

The Integrated Educational System: A Pre-University Educational System for the Third Millennium

Syed Arif Kamal *

Department of Mathematics

University of Karachi, Karachi, Pakistan.

“The Integrated Educational System” was described, which aimed to cultivate habits of creative thinking and critical analysis by providing highly-motivated students sufficient depth as well as adequate breadth of the core and the related subjects so that they could make informed, independent decisions under stressful situations. The curriculum integrates various aspects of curriculum development (why to teach – philosophy; what to teach – contents; how to teach – pedagogical techniques) in such way that the student is educated to become a *manager* of resources of the universe (not a *thief*) and should know relationship with Allah, self and environment *What to learn* is the main factor in TRAINING. A trained person “knows” the techniques, which can be repeated under standard situations. *How to learn* is the essence of EDUCATION. An educated person “knows”, “can explain” and “can apply” the concepts and the techniques. Emphasis is placed on concept building (through debates, discussion sessions, activities) and technique developing (smart approaches to problem solving). Attempts of patchwork from foreign curricula have failed many times, because they do not take into account of the complete picture. It is, therefore, mandatory to prepare an integrated curriculum. The curriculum needs to be prepared in the following stages:

- a) Outline preparation (to link with knowledge obtained in other disciplines and a systematic planning of gradual building-up of concepts and problem-solving skills, the chart contains the level, the concept, the activity/the experiment to reinforce this concept, the reference and the philosophy behind teaching this concept)
- b) Textbook, workbook and lab manual preparation
- c) Video lecture and demonstration series
- d) Interactive software series
- e) Testing and evaluation

The curriculum spanning over the entire school period (KG - Intermediate Level) is divided into three disciplines: Sciences, Liberal Arts, Health and Growth. Equal emphasis is given to moral upbringing, intellectual upbringing and physical upbringing. Yearly updated textbooks/workbooks coupled with the latest teaching and evaluation techniques promise to make the students “Muslims” to be able to tackle the challenges of this Information Age. Teachers'-training programs and parents'-education programs reinforcing the concepts and elaborating the pedagogical skills must accompany the curriculum outline. Evaluation and appraisal of this system is based on specially-designed developmental examinations of the child, written examinations, projects, quizzes, parental comments, teachers' suggestions and expert review of videotaped lessons. The curriculum must prepare the students to enter BS programs of top-ranking universities of the world, for example, Cambridge, Harvard, MIT, by being properly interfaced with the university curricula.

Keywords: Curriculum, creative thinking, critical analysis, problems solving, training, education

* Professor Dr. Syed Arif Kamal, MS (Indiana), MA (Johns Hopkins), PhD, Professor of Mathematics, University of Karachi, Convener, National Curriculum Revision Committee in Mathematics, Higher Education Commission and Member, Expert Panel (Mathematics), National Curriculum Council, Ministry of Education, Government of Pakistan; *e-mail*: kamal(at the rate of)ngds-ku.org; *paper mail*: University of Karachi, Box 8406, Karachi 75270, Pakistan; *homepage*: <http://ngds-ku.org/kamal>