Visions and Mandates: An Analysis of Three Indian IT Curriculum Guides

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Objectives and significance

In this paper we offer a rhetorical and pragmatic analysis of three official documents pertaining to Information Technology (IT) integration into educational practices in the Indian context. The three documents are (a) *the Curriculum Guide and Syllabus for Information Technology in Schools (CGSITS, 2000)* developed and published by the National Council for Educational Research and Training (NCERT). (b) *Modules of the teacher education educational technology curriculum developed by the Indira Gandhi National Open University (IGNOU); and* (c) The syllabus for educational technology master's program students at Shreemati Nathibai Damodar Thackersey (SNDT) Women's University at Mumbai. The NCERT document offers the first national technology curriculum framework for schools (and to a lesser extent school teachers). The IGNOU curriculum is aimed at school teachers while the SNDT course is designed for the next generation of educational technology designers.

The significance of this analysis grows out of three general trends about the direction of the use of IT in education in India. First, despite the arguments about the promises and perils of educational technology, no one can seriously question the growing role of computers and other new information technologies in the lives and learning of teachers and students both in and out of the classrooms. Second, in the case of India, recognition of this role of IT is combined with internationally growing status of India as a computing powerhouse. The push to integrate technology into Indian schools, therefore, is not surprising. This push is manifested through: attempts to develop technology-based curricula for schools; integrating technology into teacher education and professional development; and through educating a breed of educational technology designers. However, given the costs of acquiring, implementing, and maintaining IT, thoughtless investment in educational technology may turn out to be an expensive mistake.

Finally, as the tradition goes, before the imperative to integrate technology in education begins to permeate the schools it is formulated at the highest official levels in our society. The three documents that we have chosen express such formulation in India. Documents such as these, frame the agenda as it were, for schools, teacher education programs and educational technology graduates. Of course this "frame" influences decisions on hardware and software purchases, strategies for teacher professional development, formulation of teaching objectives, as well as the development of learning opportunities for students.

Guiding Assumptions

Our analysis of these documents is guided by the following assumptions:

1. Curriculum guides often contain important implicit and explicit assumptions about students, teachers, learning and teaching processes and their organization, and the nature and role of IT in learning and teaching the school subjects.

2. In any educational innovation guided by technological innovations that take place outside the formal system of education, it is possible for 'orchids and turnips to exist side by side.' That is old is hybridized with new in myriad different ways, sometimes fruitfully and other times in ways detrimental to the learning.

3. Educational system in the postcolonial societies is still regulated or organized largely by a centrally controlled bureaucratic system. The curriculum frameworks and course guides for teachers assume an added importance in one such system.

Given this, we explore the implicit and explicit assumptions in the above-mentioned documents. We then take a look at how those assumptions are articulated in the proposed competencies, knowledge, and skills for teachers and students. Finally, we offer an analysis of contradictions between the visions offered by these documents in contrast to the manner in which they are turned into mandates.

Method of analysis

To perform this analysis, we have resorted to the standard qualitative content analysis (Bogdan & Biklen,

1998). We have developed a set of codes to sort data across and within the documents in accordance with:

1. assumptions associated with the nature and scope of IT
2. assumptions about learners and teachers, process of teaching and learning
3. assumptions about the relationship and role of IT in learning and teaching.
4. the competencies desired and required in learners and teachers
5. activities suggested to develop the stated competencies

Based upon the above-mentioned assumptions, our analysis of these documents examines the ways in which the assumptions about content, pedagogy and learning, and technology are permitted to interrelate [or not] in the above-mentioned documents. We consider these aspects as the manner of conceptualization of each of them influences decisions on hardware and software purchases, strategies for teacher professional development, formulation of teaching objectives, as well as development of learning opportunities for students.

Results and implications

Following this approach, we argue that there is a fundamental split between the almost utopian visions offered by IT and the manner in which these visions are to be realized. The formalization of IT curriculum in India, which we examine in this paper, may undermine the dynamic [and integrated] practices that have contributed to the development of Indian IT capital. By characterizing IT integration as acquiring a laundry list of functional skills and knowledge, the curriculum guides ignore situational and contextual realities of using technology for learning. This emphasis is akin to what Lankshear (1997) describes as a form of applied technocratic rationality, a view that technology is self-contained, has an independent integrity, and that to unlock its potential and power requires merely learning certain basic skills.

Finally, we suggest some ways by which to replace the technocratic rationality by an inclusive vision which might help blend technology, content, and pedagogy. We also show how such blending may open up new ways of thinking and new problems to solve on the horizon of thinking about integrating technology in education in India. We also suggest some ways in which alternative curricular visions might help retain, foster, and transfer the dynamism of Indian IT revolution to its classrooms.

References

Bogdan, R. C. & Biklen, S. K. (1998) *Qualitative Research for Education: An introduction to theory and methods* (3 ed.). Boston, MA: Allyn and Bacon.

Lankshear, C. (1997) *Changing literacies*. Buckingham & Philadelphia: Open University Press.