

Need for innovative course module for teaching tooth morphology in India

In India, the subject of Dental Anatomy and Dental Histology (DADH) has traditionally been taught and evaluated by oral pathologists. Earlier, it was taught in the 2nd year, and then, from 2008, it is part of the 1st BDS course. The goal of this composite subject is to understand the basic concepts of tooth morphology and histology of the soft and hard oral tissues, to establish the connection between these basic sciences and the clinical practice of dentistry. Dentistry, as defined by the WHO, is the “science and art of preventing, diagnosing and treating diseases, injuries and malformations of the teeth jaws and mouth.” The practice of dentistry requires instinctive innate knowledge of tooth morphology and the ability to reproduce the same with dexterity. Carving of natural teeth, out of wax blocks, has been the traditional method for teaching and learning tooth morphology. The development of this skill requires practice and the process itself ensures that the concepts of tooth morphology are deeply imbibed.^[1] Thus, the very process of tooth carving ensures that students acquire psychomotor skills along with knowledge of tooth morphology. Several dentists in private practice acknowledge that knowledge and skills acquired through tooth carving are of great use to them in the management of patients.^[2] Various opinions have been expressed in recent times about the undue importance given to tooth carving in the BDS course^[3,4] and the difficulty faced by students in acquiring the required competency.^[2] It has been proposed that knowledge of morphology may be acquired through virtual 3D models^[5] similar to those used for teaching Human Anatomy. However, medical practitioners rarely have to recreate organs, as part of patient management, while restoration of tooth form is an integral part of dental practice. To revitalize the subject of DADH, there is a need to adopt innovative teaching methodologies. The use of videos, computerized 3D models and mobile applications like 3D Tooth Anatomy (Universal Hospital LP) by both teachers and students should be encouraged to facilitate the teaching and learning process and reduce the stress currently associated with the subject.^[2]

Given the COVID-19 situation, education institutions involved in health-care teaching and research are forced to adopt noncontact mode.^[6] Blended teaching will likely be the “new normal” and hence the absolute need to develop

methods to teach tooth carving on the digital platform in an asynchronous mode. The importance of acquiring the required level of psychomotor skills and manual dexterity involved in tooth carving for the successful practice of dentistry must be emphasized. It is the responsibility of those involved in teaching DADH to emphasize the clinical, functional and applied aspects of the theoretical and practical aspects of the subject.

However, as oral pathologists, it is also our responsibility to ensure that students of 1st BDS successfully attain the required level of competency in tooth carving, while comprehending the clinical importance of the skill being taught and learned. We propose that teaching modules, incorporating various innovative methodologies, should be developed at the level of the individual, institution, national association and regulatory body to ensure a competency-based training in DADH.

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Conflicts of interest

There are no conflicts of interest.

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