Consolidating graduate dental training with specialty education to fast-track the curriculum...is it time for changing the game?

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Introduction

I, came across an interview by the legendary cricketer Sachin Tendulkar, considered "child prodigy" in his teenage years and definitely the best amongst the best in the world of cricket till date. To my surprise he revealed the "***early days***" of his childhood were well spent on "***training hard***" with the ***ball and the bat*** and ***not*** really with learning ***trigonometry and Shakespeare plays***. Well, we all know what really helped him earn his bouquet of roses and rise through the ranks (when I say this I have no intention to belittle trigonometry or Shakespeare plays!). But, why do I talk about this? Somewhere in the interview, the words "***early days***" and "***training hard***" got imprinted in my mind and arose my inquisitiveness and also the topic of this editorial.

I dug deeper into the content of "training methods (in sports)" and came across two whipsaw methods- "***Early Specialization***" and "***Late Diversification***".[1] The common base for both the schemes is the "***exposure to general events***" and "***exposure to specialised events***" (analogous to ***graduate training*** and ***post graduate training*** respectively). What makes them ***distinct*** is the variation in '***length and density'*** of the event exposures by tuning the ***time point*** to separate the events.

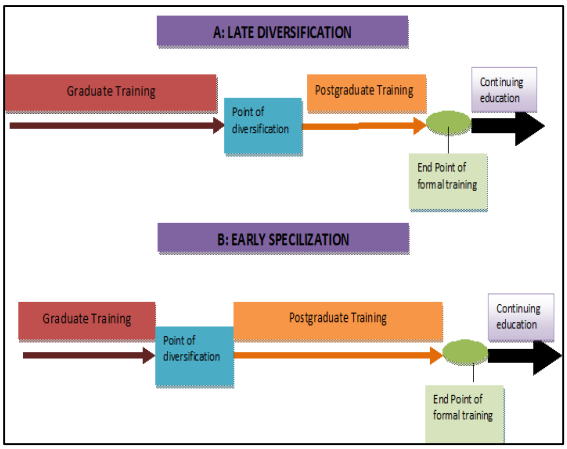

Fig. 1: Early specialisation vs late diversification distinguished by separate time point of diversification

I would not emphasise on the numerical value of the time point set. This, is because, I, am putting forward before you an "***alternate proposition in dental education***". Besides incorporating the aspect of ***"early specialization"*** in the curriculum, this suggested scheme is also characterised by the feature of "***mandatory post graduate program***" (in a particular recognised specialty). Thus one can caption this recommendation as "***Consolidated Fast-Track curriculum***" merging general dental training with specialty education and we can consider it as a "***Game Changer in the Dental Education Scenario***".

The current graduate dental education scenario…

The dominant model of undergraduate dental education in India consists of certain ***overstressed and other under stressed zones***.[2] Take for instance certain disciplines like implantology, geriatric dentistry, stem cell therapy, forensic dentistry and many more fall under the ***under stressed zones***. At the other end of the spectrum, dental materials and basic sciences acquire a greater deal of emphasis and classify under ***overstressed zones***.

Also the divorce between the basic science and clinical disciplines ***negates*** the development of "***problem solving ability***" in the students. Considerable volume of preclinical laboratory years over brimming with several exercises and lectures often leave the students ***exhausted and disgruntled***.[2]

The zone of transition from graduate onward…

This transition, once a student truly becomes a dentist, into "***what next***" is more often than not, turbulent. There are several lacunae depicted by negative outcomes that precisely need an (urgent) intervention and implementing the ***"alternate proposition".*** The opinion in this editorial may be one such intervention. The figure below represents a conventional route selected by students. It needs to be emphasised at this juncture that this is **one of the more common routes** that a dental student transgresses, however not an exclusive one.

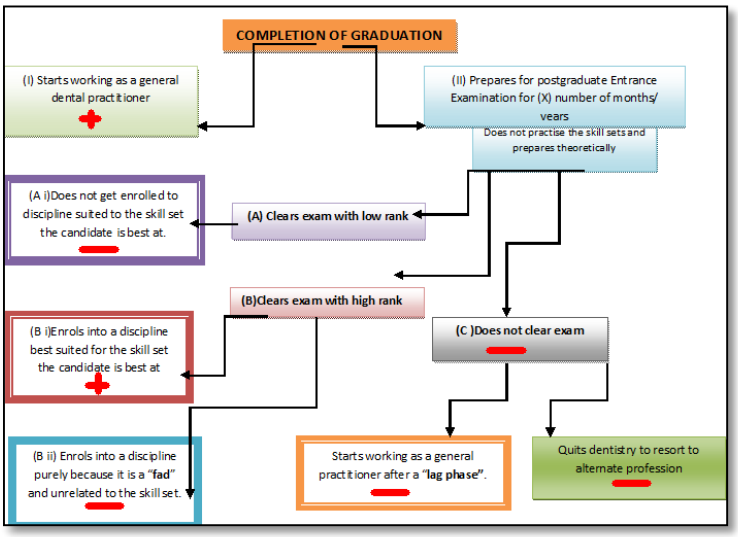

Fig. 2: Common routes taken by Indian dentists subsequent to graduation

So why should we give the "alternate proposition" a thought?

1. Dental education and curriculum of a country must be tailor made according to the prevailing oral issues encountered by the people of that region (societal backdrop).[2] For example, in India the changing demographics is manifested by increased life span due to improved medical facility. This cohort of elderly population is special in two ways. First, they usually display an array of dental work and materials in their mouth due to previous dental history. The second distinctive feature in this group of people, is the associated systemic illness. Our education system currently cannot fulfil with confidence the requirements of this set of people. Redesigning the system such that we have a larger pool of operators who can address the issues of patients requiring special care competently is need of the hour. Emphasising on specialty training will definitely increase the number of such experts, thus percolating dental expertise to people deprived and bereft of quality care.
2. Dental practice should assimilate recent advances in science and technology at the same pace as discoveries. Research and development attempts to solve the impending problems encountered in practice. However, implementing and incorporating the newer techniques will require dedicated training to yield larger number of experts, and, thus, require a shift of an emphasis towards specialty training. Clearly this calls for longer hours of specialty training and can be achieved by early specialisation.
3. Interestingly the consolidated curriculum emphasising on early specialisation promises greater respect towards parallel disciplines by restricting the performance of an operator to "exclusive" chosen discipline. This can be anticipated to be a result of increased dependency towards other disciplines and hence the respect. The same also ensures quality service delivery. Take for instance the following situation. A Prosthodontist encounters a fractured instrument in the canals of one of the prospective abutments for a bridge. A remote experience with broken instrument management during graduate training years of the Prosthodontist may not yield similar results/output to that of an endodontist working under a microscope to negotiate the same!
4. The system will be freed from the redundant information and entrance examination concept that are more based on "rote" ability and subject to negatives like "cueing".

5. Early entry into a specialty may also help strengthen research capacity of the nation by sowing the concept in young minds.
6. The concept will definitely shorten the length of training and the candidate enrolled will graduate and post graduate from the same dental college thus making him more familiar and sensitised to the setting and practise of that institute.

What may be a barrier in considering this proposition?

There are threefold issues that may be considered prior to giving this hypothesis a thought.

1. The students in India enrolling for a dental program are naïve and young at age, usually belonging to late teens. In many parts of the world students enrol after a previous (baccalaureate degree) thus preparing them more professionally prior to entry to a dental college. A young age as seen in Indian dental students is highly impressionable and likewise dangerous as any incorrect "impression" can subsequently lead to a wrong selection.
2. The second aspect is the resistance that may be encountered by existing faculty conservatism and rigidity of mind set leaning towards orthodox methods and tools of education.
3. To shape up such an education curriculum more resources will definitely be required to be invested in order to match the expected increase in rolled over number of students.

Conclusion

Redefinition of professional roles assures momentum in any profession, and dentistry is not exempted. An overburdened graduate dental curriculum, characterised by inclusion of several redundant information details needs pruning and restructuring is one way. Amalgamating the post graduate curriculum to the graduate curriculum, thus enabling the students to focus on what they are best at rather than to be all rounders, is the other way.

The editorial is '**not prescriptive'** or a '**cook book solution'**. Neither is it a polemic on general dental practitioners. It just offers an **alternate proposition to turn things around**. This may appear too dramatic and radical to many readers yet is one of the possible ways to address the impending situation and **delivering specialised patient based care** and not merely procedures to our patients.

Dentistry has come a long way from being "**just a prelude to apprenticeship" into "a comprehensive profession".**[2] This has been possible because we never maintained a "status quo" and **we kept the ball rolling**. Resistance and oppositions have always been overcome.

Like before we once again find ourselves at the cross roads. We need to "**reassess, review and renew**" with vigour in order to contribute to science and community. In today's time, we need to infuse a spirit of "***constructive consolidation"*** in order to best utilise the energy, time and passion of our students.

I sign by quoting the following: "***Experimentation and learning will help dentistry face one of its uncertainties- namely whether the future supply of dental practitioners and services will match, exceed or fall below the population requirements for dental care***."[2]

Lastly, "***It is not our abilities that determine us. It is our choices***." Sachin Tendulkar would have never made it as the world's best batsman had he continued doing trigonometry and learning Shakespeare plays.

References

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