Dental students graduating in 2014 will likely be in active practice until 2054. In those forty years, the dental profession will have seen an even greater number of changes than have occurred since 1974. Thus, a dental curriculum needs to prepare graduates to continually reflect on their practice to ensure that they are performing at the highest level of quality. The scientific advances that will occur in the next forty years will determine the best evidence-based approach for the treatment of patients. Dental curricula need to prepare our graduates to be lifelong learners, critical thinkers, and problem-solvers. The knowledge, skills, and values embedded in the curriculum must not only prepare a safe beginner dentist but an individual committed to embracing the change that will occur in the dental profession. The organization and emphases in the dental curriculum are critical for both the dental school and the dental careers of our graduates.

Each dental curriculum is designed to teach students a set of knowledge, skills, and values necessary for them to achieve competence. However, if dental curricula are surveyed to analyze the time commitment to these three areas, it becomes quite apparent that the skills element dominates. In nearly every dental school, there is a strong consideration that dental students need to “do” more procedures. In either preclinical laboratories or the patient care clinic, there is an emphasis on repetition of procedural skills often with a goal of “getting faster.” Is this a linkage of the didactic knowledge in the curriculum to actual patient care or rather to emphasize clinical productivity? This productivity initiative is often translated into numbers, and while we all have competency-based curricula, the students continually speak of numerical requirements to graduate. The skills in a dental curriculum are important, but without clear linkages to the core knowledge and values, the result is training of dental students, rather than education. It is highly likely that many of the skills currently included in dental curricula will be superseded by new techniques/technology by 2054, so the question is: are our graduates prepared to apply their knowledge and values to incorporate new approaches for the improvement of their patients’ oral health?

Many of the discussions in higher education at this time are focused on a transition from teaching to learning. This means that curricula change from teacher-centered to student-centered since the most important outcome of a curriculum is that students gain knowledge and are capable of applying that knowledge in many contexts. Demonstration of student learning requires changes in assessment approaches to evaluate a student’s ability to analyze a problem, apply different sets of knowledge, and achieve new understanding of the situation. This is quite different from the more typical “factoid” recall examinations that have been employed for many years, which often resulted in dental students unable to apply their knowledge in novel clinical presentations. In this issue of the Journal of Dental Education, there are articles on the use of innovative forms of assessment, such as objective structured clinical examinations (OSCEs), portfolios, and triple jump examinations (TJEs). These require active participation of students by engaging them in reflection, problem-solving, and the application of knowledge to patient and clinical contexts. Preparing our graduates to reflect on their knowledge and on the application of that knowledge is also preparing them for the best professional practices.

Our graduates will be licensed to practice dentistry, which implies that there is a process of continual improvement. Thus, our students need to be prepared to continually assess their performance and the needs of their patients. In most dental schools, the curricula are very good at teaching the “how and what” of dentistry, which are directly linked to the skills; these aspects are continually reinforced by
repetition in preclinical and clinical settings. However, dentistry needs to be much more than a set of procedures if we are to provide the highest quality of care. Dental curricula are not as strong in the “when and why” aspects of dental procedural skills, which are fundamental to critical thinking skills and ethical practice characteristics—that is, the values—that are incorporated into our curricula. A curriculum framework that provides an opportunity for students to continually question their level of knowledge and understanding builds a pattern of professional behavior that results in a commitment to continuous improvement.

What happens when a dental student asks, “Why?” in a preclinical or clinical setting? Is a detailed, knowledge-based response provided, or does the student hear the parental reply, “Because I said so”? We need to ensure that our students receive a sound education with full integration of the knowledge, skills, and values, so that our graduates are well prepared to deal with changes in the profession that are coming in the next forty years.

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