
New science in dental education

Advances in all aspects of science and discovery continue to occur at an exponential rate, leading to a wealth of new knowledge and technologies that have the potential to transform dental practice. This “new science” within the areas of aeronautic dentistry, cell/ molecular biology, genetics, tissue engineering, nanotechnology, and informatics has been available for several years; however, the assimilation of this information into the dental curriculum has been slow. For the profession and the patients it serves to benefit fully from modern science, new knowledge and technologies must be incorporated into the mainstream of dental education. The continued evolution of the dental curriculum presents a major challenge to faculty, administrators, and external constituencies because of the high cost, overcrowded schedule, unique demands of clinical training, changing nature of teaching/assessment methods, and large scope of new material impacting all areas of the educational program. Additionally, there is a lack of personnel with adequate training/experience in both foundational and clinical sciences to support the effective application and/or integration of new science information into curriculum planning, implementation, and assessment processes. Nonetheless, the speed of this evolution must be increased if dentistry is to maintain its standing as a respected health care profession. The influence of new science on dental education and the dental curriculum is already evident in some dental schools. Discussion of the rationale, goals/objectives, and outcomes within the context of dissemination of these models should help other dental schools to design approaches for integrating this new material that are appropriate to their particular circumstances and mission. For the profession to advance, every dental school must play a role in establishing a culture that attaches value to research/discovery, evidence-based practice, and the application of new knowledge/technologies to patient care.

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