The Hidden Curriculum: Value Added in Dental Education

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Optimum dental school student learning integrates biomedical science and clinical dentistry and provides numerous examples of their application and relation to life and dental practice. While the formal curriculum is the nucleus for learning, the largely uncatalogued “hidden” curriculum is the source of important out-of-class learning experiences and provides much of dental education’s real-life linkage. It is a worthy object of attention by dental educators.

This article details the elements of extracurricular learning comprising the hidden curriculum. It emphasizes the important contribution made by extracurricular learning to the professional development of students. It discusses characteristics of professional work and how out-of-class learning develops these characteristics. Finally, it encourages student and graduate surveys of informal learning, and extracurricular broadening and enrichment as the best preparation for the realities of dental practice.

Importance of Extracurricular Learning

Ernest Boyer observed that “time outside the classroom profoundly shapes the form and quality of student experience.” With substantial professional preparation occurring beyond formal curricular venues, curricular content may indeed be the least valuable part of dental education’s value chain.

In evaluating the quality of education, students and educators rightly focus on the total educational experience: faculty interaction, student interaction, and early and continuing clinical and personal contact with diverse populations and practicing professionals. As Ronald Ehrenberg states, “Attributes that make an individual scholar excel are only partially located in her brain: they mostly lie in the interaction between her brain, the surrounding brains, and the environment.” William McDonald concurs by noting that “what students learn comes not only—and certainly not principally—from the content of the formal curriculum. It comes from the way individual and collective life is lived on a campus—from the way the people employed there do their work, conduct their relationships, and otherwise reveal their true values, which may be quite at odds with the values espoused in the classroom.”

Making Doctors of Dentistry

The hidden curriculum is all about the professional development of students. Creation of health care professionals first entails definitions of essential elements of professional practice. Once assembled, learning processes may be planned and implemented for student attainment. At least three necessary growth factors nurture budding dental professionalism: knowledge of dentistry’s history and tradition; its social and economic impact; and pressing ethical and moral issues. These are key targets of extracurricular learning.

The distinction between technician and doctor-professional is partly found in the socialization aspect of out-of-class learning. As experienced dentists know, the dental degree is as much a social stamp as a professional one. As Boyer reminds us, “Truly
educated persons must gain perspective, see themselves in relation to other people and times, and understand how their own origins and interests are tied to the origins and interests of others.”

Effective out-of-class learning provides students a broad perspective on intellectual and social environments associated with professional life. Students learn about the professional’s disciplined conduct, codes of ethics, courtesy, and caring. The relatively scant time devoted to learning these attributes defines professionalism to a far greater extent than the learning of technical procedures through 1,000 or more formal preclinical hours.

Comments recently published in *The Lancet* on the passing of a noted British surgeon and educator illustrate the point: “Dr. Phillips was very interested in the concept of *mentoring*. He wasn’t just interested in teaching people trade-craft, as it were. It wasn’t just a question of learning surgical techniques. Where Dr. Phillips’s qualities were particularly strong was in teaching students how to communicate with patients” (emphasis added).

Likewise, the link between broad professional perspective and professional success has mature roots. A century before “lifelong learning” became a catchphrase of professionalism, the great medical educator William Osler warned his students: “The hardest conviction to get into the mind of a beginner is that the education upon which he is engaged is not a college course, not a medical course, but a *life* course, for which the work of a few years under teachers is but a preparation” (emphasis added).

While we may view the hidden curriculum as the mortar that binds the bricks of formal learning, perhaps the reverse is true: externally derived professional attributes in reality are the basic building blocks of professionalism, and internally learned tradecraft fills the gaps.

**Characteristics of Professional Practice**

Effective out-of-class learning experiences develop key attributes of professional work in students. Lee Shulman defines the characteristics of professional practice as:

- service obligation to others (a “calling”),
- scholarly understanding,
- skilled performance,
- exercise of judgment in the face of uncertainty,
- learning from experience, and
- a professional community “that both monitors the performance of individuals and [collects] and disseminates new knowledge.”

In an exceptional dental school, students discover that these aspects of professional life are measured by high standards and that healing doctors are guided in their behaviors by civility and decency. Quality extracurricular learning strongly leads students to these discoveries.

**Extracurricular Student Learning Sources**

There are at least nine categories within the hidden curriculum. The realm of *faculty-student interaction* has many modes: informal accessibility outside of class, lab, and clinic; academic and personal development based on private or group conferencing; collaborative research opportunities, including specialized areas of faculty expertise providing opportunities for scientific and educational assistantships; dental fraternity-based contact; and lunch, early evening, or weekend seminars.

*Student-to-student interaction* includes informal advice from experienced to inexperienced students on courses, teachers, testing, and clinical adaptation; preclinical and clinical laboratory mentoring; peer didactic and biomedical laboratory tutoring; and dental fraternity programs and social activities, including academic and clinical board preparation. This area also includes substantial postdoctoral teaching and learning by senior and junior residents.

*Extrainstitutional clinical and research experiences* may afford early hands-on training to predoctoral students and the opportunity to perform many clinical procedures in a relatively short time under less constrained conditions. Clinical experiences include seven- to fourteen-day international missions; local and regional public health clinics; student-generated predoctoral specialty externships; student-generated hospital externships; community pro bono clinics; and public and private school dental health teaching. The concept of local and national extrainstitutional student research is a reality at Marquette University School of Dentistry. Students in the research/scholarly curriculum track may pursue faculty-mentored research during all four predoctoral years, including training at a number of research-intensive universities.
The desirability of faculty and student diversity offers opportunities for organized recruitment of both and primes the dental school community for national and world demographic and social realities. Contact with people from other cultures provides an excellent perspective from which to judge our own, and offers mutually rewarding learning in languages, customs, education, and health care challenges and systems.

An active alumni/alumnae network develops institutional esprit-de-corps, provides professional placement opportunities, and serves as a fertile source of guest speakers and professional socialization. Students aspire to emulate senior figures who blaze innovative trails in professional careers.

Library strengths and services help students by providing access to professional literature, special collections, interlibrary loans, database searches, and self- and team-study opportunities.

Some dental students join a military service branch early in their dental school experience. Through on- and off-campus meetings and summer training sessions, they learn about military culture and educational, practice, and career opportunities offered by military dentistry. The concept of pursuing professional life while rendering important service to national defense is worthy of student attention and faculty respect.

Dental students also need to understand the importance of organized dentistry to professional survival, optimum health care, and lifelong learning. Professional association membership encourages student and practitioner political activism aimed at controlling the encroachment of government, insurance companies, and boundless entrepreneurism into dental practice. Dental students are further encouraged to partake of the vast and high-quality educational offerings and networking opportunities of national, regional, state, district, and local dental and specialty association meetings.

A final element of extracurricular learning is found in the category of dental organizations: dentistry’s honor colleges and professional certifying boards. These are valuable sources of continuing education and the “way of life” philosophy espoused by William Osler. The American College of Dentistry offers well-planned and executed ethics and professionalism courses to dental schools. Dental foundations such as the Pankey Institute provide knowledgeable speakers on ethical, clinical, and life philosophy issues. Dental specialty boards share valuable information on ethical, scientific, and technical issues with postgraduate faculties and students.

Benefits of the Hidden Curriculum

Early clinical contact for predoctoral students, especially with special needs and economically deprived patients, fosters empathic student attitudes. Continued dental school-sponsored student clinical contact with special needs patients makes it more likely that graduates will treat such patients in practice. Whether local or international, clinical experiences serving the underprivileged are important in developing a sense of service in students and in helping them appreciate the wide extent of human deprivation and associated health care needs. One example is a recent dental health screening and sealant administration sponsored by University of California, Los Angeles predental and dental students at a Los Angeles elementary school. Student and faculty participants noted the humanitarian benefit and sense of accomplishment gained through this activity.

Likewise, in helping students take steps toward professional identity, the hidden curriculum promotes the building of student confidence. Differences in patient age, gender, economic level, ethnic background, and volume between community-based and academic clinics translate into unique diagnostic and treatment challenges and valuable educational experiences. In addition, exposure to widespread dental and systemic disease and culturally diverse settings makes biomedical and behavioral sciences come to life and facilitates their learning. Also, and perhaps most importantly, this exposure “helps orient professional activity toward society’s needs.”

Successful dental practice requires high ability at oral and written professional communication. The need to communicate with patients and colleagues in extramural settings also helps develop these critically needed interpersonal skills.

Learning about professional roles and responsibilities outside the classroom helps students develop professional attitudes toward their studies and a keen anticipation of future professional life. Hopefully, the hidden curriculum will help students recognize that dentistry is an integrated discipline that promotes public health while occupying an important social position. This holistic perception of dentistry pro-
vides a conceptual foundation that can guide the student’s professional life after graduation.

Importance of Faculty

Jack Wilson emphasizes that “any faculty member that could be replaced by a videotape, CD, or web site should be replaced—as soon as possible.” Faculty are rich educational resources far transcending content provision. They are extremely important models of professional behavior. They are mentors, friends, and advisors. Faculty display of professional attributes in class or clinic exerts a much greater impact on students than reams of theory. Their input in student professional development is irreplaceable.

Faculty further set the intellectual and social tone of the institution. In William McDonald’s words, “Great teachers not only transmit information, but also create the common ground of intellectual commitment.” The professional and personal priorities of faculty determine their degree of accessibility and helpfulness to students. Professional literature clearly states that students learn at least as much from what faculty do as from what they say. Boyer adds that “lessons of the classroom should be applied first in the college community itself.”

Recommendations for Enhancing the Hidden Curriculum

The best dental schools maximize student learning by offering abundant and quality extracurricular experiences. These schools identify the key attributes of professional practice and create learning opportunities grounded in the roles and responsibilities of professional life.

Through out-of-class learning, ideas communicated to students by faculty are embodied, made real, “clothed in flesh and blood.” In this way, the danger is lessened that graduates will become “specialists without perspective, and lack larger insights.”

A number of actions have the potential to promote quality extracurricular learning:

1. Educators may determine components of the hidden curriculum perceived as most valuable by surveying senior students just before graduation on aspects and importance of extracurricular learning. Comments should be elicited on the value of specific experiences and how they can be broadened and enriched. Similar surveying of graduates five and ten years later is indicated.

2. Dental schools can encourage closer interaction between faculty and student cultures. Administrators should make greater effort to strengthen common purposes and shared experiences. Students can be paired with faculty mentors throughout predoctoral education. Faculty and students can share informal seminars and external clinical experiences. Faculty and students can attend regular programs by in-house and guest clinicians, as well as scientists and scholars from all fields.

3. Development of written and oral communication skills must be emphasized in all learning experiences. Jacques Barzun tells us that proficiency in the written and spoken word is the “first prerequisite of professionalism.” Given its importance, Yoshida, Milgrom, and Coldwell note the scant research devoted to communication skills in dentistry and a de-emphasis on teaching these skills. Progress may be made through student oral reports to peers and faculty on extracurricular activities; written summaries of the same; informal student-led seminars; and all-college, student-centered symposia.

4. Dental school leadership and faculty should continually affirm and promote the professional responsibility of service to others, including the needy. Voluntary service is encouraged by granting of curricular credit for sustained or special clinical activities and faculty models of service leadership. Osler’s exhortation to students sums up the professional responsibility: “You are in this profession as a calling, not as a business; as a calling which exacts from you at every turn self-sacrifice, devotion, love, and tenderness to your fellow men. You must work in a missionary spirit, with a breadth of charity that raises you far above the petty jealousies of life.”

5. Institutional leadership and graduates should respect and support dental fraternities. Fraternities are active learning partners in dental education. Their professional and social activities and alumni linkages are extremely valuable avenues of student development. Fraternities also promote integration of faculty and student cultures. Investment in dental fraternities yields a many-fold educational return.

6. Leadership should place similar high priority on faculty senates and student governments and fully support these organizations.
7. Academic program managers need to do the hard work of aligning the hidden curriculum with the educational goals and outcomes of the formal curriculum, an effort that is equal to planning the formal curriculum.

8. Dental educators need to examine the evidence-based realities of student learning. With regard to what actually facilitates the professional development of dental students, there is probably a gross overestimation of the impact of formal curricular learning versus the extracurricular counterpart. Professors who expect students to hang on to every classroom pearl and who perceive that every lecture and course are the only learning events in dental school are practicing self-deception.

9. Dental schools should emphasize the concept of “the world as classroom.” The location of professional learning and development is anywhere that professional practice occurs. This includes schools at all levels in all countries, hospitals, clinics, extended-care facilities, workplaces, community and migrant health centers, prisons, and areas of deprivation and disaster.17

**Conclusion**

To meet important dental health needs and nourish a vital health profession, effective dental education encourages student development of the “qualities of mind and spirit that will carry them through their lives: wide-ranging curiosity, a taste for scholarship, for ideas, for intellectual challenge and exchange, an openness to multiple viewpoints, commitment to self- [and peer-] critique, and moral discernment.”11 Extracurricular learning amply affords these opportunities. They are dentistry’s best hope for enlightened progress.

**REFERENCES**


