The management of curriculum change

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I. INTRODUCTION

The process of curriculum mapping and its territorial adjudication is a matter of debate and concern to all stakeholders. The content and process of curriculum transactions and its implementation have always been impacted by the social, cultural, economic, technological and other contemporary concerns of a society and a nation. As all these factors have never been static in a vibrant and a progressive society, and as civilization has always ushered itself consequent to croscurrents of the thought processes of the people who formed the society, the educational processes too have been vibrant and dynamic at all points of time. Little wonder, therefore, that curricular changes have been a matter of periodic concern to countries all over the world.

There are at least three different types of curriculum: the formal curriculum, the informal curriculum and the hidden curriculum. There are three other curricula as well: the written curriculum, the taught curriculum and the tested curriculum. Thus, there is a 3x3 curriculum matrix at work in schools. Most school administrators only consider the formal written, taught and tested curricula in their work. There is a need to integrate all these versions and manifestations of curriculum.

Curriculum development, curriculum implementation and curriculum evaluation are critical elements of curriculum policy. If development of curriculum is an important process then the implementation of curriculum is no less important.

II. DETERMINE CURRICULAR GOALS

Curriculum is but an embodiment of the aspirations of the nation for its citizens. It is a vision endeavoured to be realized through educational processes. The national aspirations, in turn, are an accumulation of the dreams in different facets of the environment. They are comprehensive in nature. It is from the national aspirations that educational goals have to be derived—for education to be functional, relevant and realistic. In such an exercise of the derivation of educational targets, the following key considerations have to be taken into account.

Firstly, these targets should, in fact, be concrete and specific, enabling a pinpointed development and realization of the curriculum, and not be projected in vague and nebulous terms.

Secondly, because these targets are being listed for realization by the students, they should be stated in terms of learner behaviour. This needs to be specifically mentioned because normally what are set forth as educational targets are goals that are to be realized by the teachers, though it becomes incumbent on the student to accomplish them.

Thirdly, with regard to the competencies to be developed and evaluated, it ought to be emphasized that without an orientation to abilities, the mere listing of the themes of content remains meaningless and motivates only memorization. The inclusion of evaluation practices and procedures to be adopted enables us to spare a thought to the fact that what is being attempted to be developed can also be judged for its effectiveness in accomplishing the set goals.

Fourthly, targets are often raised to such unrealistic levels that it is practically impossible for the students to attain them with the available inputs at their disposal in the course of their pursuit of the curriculum. This makes everybody grope in the dark without being clear about what they have to accomplish.

Fifthly, targets are frequently enumerated in such global terms that it becomes almost impossible to precisely comprehend what is being conveyed as well as how it is meant to practically translate itself in specific contexts.

The design of a curriculum has never been a simple process and has always necessitated entertaining all emerging issues at all intervals of time. The total review and modification of a curriculum, hence, needs a reasonable hiatus as it may change its direction substantially over even a short period. Such changes call for a grass-root level reorientation of functionaries implying phenomenal expenditure. In a fast-changing social fabric, long durations for curriculum modifications have not been seen as desirable—even more so given the influx of information in a globalized world and its facile access by the consumer. There is an urgent need for curriculum updating even while it is being implemented and the curriculum managers face the uphill task of managing curricular change during its implementation.
Any process of curricular revision during the life span of a curriculum should ensure that the major objectives and goals are not altered. Changing horses in mid-stream does not help. A revision's sole aim should be to enliven the existing structure and fabric to make it more vibrant. This exercise should be comprehensive, focused and relevant. While it should be user-friendly, one should not adopt a piecemeal approach, but the entire exercise should instead be based on a holistic approach that sensitively ensures that the interest of all the stakeholders are taken care of.

The basics of any such exercise on curricular revision during implementation should take cognizance of its impact on the formal, informal and hidden curricula. It is, therefore, necessary that the inputs should percolate to all levels of the curricular edifice homogeneously, laterally and vertically. The changes effected should have symmetry, correlation and should identify with the existing curriculum so that it does not end up being only an exercise in window-dressing on the part of the curriculum manager to please a particular interest group.

III. CURRENT TRENDS

The following developments are likely to be influential in the first decade of the twenty-first century:

1. **Increased importance of national and state norms**
   Norms will ensure that the citizens have shared knowledge. They will result in greater efficiency. Additionally, norms will encourage state and local boards to raise their standards, improve the quality of schooling, and ensure a large measure of educational equity.

2. **Movement towards decentralized, school-based curriculum development**
   While there is increased interest in setting curriculum standards at both the national the state levels, there is a simultaneously growing interest in having some flexibility in school-based curriculum development.

3. **Increased interest in constructivist curriculum**
   It has its strongest impact on science and mathematics curriculum. Learning strategies should be taught in the context of solving problems.

4. **Development of new approaches in vocational education**
   **Emphasis on generic skills.** These general, transferable skills can be used in many situations. The object is to equip the students with skills that will enable them to function in a changing economy and new situations.
   **Emphasis on integrating academic and career education.** Greater integration of the two is required in order to reduce the dysfunctional barriers between academic and career curricula.

5. **Development of integrated curricula**
   It is used to denote curriculum units that combine content from two or more disciplines. Though research generally supports the use of integrated curricula, some problems are associated with their use.

6. **Institutionalization of technology**
   The use of the computer to manage the curriculum and to facilitate student learning is now widely accepted. Use of sophisticated technology will continue to increase.

IV. THE FOUR CURRICULUM LEVELS

1. **State-level functions**
   1. Develop curriculum frameworks;
   2. Develop and use tests and other measures of evaluating performance;
   3. Provide the local districts with the resources necessary to develop and implement quality curricula;
   4. Periodically review state frameworks.

2. **District-level functions**
   1. Develop a vision of quality curriculum based on the goals of the state.
   2. Identify a common programme of studies and curriculum requirements for each level of schooling.
   3. Develop the documents for the core curriculum related to each subject.
   4. Select instructional materials.
   5. Provide fiscal and other resources needed at the school level, including technical assistance.
   6. Evaluate the curriculum.

3. **School-level functions**
   1. Develop a vision of quality curriculum for every school that is harmonious with the vision of the districts.
   2. Develop in-house programmes of curriculum transactions.
   3. Determine the nature and extent of curriculum integration.
   4. Assist in the implementation and monitoring of the curriculum.

4. **Classroom-level functions**
   1. Develop yearly plans.
   2. Develop units of study.
   3. Enrich the curriculum and remedial teaching.
   4. Evaluate the curriculum.

In introducing and managing changes, the curriculum manager has to keep in mind the following points:
   - the need for a change;
   - selection of the content;
   - organization of the content;
   - selection of learning experiences;
● organization of the learning experiences;
● methods and means of evaluating the learner. He should address the following questions:
● Are the changes desirable or inevitable?
● Do these changes reflect the latest trends in a global context?
● Does the content provide just additional enrichment or newer dimensions in learning?
● Do the contents reflect contemporary developments and thinking?
● Do the learning experiences provide an insight into the learning areas?
● Are learning resources available to provide the required learning experiences?
● What steps are to be taken to ensure the effective and meaningful acquisition of these learning experiences by the learner?

The curricular inputs so incorporated should provide a smooth interface with the existing social, cultural, economic and technological aspects of the curriculum. Its modernity should not be in conflict with its ethnicity; its cultural creatvity should not undermine the traditional sensitivity. The curriculum should provide flexibility, openness and creativity to justify its intervention into the normal life cycle of the existing curriculum.

V. MANAGING THE CURRICULUM

Curriculum implementation depends largely on the classroom teaching strategies, which in turn depend on the teacher’s commitment, competence and training.

The comprehensive management of curricular change demands undertaking various activities that may run concurrently. The basic components of successful curriculum implementation are as follows:
● spelling out curricular contents;
● training and re-training of teachers;
● curriculum delivery and transaction;
● providing learning materials, both for teachers and students;
● measuring learning outcomes; and
● use of ICTs.

It is therefore a question of overlapping layers of activities. The focus should be on ensuring minimum levels of learning at each stage, and that subjects are taught in a way that promotes understanding and thinking rather than recall and memorization.

There are several approaches to curricular interventions. However, care should be taken to ensure that these interventions are finely tuned to the existing structures. The interventions could be selective, partial or spread over the length and breadth of the territory covered by the curriculum. It could focus on lateral knowledge or on vertical thinking. What is important is the quantum and quality of management and planning that facilitates in smoothly synergizing the changes with the present spectrum of operations. A few approaches may be as follows.

1. The frontline approach

In this method of curricular intervention, emphasis is laid on introducing the latest information to an extent of say 10% of the existing quantum of the content. The selection of content is central as this should be able to provide the learner opportunities for imbibing the current knowledge. The purpose is that the learner is familiar with the life processes and the thought patterns of the present society, its scientific and technological achievements, economic activities, challenges, threats and opportunities. Such interventions could be done selectively, subject-wise and in a phased manner.

2. The constructivist approach

The foundations of the curriculum could be reviewed for reinforcement of such inputs, which are contextual and need to be incorporated so that the learning process is more effective. The content, the learning materials have to be carefully scrutinized so that the interventional inputs construct a sound edifice and the learner experiences continuity and coherence. However, it is important to ensure that such reviews do not distort the established and defined aims and objectives of the curriculum. The content material should be objective and free from any bias lest it cause aberrations in the learning contexts and experiences. It must also be ensured that such inputs are not excessive.

3. The social context

The explosion of information technology

The movement from an agricultural economy to an industrial one brought about a change from classical vertical thinking to that of analytical thinking. This warranted a change in the learning processes of the people of the industrial society and the curriculum had to respond to these changes. A similar situation arose with the ushering in of the information technology-based economy to the industrial economy. However, the changes that occurred this time were faster and more extensive, and the curriculum had to respond at an equitable pace. The thought process of the people has now shifted to lateral thinking, exploring unlimited opportunities for discovery and innovation. The curriculum has little option but to meaningfully respond to this call. The amount of information being extensive and the life span of the information being so short, the curricular response and intervention has to be almost instantaneous—this is only possible during the normal life cycle of the existent curriculum.

Knowledge society

The emerging dimension is one of a knowledge society. The key player in this area is artificial intelligence. The human response to creating a base for effective organization and manipulation of the tools of artificial intelligence needs critical study and review. The emphasis is not merely on assimilation and retrieval of knowledge
but in knowledge synthesis and knowledge economy. The entire focus of curriculum and the modus operandi of its implementation have to be carefully designed.

Consumerist tendency
The consumerist tendencies affecting the market dynamics do not spare the educational scenario either. In trying to make interventions at short intervals, care has to be taken that we do not succumb to these pressures. The broad objectives of the curriculum in strengthening human excellence have to be nurtured and nourished. Electronic media impact the minds of youngsters and seem to breed psychological violence. It is necessary to offset the consequent mental turbulence by appropriate inputs of emotional intelligence.

The role of the teacher is changing from that of a moderator and facilitator to that of a co-learner. The thrust will be on self-learning and hence the modules of learning have to be appropriately designed.

External influences on the curriculum
Even while the educational agency is not addressing itself to a curricular review, it must be admitted that the learning situations and learning experiences are being continually modified on their own by the impact of global information flow, thanks to the explosion of information technology. New software materials to enrich the educational content and the pedagogy available in the market and accessible to any learner provide not only additional inputs, but also additional experiences affecting the thought process of the learner. The learner would like to translate those experiences into the classroom and into the curricular framework, whether or not he is called upon to do so. Such experiences may have relevance to all the three domains: cognitive, affective and psychomotor. The teacher needs to be sensitized to handle these situations with a sense of confidence and conviction.

Management of curricular interventions of such kind is a major challenge to curriculum managers.

It must also be admitted that the ascent of the technological interface with education has had a direct and a powerful impact on teaching methods. The methods of classroom teaching and the tools applied for effective learning too will have to change. The use of print media alone will not suffice and even the treatment of the content through the print media might attract changes.

A decline in rote learning and an emphasis on understanding and application will be a dire necessity. Concepts of lateral thinking and critical thinking skills need to be integrated in developing and implementing the curriculum. Ability to communicate effectively and meaningfully will be required and hence the language skills in classrooms have to be enlightened to a communicative approach. The decreasing importance of literature, poetry, arts, etc., will be a matter of serious concern to the educational agencies and administrators and appropriate strategies have to be developed to cope with the situation.

Education being a broad-based concept, it has to take care of the holistic development of the learner. The emotional balance of the learner will be critical in a progressive and dynamic society where there will be increasing problems of communication. It is in this context that the educators will be called upon to give a greater thrust to areas related to emotional intelligence. All curricular interventions have to take care of the affective domain and strengthen the same.

In order to achieve a balanced emotional and cognitive base in the curriculum, focus will be on interdisciplinary approaches to learning. To ensure that curriculum does not get heavily loaded, conceptual aspects relating to population education, adolescent education, value education, peace education and cultural education, etc., may be integrated suitably within the existing scheme of studies.

4. Following the implementation

Periodic monitoring of growth
The success of a curriculum can be determined by taking stock of the realization of the set objectives. Such monitoring has to be periodic, so that it is possible to provide some timely inputs in case shortcomings are noticed. Such monitoring should be so designed as to cover the quantum of growth among children realized through the curriculum. The degree of realization in respect of each identified aspect in previously mentioned quantum also deserves to be assessed. This, in fact, will be an important indicator of quality. In addition, it is also worthwhile to monitor the pace of growth of the students. This will vary from student to student. The significant outcome of such a process of monitoring will be the diagnostic inferences obtained for purposes of providing remedial programmes for greater equity (i.e. strengthening the weak) and enrichment programmes for bright students.

Infrastructure for curriculum change
A permanent infrastructure for shouldering the responsibility of managing the curriculum change is essential. Besides the generalists, it will also be necessary to have subject specialists for smoother and satisfactory implementation. The principals will need to work in close collaboration with the district leadership.

While policy decisions indicating the broad paradigms can be taken at the national/state level, it will be necessary to take a number of other decisions at the regional/district and the local levels to ensure that the curriculum is kept relevant to the felt needs at the grass roots. This will naturally necessitate the establishment of small teams operating at the regional and the local levels. To carry out the curriculum-related tasks, a curriculum task force may be appointed. The teams functioning in this area while working at the different levels are effective only if they function as a hierarchy with interdependence amongst themselves.

The role of supportive institutions in successful management of curriculum change is very critical. There
must be such supportive institutions at the school cluster, district, state and national levels.

Curriculum revision must be undertaken based on feedback received during the implementation phase. The critical information received from different sources should strengthen development of curricular policies. Periodic reviews are also necessary to identify gaps and missing links for necessary correction.

*Upgrading the skills of curriculum teams*

To be able to work progressively and scientifically, it is imperative that the people engaged in the task of curriculum review and renewal continuously upgrade their skills and catch up with the latest developments instead of just depending upon their experience as their sole professional equipment. Towards this end, in-service education programmes will be called for. For the senior level personnel, such training could even take the form of inter-country courses. This top-level team, after getting abreast of the developments in other countries, may design courses aligned to the national needs for the training of second- and third-level functionaries. Such training programmes will need to be built into the total schedule of activities with the provision of both time and money.

In addition to such formal training programmes, it would be highly beneficial if periodic meetings for exchange of experiences are also planned and conducted on a regular basis. These are likely to be very useful as the parallel teams working on the same programmes at different locations will be able to learn and gain from the experiences of their counterparts on how they have attempted to face and solve the problems that come their way.

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**VI. LOOKING AHEAD**

Futurism in education is a topic of concern to all educators. There are numerous models available about what schools should and could be like in the future. What is needed in the future is an education system that serves individuals in successfully coping with the changing demands on them.

To conclude, some of the thrust areas of the future are:

- providing all learners with common skills;
- assisting individuals in becoming adaptive;
- guaranteeing learning by whatever means needed;
- recognizing the emergence of web-centric curricula;
- offering professional support to develop text books and other reading materials;
- calling for more synergies in the classroom environment rather than mere individual participation;
- emerging societies will be anticipatory in nature, hence the need for the component of future studies to be integrated in the curriculum;
- moving from knowledge testing to competency certification;
- curbing the tendency of one-shot learning and evaluation by commercial enterprises;
- using schools to engineer social development;
- shifting from an ad hoc to a systematized approach to manage curricular change, which will lead to institutionalization of a framework for this purpose; and
- training in various aspects of classroom transactions, including team teaching.