes a considerable number of additional hours of study (practical or trial and error learning) to understand the intricacies of business life and the subtleties of practice. A young scientist, serious about a career, takes a post-doctoral experience in a successful laboratory. Similarly, a young, aspiring teacher must spend additional time honing the skills of teaching. The tricky part of producing an educator is that the young professional may be expected to excel quickly in all three areas, thus the new academic must pick up additional training in all.

An educators' curriculum in our programs would not be a list of courses or a set of seminars, rather a plea to establish an environment from which academics of the future can be grown. My version of an educator's curriculum brings in the concept of Schon's "reflective practicum" and the guided design exercise of Wales, et al.¹

We need to teach the best discipline-related skills in clinical pediatric dentistry in such a way that we produce thinkers (i.e. reflective professionals, prepared to advance the science of our discipline regardless of whether their future is in academics or in practice).

We must continue to give wide-ranging opportunities to our students so they will understand the spe-

cialty in all its glory, putting our students on track to develop, with time, into master clinicians. A part of this strategy is to teach critical thinking and critical evaluation of literature, both of which are essential to the future of our discipline. Then, during the process of guiding students down the path to be master clinicians, it is imperative that we express the excitement of academic pursuits and scholarly work by the example of our own work lives. We must highlight the inter-relationship we have as clinicians with research in the discipline, mentor the inter-relationship we have with scientific investigation in the school or university, lead students to seminars outside our discipline, involve students in solid research projects with strong scientists, and help students become more comfortable with scientific vernacular.

In addition to communicating the excitement of our academic work, we must also begin to develop, by our own example, students' skills in teaching. Each of us must demonstrate good teaching methods, by embracing the process of communication and dialogue that is teaching at its best. We can certainly involve interested students in assisting with courses, lecturing and teaching undergraduate dental students, thus giving them a chance to try the communication and organizational skills necessary for being an educator. In addition, this involvement allows interested students the opportunity to see us in action with other groups (i.e. dental students, CE course participants, parent groups, and medical colleagues). These examples are powerful teaching tools for the young professional. By mentoring, we set the stage for a cadre of young pediatric dentists who envision teaching and academic life as worthy enterprises.

After identifying interested students, another set of strategies can be established to develop skills that enable young professionals to survive and prosper in academics. These phase two strategies are dependent on several levels of involvement and will be successful only if responsibility is taken by the individual, the department, the dental school, and the Academy.

The *individual* aspiring to have a successful academic career must take special steps to increase the likelihood of his/her success.

1. There is an ethical obligation to prepare to become a good teacher. The young professional must seek the necessary information through formal courses, self-study, and on-the-job training encouraged and offered by the department, school, and Academy as listed below.
2. Text and computer self-study courses are available, and young faculty should be expected to utilize them.

The *department* has another level of responsibility.

1. Effective role models must be apparent to young faculty members, and senior faculty must convey the message that good teaching and scholarly pursuits are important and expected.

2. Senior faculty must be willing to guide young faculty members by constructive criticism and teaching improved methods of interacting with students.
3. Current and classic texts, articles, and self-instructional aids dealing with educational principles should be available in departmental libraries.
4. Graduate programs should be structured so students are expected to teach in clinical, seminar, and even lecture settings. Therefore, students are exposed to learning by doing.
5. Program directors should be familiar with available coursework in education at their institution and should promote access to this coursework for any interested student.

The *school* has an additional level of responsibility.

1. The dental school must provide new faculty with opportunities to increase their educational skills. Release time must be available for new faculty to take courses offered locally on aspects of effective teaching.
2. The dental school must give recognition to successful teaching initiatives through provision of credit toward promotion and tenure.
3. Faculty development programs and activities should be available at each school.
4. Dental schools should retain one or more faculty who are trained in education specifically to help the dental faculty improve their educational skills through development courses or consultation.
5. Schools must help fund the purchase of necessary hardware and software to enable their faculty to make educational use of the technological improvements available in teaching materials.

Even the *Academy* holds some responsibility.

1. The Academy could feature educationally-oriented presentations on practical issues related to teaching at annual meetings and in its journal. Such "how-to" topics would have an audience much wider than the academic community, since practitioners also speak and teach.
2. The Academy could maintain a directory of experienced educators willing to serve as mentors to those interested in upgrading their skills. With electronic communication, such long-distance mentoring is possible.
3. As a long-term project, the Academy could develop an independent study course in education. Modules in such a course could be made available for self-paced learning. A certificate of completion would serve as recognition to employers that the participant had invested time and effort into learning educational skills.

The examples set and the mentoring done will largely determine the number of talented students we

can interest in academic life. Addressing these areas of responsibility will improve the skills of those interested in education as well as focus the dental school environment on the value of good teaching.

The institutional schizophrenia we face continues to be a difficult challenge. We must argue for the academic community to value quality in teaching as it values quality in research. All schools need good teachers. This is a practical as well as simply an esthetic issue. Teaching in the era of decreased resources must be accomplished in the most efficient and effective manner. Quality initiatives in education may, in fact, save our institutions from budgetary collapse. Therefore, it is imperative for our schools to place an emphasis on education by replanting resources and cultivating young faculty. This can be done by giving support to young faculty who are scholarly in the pursuit of excellence in education.

This point reflects Recommendation 8 of the Institute of Medicine report that reads "to permit faculty hiring and promotion practices that better reflect educational objectives and changing need, the committee recommends that dental schools and their universities supplement tenure-track positions with other full-time nontenured clinical and research positions that provide greater flexibility in achieving teaching, research, and patient care objectives."²

However, the responsibility does not lie only with the school. As previously mentioned, there are many partners in this quest. The Academy must play a part, and individuals can be extremely effective. Also, I feel compelled to add that honest counseling be offered to aspiring academicians. Students have a right to know the differing pressures that come to bear on their lives based on their individual career path and based on type of dental institution for which they work.

Novel proposals

We will need an excess of creativity to solve the shortage problem facing our training institutions. We must be willing to think "outside of the box." Two ideas come to mind. First, some professional educators are promoting a program of early identification of potential teachers and mentoring these candidates through dental school and a concurrent educational curriculum. This has merit for starting the "teacher training" early. It will allow a number of years of skill development in education simultaneously with knowledge and skill development in dentistry. Second, I suggest that not all new teachers will come from the ranks of the young. Therefore, I propose a novel program to develop a cadre of educators for pediatric dentistry out of our mature colleagues; those we know who have distinguished themselves in practice and are now looking for a chance to give back some of the knowledge gained through years of successful practice. I personally know several such practitioners who are excellent communicators and who would jump at the opportunity to give

back something to dental education. Some of these individuals find themselves independently wealthy. Their major problem is that their retirement fund is "maxed out" (their financial advisor says no more contributions).

Given an offer to teach in graduate or undergraduate clinics and hold seminars, these dentists would respond positively. We would only have to make an effort to coordinate such a traveling band of educators. Offering a short-term position with your institution and a place to live, many such clinicians would come for no other reimbursement. Add in a few concert or sports tickets, and they may line up for the chance to help.

Let me be clear that this idea is not built on the existing model of the part-time educator. This idea depends on a cadre of traveling, or rotating, teachers who travel to different schools for the adventure of a new place and a new group of students. Some central clearing house would be in charge of signing up the interested clinicians, giving them basic material on teaching methods, and then helping to arrange their sabbatical sessions with individual institutions. They each would develop a CV of their seminar/teaching topics. We could keep records on the effectiveness of their efforts. Some clinicians might return to one or two schools each year. Others may become true itinerants, trying out different parts of the country each year. The commitment by each clinician would be variable to fit their interests and freedom. Some might be available for a full year, some a semester, some a month. It is possible that such a cadre could fill important needs of each of our departments for some parts of the year or some topics that are difficult to cover. The resultant "release time" for regular faculty might just be the sal-

vation of our busy teaching lives.

Regardless of your support or lack of support for this particular idea, I encourage everyone to engage in wider thinking. Develop your own novel proposals. We must expand our horizons of creativity to solve this problem of person power in dental education.

Summary

We will see an abundance of eager, well-prepared aspiring academic pediatric dentists only when the market forces make this decision more rational for the best and the brightest. Until then, our challenge is to show interested students the excitement and vitality of this career path through our own examples. Then, once those few are intrigued, it is incumbent upon the system to be prepared to foster their interest and help them improve their skills so they are prepared to be successful in the academic environment. In addition, supplementation of teaching efforts may come from other creative avenues. Potential additional sources are found in experienced clinicians as well as modern, media-based instructional packages.

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2. Institute of Medicine, Committee on the Future of Dental Education: *Dental Education at the Crossroads*, Ed. Marilyn J. Field, National Academy Press, Washington, DC, 1995.