

# Innovation and Entrepreneurship

## The Video-Game Generation is now in Dental School

It is with a mixture of shock and awe that I calculate that most members of this year's new wave of dental students, the class of 2009, were born around 1984. Because I earned my dental degree from the University of Pennsylvania in 1964, let me paraphrase the title of the song "What a Difference a Day Makes" with a title of my own, "What a Difference 45 Years Makes."

My song might open with a stanza reminiscing about the class of 1964's use of "crimping pliers" for copper bands. Following would be a verse marveling at the class of 2009's intuitive and (to me) intimidating, almost magical grasp of laptop computers. But the laptops are just the beginning; there is no end to the electronic gadgets and gizmos hanging from the modern student's belt or backpack.

Given this armamentarium, it should come as no surprise that, before beginning a lecture, I must always say "Please turn off cell phones and pagers." However, my attempts to gain their attention usually prove futile—without their cell phones, the students simply flip open their laptops and begin messaging over the Internet. Every generation acquires a name—Generation X, the Baby

Boomers—and so I have dubbed this group the Video-Game Generation.

### Conditions are Set for The Perfect Storm

Those of you that embrace the quintessentially American principle of free speech and read this column must realize that one of my favorite themes is the stagnation of dental education. Given that the Video-Game Generation is outgoing, independent, and exhibits many of the hallmarks of their parents, the generation known for Woodstock and war protests, conditions appear optimum for a crisis of some sort. Even more so than their parents, these young men and women are confident, well-prepared, motivated, and optimistic about their career choice.

What I fear is that when these optimistic students become aware of the anesthetized condition of the dental education system, especially the slug-like speed with which new products and technologies are incorporated into the dental school curriculum, we will experience the educational equivalent of the Perfect Storm.

### Averting the Storm

Organizations like the National Institute of Dental and Craniofacial Research (NIDCR), the Dental Trade Alliance (DTA), and the American Dental Education Association (ADEA) must have recognized that Video Game Generation's unbounded optimism was about to collide with an antiquated curriculum. These organizations have implemented programs to prevent the colli-



**Edward F. Rossomando, DDS, PhD, MS**  
Professor and Director  
Center for Research and Education in  
Technology Evaluation  
University of Connecticut  
School of Dental Medicine  
Farmington, Connecticut  
erossoma@nso2.uhc.edu

sion, or at least minimize its impact. To facilitate the introduction of new products and technologies into our dental schools, the DTA has invited the ADEA to participate in its 2005 annual meeting to discuss mechanisms to do this. The ADEA has formed a committee to examine dental curricula and make recommendations for modernization.

In 2004, the NIDCR funded a bold new educational effort called Biodontics—Innovations in Oral Health. The Biodontics course was first given at the University of Connecticut School of Dental Medicine in July 2005 during the 4-week interval between the first and second academic years. The course included seminars by scientists and entrepreneurs, tours of dental manufacturing companies to introduce the production and design processes for new dental products, and clinical demonstrations in dental offices of new products and technologies. The course's final exam required students to develop a proposal to create a new product or technology.

In addition to funds from the NIDCR, the Biodontics course received financial and in-kind support from the Patterson Companies, AirTechniques, Centrix, the Harry J. Bosworth Company, and DentalEz.

The proposals presented at the conclusion of the course showed that the students had acquired an enhanced awareness of how new service and technologies are developed to solve dental clinical problems; how basic science discoveries lead to the development of biotechnology companies; how biotechnology products enter dental practice; and how entrepreneurship and business principles are linked with a successful dental practice.

The findings from the Biodontics course suggest that instruction in new products can be a motivator for learning basic science and clinical dentistry, as well as for developing problem-solving skills. Efforts are underway with dental companies to commercialize these student projects.

Practicing dentists confront clinical problems daily that they might not have seen before. In many instances innovative new products are needed, and dentists must either devise their own instruments or contact their dental suppliers for such an instrument. The Biodontics course was designed to facilitate both these actions. For the dentists who design their own instruments, the course teaches how

to develop these instruments, including how these efforts may lead into the formation of a new business. For those dentists who reach out to their supplier, the course teaches how to effectively communicate with suppliers.

The idea of using new technologies to solve clinical problems in dental medicine has been successful because of the cooperation from dental manufacturers and distributors. The programs mentioned above are the first steps toward bridging the gap between dental students' expectations and the reality of today's dental industry. The students of the Video Game Generation have all the tools and skills they need to take advantage of the latest developments in dental technology, but our dental schools need to provide the specialized education to allow them to do so.

*For the continued success of the Biodontics educational program, access to new products, equipment, and services are needed. Dental companies interested in contributing to the 2006 Biodontics program should contact Dr. Rossomando at [erossoma@nso2.uchc.edu](mailto:erossoma@nso2.uchc.edu).*



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