

Dental Education in India: Embracing Transformation for a Rapidly Evolving Future

Dental education in India today is at crossroads. Dental education and dentistry today are already different from that which were a couple of decades ago having experienced a paradigm shift in incorporation of technologies and innovative concepts. Dentistry and dental education in India have seen significant evolution over the years. Initially, dental practices were conventional, and education was limited to a few institutions with fewer educational opportunities. However, today, dental education has evolved to various specializations and skill learnings.

Over the decades, the 'learning' in dentistry has expanded to include specialized fields such as forensic odontology, esthetic dentistry, cosmetic dentistry, implantology, geriatric dentistry and many more. The advent of technology brought digital dentistry, advanced imaging techniques, and modern treatment methods into classrooms and clinics. Today, Indian dental education emphasizes a blend of theoretical knowledge, practical skills, and research, preparing students to meet global standards and innovation in their practices.

The focus has also shifted towards community dentistry, aiming to address the oral health needs of rural and underserved populations. Continuous professional development and international collaborations further ensure that Indian dentists stay abreast of the latest advancements, contributing to the global dental community.

However, as we stand now almost halfway through the second decade of the 21st century, there is a more crucial yet inevitable heralding of a new era of dentistry and dental education. Dentistry stands today at an intersection of several factors that will eventually affect dentistry and determine the future of dentistry. They are as follows:



- Integration of Artificial Intelligence:** It was long presumed and speculated by several technological experts and thinkers that the only profession that may remain untouched by the advent of Artificial Intelligence shall be dentistry. However, dentistry in India has been witnessing several innovative technologies to develop that incorporate artificial intelligence in diagnosing and even treatment planning for dental practice, whereas enhancing scientific research by providing useful tools for research and innovation. Dental teaching institutes are today considering the potential of advanced simulation labs and virtual reality technology to provide students with realistic clinical experiences without patient risk. It is a surety now to accept that dentistry will witness a tectonic shift with the advent of artificial intelligence.
- Curriculum Reforms:** The passing of the National Dental Commission Act, 2023, is a first step towards the transformation of the Dental Education in India. While Dental Council of India has effectively held the fort for the last seven decades of dental education in India, policy-makers felt the need to have a newer regulatory body reflecting the transforming landscaper of dentistry of today. The National Dental Commission brings with it the National Exit Test, a foundation for competency-based learning and interdisciplinary collaborative learning. Dental Education in India, with these initiatives, indeed stands on the threshold of a radical transformation which will revolutionize dental education.
- Evidence-based Practice:** With technology, there has been an increasing easement in incorporation of scientific research and innovation in dental practice. Dental practice of adhering to conventional methods is now giving way to introduction and incorporation of innovative materials and methods albeit backed by sound research. The young generation of dental professionals today have a zeal for learning, staying abreast of the latest innovations in dental practice. And with access to information databases at their fingertips, incorporation of an evidence-based practice is not only becoming a reality but, in fact, a new 'normal' also.
- Community-based Education:** The world witnessed the horrors of the pandemic in the past few years. Policymakers, stakeholders and the society alike were woken up to the rude reality that public health systems are a crucial component of any society to progress, something that was being advocated by epidemiologists since long. Public health system reduces the disease burden in the society, and it is imperative for every health professionals—dentistry included to have an outlook for community-based learning. Public health dentistry has evolved rapidly and still has immense potential to transform and enhance the dental education scenario of the present and future.
- Continuing Education:** With these 'intersections' paving the way for a new dental landscape in India, what stays more important than ever is keeping updated with the latest developments all the time. Dental practice of the future shall be dynamic-evolving and be all about introduction and incorporation of newer innovative materials, procedures and tools. A dental professional cannot afford to neglect the recent advances and keep adhering to 'conventional' dental practice. The change is inevitable, and it is more beneficial if one stays updated rather than being 'phased out'. Continuing Education in dentistry is now becoming more than just a label of a 'CDE' program to a proactive learning of newer skills by young and old dentists alike. This will surely enhance the dental practice.

Conclusion: To summarize, it is necessary for every dental professional to accept the inevitable heralding of a new era in dentistry and dental education. Instead of pessimistic caution, an optimistic embrace of the developments can benefit one and all immensely. Human history has been about evolution—we have reached so far because we embraced evolution and prospered. Dentistry and dental education in India and also the world over, is experiencing the next tide of evolution and it is definitely beneficial to sail faster using the tide than drowning against it.

Dr Arun Suresh Dodamani

Principal, JMF's ACPM Dental College, Dhule, Maharashtra, India
 Member, Dental Council of India
 Executive Committee Member, Maharashtra State Dental Council
 Academic Council Member, Chairman Board of Studies
 Senate Member, Maharashtra University of Health Sciences, Nashik
 Lifetime Senate Member, Lalit Narayan Mithila University, Darbhanga (Govt of Bihar)
 Hon. National President, Indian Association of Public Health Dentistry