Editorial

Prosthodontic Education: time for a course correction?

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We are living in the digital age of dentistry. Prosthodontics, a blend of Art and Science, has successfully embraced this transformation and has evolved as amalgamation of Art, Science and Digital Technology. The outcome has been truly amazing, enabling us to deliver precise and cost-effective patient care than ever before. This progress is worth for celebration.

Yet, some concerns tend to dull the shine of these excellent achievements, particularly in the field of Dental Education. One such concern is, whether the current education methodology is effectively preparing our young graduates to face the DigiTech future? Based on the current trends, they will be expected to hit the ground running and deliver tomorrow's results today! Yet, another concern is whether it is acceptable to continue with the traditional Pedagogic education model or whether it should be replaced with an Andragogic[1] or even Heutogogic approaches.[2] Last but not the least, are we preparing the younger generation to critically evaluate scientific data and help them distinguish genuine science from non-science?

Sadly, the answer to all these concerns is not encouraging. Addressing them require a closer examination in the way our syllabi and curriculum are structured, as well as how Prosthodontic education is delivered today.

Take syllabi formulation, for instance. More often, than not syllabi are textbook based; often a near verbatim reproduction of the chapters of textbooks written by international experts on a subject. Prima facia, this is not a point of contention. However, the pitfalls of blindly following textbooks are that a large number of them, at least in terms of their informational content, are few decades old. And, in a rapidly expanding Prosthodontic universe that represents almost a lifetime of change.

This leaves students blindsided regarding the cutting-edge developments within the speciality. This observation is not an indictment of the way textbooks are written. By their very nature, textbooks are expected to blend the old knowledge with the new; new, as at the time of publication. And they cannot be faulted for this gap. Instead, it is we who have to make course corrections in the way curricula and syllabi are framed, if we wish the younger generation to be DigiTech ready. Dental education experts must put in efforts to delink syllabi preparation, at least partially, from textbooks and create space to introduce current, cutting-edge information into the teaching/learning process.

Such an approach will expose students to current developments, eventually leading to the creation of better prepared professionals, who possess not only expertise in their core area of patient care, but are also acquainted with artificial intelligence, digital workflows, and the latest advances in fabrication technologies.

The creation of such a space can also pave the

way for the introduction of relatively newer educational concepts such as Critical Thinking, Andragogic and Heutogogic training formats into the teaching/learning process.

Introducing a relatively new concept like Critical Thinking assumes importance when one considers the humungous amount of literature in the medical/dental domains, which contains a mix of credible evidence alongside questionable or misleading data and conclusions. While systematic reviews and meta-analyses can help separate the grain from the chaff, they may not be available for every topic. Hence, it becomes vital that students are trained in critically appraising published scientific literature in order to distinguish the true from the false. Introducing the concept of Critical Thinking in syllabi can serve this purpose efficiently. Critical thinking is a disciplined process of critically and skilfully analysing, evaluating and synthesising information to make an informed judgement or decision; it involves examining facts, identifying biases, considering multiple perspectives and applying logic to understand a problem or situation deeply.[3]

Training in Critical Thinking will endow clinicians with the confidence to critically evaluate scientific data and take informed, clinically sound decisions based on logic and evidence. It will empower them to provide individualised, ethical and scientifically sound patient care by enhancing clarity in diagnosis, treatment planning, execution and the management of complications should they arise. This approach will ultimately help advance the profession.

Although not explicitly stated, G. E. Carlsson in a landmark article aptly titled-'Critical review of some Dogmas in Prosthodontics', applied Critical Thinking to certain concepts in prosthodontics.[4] In this article, he has challenged several 'time honoured' dogmas currently in vogue in the discipline, including the use of the face-bow, balanced occlusion and even the need for final impressions in complete dentures. He also addressed dogmas related to implantology and temporomandibular disorders. In all these instances, he emphatically stated that no clinical evidence existed to justify such long-held beliefs. To the dogmas highlighted in the article, we can add one more dogma, namely the concept of the Terminal Hinge Axis.

Due to inadequate training in both critical thinking and evidence-based dentistry, we still subscribe and teach many of the dogmas highlighted by Carlsson, including the patently incorrect concept of a Terminal Hinge Axis, despite mounting evidence that such an axis is non-existent.[5]

It is also a matter of urgency to reorient in the student- instructor relationship. A shift from Pedagogic, teacher centred approach to an Andragogic (the art of helping adults learn by emphasizing a student-centred approach) or Heutogogic (a learning technique where the individual takes full responsibility for their learning journey) approach to the teaching/ learning process is needed. Dental student are adults, and application of Pedagogic educational principles in their training is unlikely to create competent professionals.

The introduction of these contemporary concepts into the curricula will necessitate a redefinition of the way dental education is structured currently. While freeing syllabi framing from textbook dependency will enable students to be at the cutting edge of developments, overhauling the entire approach to prosthodontic education through the transition from Pedagogic to Andragogic or Heutogogic system and the integration of Critical Thinking in the teaching/ learning process, will bring about seismic changes in prosthodontic education; a change which will benefit the profession as a whole.

Prosthodontics is a great and noble profession that has given each one of us a meaningful career and a sense of fulfilment and satisfaction. We owe it to the profession, to ourselves and to future generations to create a strong, credible and scientifically sound basis for our profession. It is said that a journey of a thousand miles starts with one small step. The outlined suggestions may be construed as the first steps towards creating a better future for prosthodontic world.

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