## *Editorial*

# UNDERGRADUATE PEDIATRIC EDUCATION IN INDIA: CURRENT CONCEPTS

One of the significant improvement of contemporary educational scene is increasing use of management principles for educational planning and administration. Terms like motivation, conflict resolution and process intervention are no longer confined to management parlance but are equally used in educational programmes. Of interest to us is 'systems-approach'(l), which is now being used in more and more educational programmes. Systems-approach deals with interrelatedness of various subsystems *(Fig. 1)* and tries to construct an educational experience which is commensurate with requirements of the learner.

Unfortunately, in India, medical education in general and pediatric education in particular has kept itself aloof from this significant approach in education with the result that to use a lighter analogy(2), the students are taught, how to swim and then sent to the desert to apply their skills. No wonder then, that either they try to make an expensive swimming pool in the desert or run away from the desert in search of greener pasteurs!

Let us try to apply 'systems-approach' to Pediatric education in India. Children below 14 constitute almost 40% of our population. In a routine day's work of a general practitioner, 40-70% of all patients are children(3) and with minor exceptions, the figures are consistent across length and breadth of the country.

Against these figures, the time allotted for teaching of pediatrics is only 10% of the total time(4). While duration of training in a given clinical discipline need not match with its quantum in practice because of overlap in training principles, gross deficiencies do demand attention. Moreover, a doctor of any discipline needs an adequate exposure in handling sick as well as normal

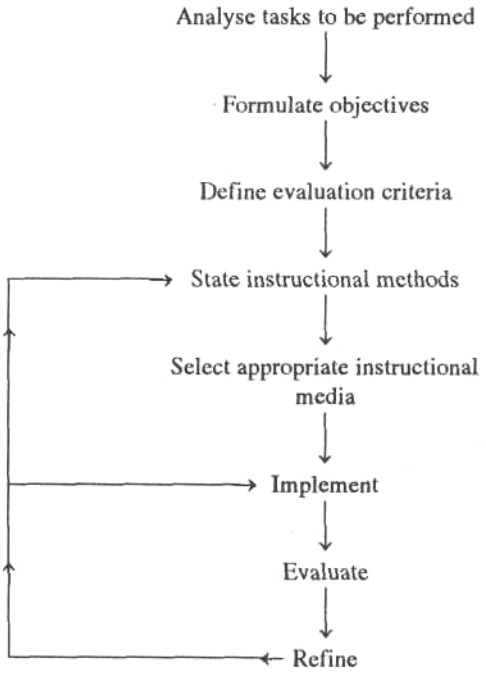


*Fig. I. Showing the steps involved in 'systems-approach'*

children. The neglect of Pediatrics in training curriculum has resulted in production of inadequately qualified manpower.

While we have to be contended with an almost constant morbidity and mortality pattern in child population, countries like Thailand and Sri Lanka have been able to bring down the 1MR to almost l/3rd of our rates. It is more than a mere coincidence that these countries devote 3 times more time to the study of Pediatrics in their curricula.

The pinch has been and is being felt. Persistent efforts by Pediatricians of this country have succeeded in pursuading the MCI to adhere to the recommended Pediatric component of MBBS training. However, even then, Pediatrics has not been recognized as a separate subject and is still considered a part of Medicine. Pediatrics must be considered an independent subject, at par with oilier major subjects and at least 400 hours of practical training must be available to the student at the graduate level. Concurrently with increased time allocation, provision of Pediatric intensive care and Pediatric superspecialities should also receive utmost attention.

While having more time available for training in child health is one issue, using that time efficiently and effectively is another. We can again refer to the concept of systems-approach. Barring few exceptions, we have well defined problems for whole of our country—diarrhea, pneumonia, malnutrition, vaccine preventable diseases—can be cited as examples. Unfortunately till date, most of the medical colleges in India donot have a written curriculum, distinguishing between 'must know', 'should know' and 'can know' areas. This results in a vague kind of teaching, making it free for all with individual students and teachers interpreting the subject areas in their own way.

A recent subcommittee of MCI(5) has given a comprehensive curriculum, which covers most of the areas in relation to child health. There is an urgent need to translate this curriculum in terms of learner's objectives covering all 3 domains *(viz.,* cognitive, affective and psychomotor). This will provide clearcut directions, both to the students as well as teachers and ensure better learning. At the same time, this will help us in using examinations not only as a certifying but also as a learning tool.

One of the ways to improve the quality of pediatric teaching is to have what can be called integrated teaching(6). To take an example, at present typhoid is taught differently and with varied objectives by Departments of Medicine, Pediatrics, Surgery, Microbiology, Pharmacology and Community Health. This results in unnecessary duplication and wastage of efforts. At the local level, it should be possible to co-ordinate teaching by involving different departments so that the students get a comprehensive view of the whole problem without wasting time and effort. We would even go a step further and suggest not only a horizontal integration just described but a vertical integration. After all, growth and development should not become an exclusive domain of Pediatricians—Anatomist should teach the structural changes associated with growth, Physiologists should deal with altering body functions associated with growth. Changing pharmacokinetics with growth should be taught by Pharmacologists and influence of environment on growth and development should be dealt with by Social and Preventive Department. Such an approach would have more than one advantage—on one hand it would result in

better understanding of the whole process and on the other, it would also make other specialists (surgeons, orthopedicians, ophthalmologists) more confident of handling and dealing with children.

Faculty development is a prime requirement for successful implementation of any teaching—learning system(7). In a traditional curriculum like ours, the teacher plays an important role in guiding learning of the student. This role can't be effectively performed till the teacher is well versed with pedagogic and managerial skills. As of today, no formal training is required to become a medical teacher but we must strive to impart at least some informal basic training to teachers. Writing specific instructional objectives, selecting appropriate instructional media and designing valid and reliable evaluations are the key areas to be included in this training. IAP should create a core group to devise methodology of imparting pedagogical training to pediatric teachers. The time and effort spent on this will be more than repaid by way of better pediatric training.

Community orientation of pediatric teaching has been the most debated yet, in our opinion, most misunderstood issue. An impression has been formed that community orientation and teaching takes place only in a village or in a slum. This notion is totally unfounded. Community orientation can be and must be built in day to day pediatric teaching and teachers themselves can serve as very effective role models. Family screening of a child who has been put on anti-tubercular therapy, treating the whole family of a child who has presented with enterobiasis or scabies are all examples of community orientation. We strongly believe that community orientation is an attitude and not merely a subject and this must be reflected in the day to day teaching of pediatrics. The clientele of most medical colleges represents a mixed strata of population and teaching cases should be geared taking socio-economic factors into consideration.

Of the three auricular components, evaluation plays a major role in guiding learning(8). Even in the absence of any content change, merely changing the evaluation can bring a desired change in students' learning behavior. Over the years, evaluation tools have become more and more refined and sophisticated(9). Evaluation tools, selected for evaluation of pediatric teaching should be valid and relate more to common problems that a student is likely to encounter in later life. At the same time, a variety of tools should be used for evaluation of clinical skills(10). Allowing for minor variations, the evaluation package should consist of short answer questions, Objective Structured Clinical Evaluation, Case presentation and structured oral examination(ll,12). Internal assessment can also make use of these tools, with an additional weightage for attendance and log books maintained by the students. A beginning also needs to be made to give weightage to non-scholastic learning abilities and communication skills(13), both of which are vital for successful practice of pediatrics.

Spirit of innovation is a sign of and a tool for bringing maturity in any educational endeavour. Pediatric teachers should constantly strive to innovate the teaching learning programme. We specifically need to look at and modify the concepts of problem based learning(14,15) to suit Indian Medial Schools(16). This will help to make the students self directed life long learners and ensure that the phenomenon of obsolescence is kept out of pediatric practice.

From the days when there even were no separate hospital wards for children, we have made a long and fruitful journey-yet much needs to be done. Having more time for Pediatric teaching or developing Pediatric superspecialities alone is not going to improve Pediatric teaching unless we continuously explore the context and linkages of undergraduate Pediatric education to the needs of Indian Society, where ultimately the products of such education have to deliver the services and modify our teaching-learning strategies based on that knowledge.

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