

CURRENT STATUS AND FUTURE TRENDS IN MEDICAL EDUCATION

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Education is a process that brings about a visible, palpable, tangible change in a person. It is the hallmark of human development and evolution, Cultivating, gathering and disseminating knowledge is an art as well as science. Teaching and learning run pari pasu, as one is incomplete without the other. Prometheus, a Greek god is acclaimed to have thrown down an ember from the heavens into abyss of the universe. It was the ember of knowledge which grew into a lamp that illuminated the world. Zeus and other powerful gods did not approve of it, and punished Prometheus, just as later day lords and the masters did in the early centuries. They felt threatened with the awakening of mankind and loss of their might.

The first word revealed to Prophet Mohammad in Quran is Iqra...Read. All religions command and promote knowledge more than any other element. In early days, education was confined to the elite, and jealously guarded by the monks, monasteries, savants, pundits and mullah. Gallelio and Copernicus spoke truth to enlighten the world and were heavily punished.

Greeks served the cause of education through the sophists and the philosophers. Romans did no such thing. They promoted martial arts. That too was a form of education. After all brain must be cultivated along with the brawn! Then came other periods and eras. The process continued.

There are two forms of education. Informal, that begins at birth and continues throughout life. And formal, that begins at the time of entry into a primary school and all but finishes with the degree from a higher seat of learning; albeit not for all. Some folks love it so much, that they live only to learn and teach.

Medical education has gone through a seachange over millennia. It was the process of long and enduring apprenticeship and Hippocrates, Galen and Hakim Ajmal Khan, just to name a few stalwarts, used for the transfer of knowledge and skills to their pupils. A process of osmosis enabled the *chela* to imbibe as much as he could from his formal medical education in the eighteenth century, but it was the Carnegie foundation in US, which gave us the planned education program in the early parts of the twentieth century.

Abraham Flexner was an educationist. He was hired by the Carnegie foundation to design a curriculum in 1910. His terms of reference were none, but he devised them as a planned activity based upon the knowledge of science of contemporary times, with a view to produce a doctor capable of doing all the basic tasks.

Thus arrived the science based curriculum, which we call the Traditional curriculum. It has been in vogue for more than a hundred years. There are strong objections and concerns about its relative application today, but it continues to function in many parts of the world.

The main features are its economy in terms of delivery through didactic lectures, and subject orientation of a student of many elements of health Care. Thus, a pupil can become a physician anatomist, physiologist, surgeon and a forensic pathologist; etc. It is teacher centred, presuming that the student has an immature mind and can not decide what is required; so a teacher, a symbolically wise person will decide for him as to what he needs to learn. Knowles called it the Pedagogical approach.

Many academicians did not approve it. In 1950s McMaster came up with an idea of improvising the curriculum and tailoring it to meet the students needs of modern times.

They considered it wiser to teach what is needed to make pupil a competent problem solver rather an encyclopaedia of knowledge with limited applicability. They called it the Problem Solving Methods. Maastricht refined it further, and identified its steps to make it more practical. Many universities across the globe have adopted the PBL method in their Academic programs; though many others continue to resist.

No doubt PBL is a fine methodology. It is student based and student centred. It is exciting and challenging, but it has many drawbacks. For instance, it is expensive requiring larger logistic support and lacks a wider knowledge base.

Many universities are now employing the hybridised version, combining didactic lectures as introduction to the topic in a system based, holistic teaching, followed by small group discussions. PBL is good for mature minds that is after a four year liberal arts or graduate degree, as in the US, and Canada, but not if the students enter a medical school after finishing the high school, as is customary in the Indian sub - continent.

In the West, most students are mature enough to delve in the luxury of cerebral exercise as they come from a back-ground of analytical teaching. Even then some universities have refused to adapt the PBL culture fully. USMLE is one fine example where the problem solving strategy is the backbone of the teaching and learning exercise. It has many good but some bad points. The best point of course is that it allows a young doctor to join the finest health care delivery system in the world, despite its shortcomings and the nuisance of Managed Health Care as against the Egalitarian approach of

the NHS in UK. The bad point is that the knowledge base in USMLE may be poor at the outset, as it is focused on the issues rather than subjects.

The current principle of medical education is..? Core knowledge at undergrad level and more knowledge through out life?... Life long active studentship is recommended by the maestros. So, the deficiencies and lacunae noted in undergraduate programs are continual lay filled , and replenished.

University of Dundee has contributed a great deal in modern medical education. Ronald Harden is a pioneer of radical reforms. The SPICES model of curriculum designed by him and his team is now in practice in many universities.

Harden's Spiral curriculum is extremely innovative and the best form of integration of the so called basic and clinical subjects . It also integrates the curriculum horizontally. Each subject is imperceptibly yet tangibly merged nay submerged into another subject. Revisiting the subjects each semester or in successive years combing the triangle of education ie knowledge, skills and attitude , can not be better than in a spiral curriculum. But it is intensive and exhaustive, demanding huge efforts on the part of the faculty as well as the students.

Another great contribution by that genius is the concept of curriculum mapping. It is so useful that every deanery should seriously consider employing it for the main beneficiary namely the student. A curriculum map not only monitors day to day academic activity but also inter institutional progress, laterally as well as vertically.

In the field of instructional strategies, much debate continues to rage amongst the academicians. Didactic lectures continue to enjoy the popularity , despite the firm opposition by the diehard supporters of small group discussions. Lecturing is an art, which may not need any adventurous support if the speaker is fully conversant with communication skills. Many however, believe that additional tools like animations are of immense value in clarifying the concepts. The ageless quote that 'a picture is with a thousand words' applies more to animation than any other item on the agenda.

Assessment and evaluation are a rapidly evolving speciality. There are experts within the field of medical education who have sub specialised in this field. They continue to evolve newer and more precise tools for assessment and evaluation.

The debate on the grading system based upon the ABCD and F versus pass or fail is another issue. A display of D on a

transcript, some believe, may seriously jeopardise the chances of a foreign graduate to gain a residency placement. So should one scrape D altogether and raise the passing bar to 70% i.e. C grade as the lowest , and if so how should one allocate the marks in the Formative and Summative evaluations.

Finally, the complexities of the credit and contact hours, so vital of an American system of education is not fully understood by those teaching in different parts of the globe. A clear concept of GPA system is also alien to the non American set ups.

A contact hour is a unit of measure that represents an hour of scheduled instructions given to a student. It is however different to a credit hour or credits, which is a unit of measure representing the value of time equivalent to an hour (usually 50 minutes) of instruction or active teaching per week over the entire term.

The contact hours and calculation of credit hours is a specialised task. One teaching session of 90 minutes may get 6 course credits, and so on. The time of actual teaching or lab work plus self study or preparation are also added according to formula , and the credit hours calculated. for instance 290 lecture of 435 contact hours will be awarded 29 credit points.

Currently, the USA accreditation authorities demand a fulfilment of quota of 3050 contact hours and between 110-140 course credits for the basic sciences only. The American University of Barbados is providing 136 credit hours and 2040 contact hours at present .They will reach the limit of 3050 or more in the Fall semester.

Credit hours are needed for fulfilling the requirements of a degree, diploma, certificate or other awards.

An MD program is different to an MBBS program in many ways. They both aim to reach the same goal albeit through a different course of action.

Rudyard Kipling , the famous novelist duly highlighted the polarity of cultures and their implications, which would include education, in one of his writings... 'The East is East and West is West'.

So, the moral of the story is... Different horses for different courses. It is the job of an educationist to do his utmost to keep the interest of the student at the highest altar and endeavour to produce the world leaders in the respective fields with honesty, integrity, dedication, and above all altruism.