Curriculum framework in search of a coherent epistemology: A case study of Indian National Curriculum Frameworks

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In the last three decades or so, several studies have suggested a correlation between teachers’ beliefs about knowledge and student learning (Shulman, 1986; Medwel et al (1998); Askew et al (1997)). In philosophical literature on the activity of teaching, particularly as it pertains to democratic societies and the development of independence in thinking, a teacher’s understanding of what is being taught has been emphasized even before. Scheffler (1967), for instance, argues for what he calls “the rule model” of teaching in his essay “Philosophical Models of Teaching”. This model takes development of rational thinking as rooted in knowledge traditions. To take another example, Hirst (1967) raises the question what “then are we after in teaching a subject? What does learning it involve?” And then he goes on to argue that if we want the pupils to understand, and further, that to make proper meaning of the term ‘understand’, we have to take recourse to traditions and frameworks of rational enquiry. These ideas suggest that the view of knowledge taken by the educators, including teachers, influences the process of teaching as well as student learning.

The curriculum documents articulate the official view of knowledge taken for teaching students in a society. If there happens to be a national curriculum or a national curriculum framework, the official view of knowledge taken in such a document influences the whole national education system and learning and the intellectual development of millions (in case of India, hundreds of millions) of children. Thus the notion of knowledge guiding the National Curriculum Framework of a country is far from being an issue of minor importance. With this concern in mind, the present paper attempts to understand the kind of epistemic framework Indian National Curriculum Frameworks (NCFs) seeks to adopt.

The chosen task in this paper will be accomplished by first adopting a framework of analysis and then that framework is used to critique the particular set of values, aims and notion(s) of knowledge the NCFs have accepted. However, only the epistemic part of the framework will be emphasized here.

A framework for analysis

The term curriculum is variously defined and the socio-political critique of curriculum has motivated formulation of notions like ‘prescribed curriculum’, ‘intended curriculum’, ‘transacted curriculum’, ‘hidden curriculum’ and so on. These debates are useful and bring out important issues concerning the gap between theory and practice as well as the unintended outcomes of the educational process that might be a serious social concern. It is, however, important to note that when societies and nations develop their curriculum, they are designed primarily in the sense of “what ought to be taking place in schools rather than what actually is, although ideally the two will coincide” as Winch (1996) puts it. In this paper, then, curriculum is taken as “the prescribed content of knowledge, understanding and skill that fulfils the aims of education”. (ibid) However, it needs to be noted that knowledge and understanding include moral understanding and therefore values. The selection of content in a curriculum is likely to have implications for pedagogy and evaluation. If we look at the internal structure of any curriculum, we would find that it comprises objectives, content to achieve those objectives, recommendations for pedagogy and material to be used in transaction and assessment of progress towards achievement of the chosen objectives. This structure of the curriculum is visible in the three NCF documents analysed in this paper as well as what is articulated in the Position Paper on Curriculum, Syllabus and Textbooks (NCERT, 2006), developed as part of the overall exercise of NCF review in 2005.
A curriculum framework, as understood in India, need not provide details of content, what methods and activities to use to teach that content, books and material, and evaluation procedures. What is, however, expected of a curriculum framework is a set of clear guidelines to generate details for all these curricular components. The Curriculum framework, therefore, provides ways of developing a syllabus as well as grounds for its justification. But these guidelines and principles articulated in the curriculum framework are of the nature that they themselves require further justification. For example, all NCF’s recommend ‘child-centred pedagogy’, which cannot, properly speaking, be taken as self-justifying even if Indian curricular documents take it as such. Therefore, further questions of explanation of meaning and justifications for curricular recommendations need to be raised, addressed, and answered. What could such justification consist in? And if there is a dispute on recommendations, on what grounds can such curricular guidelines and principles be critiqued and debated?

Dhankar (2000) in “On Curriculum Framework” argues that such further justification for curricular decisions rests on certain general principles that are assumed but rarely articulated by the interlocutors in debates. He also argues that it is possible to articulate them to a reasonably adequate degree and to organise them under four broad groups, which might be somewhat overlapping but still remain useful as a tool for analysis and meaningful debate. These four broad groups of general principles are concerned with human beings and society, epistemology, learning theories and children’s contexts.

A slightly modified version of this framework is used in CST (NCERT, 2006) where these groups are referred to as: “assumptions concerning human beings and society”, “epistemological assumptions”, “assumptions about learning”, and “assumed understanding of the child and her context”. Here I would like to state them as: socio-political assumptions, epistemological assumptions, assumptions about human learning and assumptions about the child’s context. To my mind, this slight modification retains the spirit of the earlier articulation and brings in sharper focus.

This framework can be diagrammatically represented as follows:

<table>
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<tr>
<th>Basic assumptions</th>
<th>Structure of curriculum</th>
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<tbody>
<tr>
<td>• socio-political assumptions</td>
<td>• Aims of education</td>
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<td>• epistemological assumptions</td>
<td>• Curricular objectives</td>
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<td>• assumptions about human learning</td>
<td>• Criteria for content selection and organisation</td>
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<td>• assumptions about the child’s context</td>
<td>• Recommendations for pedagogy</td>
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<td>• Recommendations for teaching-learning material</td>
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<td></td>
<td>• Criteria for good assessment of progress</td>
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To understand a curriculum framework one has to examine: one, the adequacy and internal consistency of the basic assumptions; two, consistency of basic assumptions with components in the curriculum (i.e. aims, objectives, etc.); and three, adequacy of and consistency between various components of the curriculum.

This paper is primarily concerned with an examination of the epistemic assumptions, therefore, I will focus on the relationship between socio-political assumptions and epistemological assumptions on one hand, and relationship of epistemological assumptions with aims, objectives, recommendations for content selection and organisation and
pedagogy on the other. Obviously, this analysis does not seek to be an exhaustive one; however, in my view, it is adequate for the stated purposes of this paper.

**National Curriculum Framework documents**

So far there have been only three versions of the national curriculum framework (hereafter NCF). The first one was titled “National Curriculum for Elementary and Secondary Education: A framework” and was published in 1988 (NCF1988). This was revised in 2000 and the revised document was called “National Curriculum Framework for School Education” (NCF2000). Another review and revision took place in 2005 and the new document was simply called “National Curriculum Framework 2005” (NCF2005). This last document is the current curricular framework followed in India, and therefore, the subject of main focus here.

**Values in NCFs**

The discussion on values in NCF1988 and NCF2000 is extensive, complex and somewhat confused. All NCF documents, especially the first two, bring in values in articulation of various concerns and recommendations, and rightly so, but often without clearly defining the terms used and without providing any justification. All three documents devote their first chapters to setting the context, and most often the values are mentioned herein, though they continue to be mentioned in the articulation of aims, content and pedagogy in the later chapters as well.

The constitutional values are mentioned most prominently in all NCFs. The idea of India as a political entity and a nation was shaped in the course of the long freedom movement starting in 1857 and culminating in 1947. This movement, simultaneously, was also a movement for nation building. The future vision and values that emerged out of this long and intense socio-political churning were crystallized in the Constitution of India. All three documents, therefore, draw their values most prominently from these two sources, history of the freedom movement and the constitution of India.

The preamble of the constitution of India gives a very short but well articulated statement of values, it is a resolution “to constitute India into a sovereign socialist secular democratic republic and to secure to all its citizens: JUSTICE, social, economic and political; LIBERTY of thought, expression, belief, faith and worship; EQUALITY of status and of opportunity; and to promote among them all FRATERNITY assuring the dignity of the individual and the unity and integrity of the Nation...”. These values are often referred to in all three documents as grounds for particular recommendations as well as broad policy statements. Equality and social justice among them stand out most prominently. (NCERT, 1988, p. 3; NCERT, 2000, p. 9; NCERT, 2005, p. 7) Education is expected to inculcate the values of equality and justice as well as to become an instrument for promotion of equality and social justice in the society.

All three documents emphasise national integrity and building of strong national identity through education. In addition, NCF1988 and NCF2000 mention a host of other values variously termed as ethical, moral, universal, social, spiritual and environmental. NCF2005 seems to take such additional values as derivatives of the constitutional values of equality, justice and care for the well-being of all.

Interestingly, scientific temper can be seen as a constitutional value in India as it is mentioned in the fundamental duties of an Indian citizen, and all three documents emphasise constitutional obligations. NCF1988 and NCF2000 specifically mention it. NCF2000 places the greatest emphasis on Indian cultural heritage and use of religious beliefs in moral development. A careful reading of the document seems to suggest a dilution of constitutional and rational values and veering towards cultural nationalism of a religious variety. But, in general, the core values remain democracy, equality, justice and pluralism.
NCF2005 also specifically emphasises freedom and autonomy of the individual. Thus, broadly speaking, socio-political assumptions of the above mentioned framework in terms of values are clearly stated.

**Aims of education**

As far as the three documents under consideration are concerned, aims of education can be best understood if we first understand the overall purposes of national education system, and of the national curriculum framework, and then come to the aims of education. Building a national education system that ensures some uniformity and comparability in education received by all Indian children is a major concern in these documents. The system of education that has a nationwide uniformity in structure, broad values’ framework, aims and learning achievements (not in particular items to be taught) was sought to be established. The national curriculum framework is seen as an important tool to create such a national system of education. NCF1988 makes it clear that the “national curricular framework for elementary and secondary education is envisaged in the context of the National System of Education” (p12). Thus, aims of education in NCF1988 and CF2000 should be seen in the perspective of education for nation building. Education is seen “as a powerful instrument of human resource development” and is expected to “help in the process of desired social transformation and the achievement of national goals and priorities.” (NCF1988, p3)

Aims of education can be understood as desired capabilities and characteristics education strives to develop in the learners. Such capabilities and characteristics can be further elaborated in terms of knowledge, understanding, moral values, qualities of character, capabilities and skills. If we use this perspective to understand aims of education in NCF1988, we find that there is much that is said in the section on “Curricular Concerns”. A little reflection on the long list of these concerns reveals that the capabilities and characteristics that are to be developed in the learners as aims of education can be reorganised as follows:

1. Character building and inculcation of values
   a. Inculcation of constitutional values: equality, justice, liberty, secularism, human dignity, fraternity, etc.
   b. Development of cultural and national identity with cultural values, appreciation of national heritage etc.
   c. Development of environmental sensitivity and commitment to its preservation and adherence to small family norm.
   d. Values such as honesty, truthfulness, righteous action, etc.
2. Learning how to learn
3. Fostering creativity
4. Fostering scientific temper (which is Indian educational equivalent of rational enquiry, though somewhat negligent of wider range of rational thinking and more specifically tied to scientific method).
5. Emphasis on relationship between work and education

A similar exercise of culling out aims of education from “Curricular Concerns” as stated in NCF2000 will result in the following aims of education:

1. Education for value development
   a. Education for a cohesive society
   b. Strengthening national identity and preserving cultural heritage
   c. Integrating indigenous knowledge and India’s contribution to mankind
   d. Values such as honesty, truthfulness, righteous action, etc.
2. Development of aesthetic sensibilities
3. Interface between cognition, emotion and action
4. Relating education to the world of work
5. Linking education with life-skills
6. Responding to the impact of globalization
7. Meeting the challenge of Information and Communication Technology

The next level statements of aims occur as curricular objectives. NCF1988 provides a list of 21 and NCF2000 a list of 18 curricular objectives. In both the documents, objectives include general statements like “moral and character values such as honesty, truthfulness, dependability, courtesy, fearlessness, compassion, etc” as well as specific content-related statements like “competencies that facilitate mathematical operations and their applications in day-to-day life and learning”. One can hardly find any principle of organization in these lists, but most of the statements can somehow or other be inked with the statements of aims we have culled out above. However, the adequacy of the lists and necessity of all statements in them are open questions to be examined in greater detail.

The NCF2005 roots the aims of education in democratic polity that is also culturally diverse. (NCERT, 2005, p. 1) Education still remains for nation building but there is a significant shift in perspective. Education in NCF88 is also for democratic nation building; and the individual was important but primarily as a national resource. In NCF2000, together with democratic nation building, cultural identity took prominence, and again the individual was important but as a means to realise this vision. NCF 2005 explicitly mentions that the individual is primarily worthwhile in herself, visualises her as an autonomous citizen, with rights and capabilities to contribute to nation building according to her own imagination. In fact, the primacy of the individual is no invention of the NCF2005. This vision and relationship between the citizen and the nation was first articulated in the report of Secondary Education Commission right after independence in 1952. The NCF2005 quotes from this document approvingly: “Citizenship in a democracy involves many intellectual, social and moral qualities...a democratic citizen should have the understanding and the intellectual integrity to sift truth from falsehood, facts from propaganda and to reject the dangerous appeal of fanaticism and prejudice”. (NCERT, 2005, p. 7). The Secondary Educating Commission also recognises the intrinsic worth of an individual. “Democracy is based on faith in the dignity and worth of every single individual as a human being...”

(MHRD, 1952, p. 20)

The aims of education in NCF2005 are articulated in this light. They can be paraphrased as below:

- A commitment, based on reason and understanding, to democracy and values of equality, justice, freedom, concern for others’ well-being, secularism, respect for human dignity and human rights.
- Development of independence of thought and action.
- Development of sensitivity to others’ well-being and feelings.
- Learning to learn.
- Development of ability to work, participate in economic processes and social change.
- Appreciation of beauty and art forms.

In all three documents under consideration, the socio-political vision receives due consideration. In spite of confusion over aims, objectives and content, in NCF1988 and NCF2000 the aims and objectives are in agreement with values and democratic vision of the

1 Interestingly, The Secondary Education Commission Report (1952) has striking similarities with John Whites paper “New aims for new national curriculum” (1998) written in another country and, in a sense, another era. Since White is unlikely to be acquainted with the earlier document this is a result of deriving conclusions from similar assumptions regarding democracy.
country. The articulation of values and aims in NCF2005 has significantly greater clearly and consistently.

Notion of knowledge

Knowledge, in whatever ways it may be understood, remains a central concern of any curriculum. After the general aims and objectives are settled, one has to find ways and means of achieving them. Knowledge figures both as an aim/objective to achieve as well as a means to achieve certain other objectives; for example, skill or understanding values or commitment to values all require knowledge relevant to them. Most prominent in what children are supposed to ‘learn’ in education is knowledge. Thus the notion of knowledge a curriculum uses, be that explicitly stated or implicitly assumed, is likely to have important implications in selection, organization and sequencing curricular content. It will also have significant influence on the pedagogy used. Therefore, one way to examine adequacy of notion of knowledge in the curriculum is to carefully delineate how it is used in arriving at decisions regarding selection, organisation, and sequencing of content, and also regarding pedagogy.

In this analysis I will treat NCF1988 and NCF2000 together in one section and NCF2005 in a separate section as the latter is quite different in its understanding of knowledge from the earlier two.

Knowledge in NCF1988 and NCF2000

The content and process of education in NCF1988 and NCF2000 are aimed at developing “knowledge, skills, attitudes and values”. (NCERT, 1988, p. 3 and NCERT, 2000, p. 39) These terms are not explicitly defined but taken to be generally understood in educational conversations. The term ‘knowledge’ in these two documents is almost always used to indicate propositional knowledge (knowledge that) as is indicated in the separate mention of knowledge, skills, attitudes, values, habits, etc. The propositional knowledge, however, is taken as unproblematic as far as its veracity is concerned as no reference to any kind of validation of knowledge is made. If it is propositional knowledge then it necessarily involves claims about the world and perhaps belief in those claims; but evidence for and truth of such claims remain implicitly expected. Knowledge is also supposed to be different from information on the one hand and understanding on the other. (NCERT, 1988, p8; and NCERT, 2000, p26). However, making a distinction between information and knowledge would be difficult in the absence of the conditions or some criteria a belief has to fulfil to acquire the status of knowledge; for example, justification and truth might be seen as such conditions. Understanding, on the other hand, seems to assume knowledge and involves either meaning making of concepts and principles or evaluative appreciation of facts, situations, and feeling and opinions of other human beings. Thus, knowledge seems to stand between information on one hand and understanding on the other; it is a little more than information and falls a little short of understanding. Both the documents repeatedly emphasise that the education should aim at knowledge and understanding and not at mere information. In itself, this may be a goal of education worth emphasising, but in the absence of clear distinction between information and knowledge one may have no clue what to make of it in actual practice. This seems to be the first casualty of inadequately articulated notion of knowledge in these documents.

Indian education system is plagued by excessive curricular load. At the least two official committees have been appointed by the government so far to suggest ways of reducing curricular load; first Ishwar Bhai Patel Committee in 1977 and second Yash Pal Committee in 1992. Another serious problem of Indian education is rote learning. It would be worth researching whether the inadequately articulated notion of knowledge might be one of the contributing factors behind continuous aggravation of these problems. There are, prima facie, reasons to argue that in absence of a clear distinction between knowledge that is
recommended and information that is seen as a case of rote learning, no teacher can make proper sense of the recommendations, and therefore, cannot implement them.

In acquisition of knowledge both the documents (NCFs 1988 and 2000) place a lot of importance on experience, activities, interaction with others and these documents also talk of presentation of facts and concepts. A teacher’s role is recommended to be that of a facilitator. (NCERT, 1988, p. 8) NCF2000 goes a step further; the constructivist teacher is supposed to “follow no rigid prescriptions for successful teaching”. (NCERT, 2000, p. 26) All possibility of any public criteria for knowledge is denied as “knowledge acquisition is a constructive or generative process and each student’s knowledge is personal and unique.” (NCERT, 2000, p. 42)

Organisation of knowledge in different subject areas is proclaimed to be a matter of mere convenience and without any reasonable grounds, “ideally, various learning experiences should make an integrated whole, they have to be classified under various subject areas for the sake of convenience.” (NCERT, 1988, p. 19 and NCERT, 2000, p. 49) This untenable claim, however, has no bearing on objectives and descriptions of various subject areas. Mathematics is claimed to be the most powerful means of teaching scientific temper (NCERT, 1988, p23), science is supposed to be an antidote against superstition, and social sciences are supposed to be a particularly efficient means of teaching values. Thus recognising different characteristics of subjects as claims of differences in nature and domains of subject areas are replete in both documents. If the division of subjects happen to have no other grounds than mere convenience, these later clams are all whimsical, to say the least.

This view of knowledge does not allow recognising epistemic requirements in pedagogy and content selection for various subjects. However, according to this view, it may be argued, traditional authoritarian distinctions can be maintained without providing any rationale. Thus, it forfeits the opportunity of connecting knowledge to the child’s cognitive processes as well as to publicly recognisable validation criteria. That leaves the field open for an arbitrary application of developmental psychology and leads to recommendations such as the following: only concrete and experimental teaching of mathematics till the age of 14. Students till the end of elementary school are recommended to prove theorems of geometry by measuring and ‘experimental methods’. Science is the only exception in NCF1988 and NCF2000 in which the nature of knowledge and also the methods of knowledge generation are supposed to be taught. Specific concerns about the nature of knowledge in any other subject area receive no consideration; presumably because such recognition is contrary to the child-centric idea of knowledge as a seamless whole, without any divisions.

The operational definition of knowledge in all Indian classrooms is “verbatim memorisation of officially sanctioned knowledge available in the textbooks”. The confused and contradictory claims about knowledge in NCF1988 and NCF2000 could have no dent on this entrenched authoritarian definition of knowledge. Unless the role of epistemic criteria for knowledge and child’s right to effectively use them in assessing knowledge claims are emphasised, recognition of child as free constructor of knowledge is unlikely to challenge the authoritarian view of knowledge.

Knowledge in NCF2005

The NCF2005 sees knowledge in a significantly different light. This document explicitly recognizes the need to consider the nature of knowledge in various curricular decisions. (NCERT, 2005, p. 4, p. 8, p. 10) In this document, learning and nature of knowledge in general are considered in chapter two. Subject specific epistemic issues are considered along with an elaboration of subject knowledge and pedagogy of each subject area.
In spite of due emphasis on the notion and nature of knowledge, NCF2005 presents a somewhat confused picture of knowledge, particularly in the consideration of learning and knowledge. This is partly because the document has two mutually contesting views of knowledge and both are partially articulated. One view of knowledge emphasises experience and personal meaning making more; it is also sceptical of public norms and categorisation. Here, learning is the presiding deity and knowledge is left ill defined. We will refer to this view as the “First View of Knowledge”, “FVK” for short, as it comes first in the document. The other view takes knowledge essentially as requiring publicly debatable norms of validation and admitting categorisation. This view, while it recognises knowledge as rooted in experience, considers the role of language, articulation and conceptual organisation to be very important. According to this view, knowledge is the presiding deity and learning is a means to achieve knowledge. We will refer to this view as “Second View of Knowledge”, for short “SVK”, as it comes second in the document.

The FVK primarily emerges from constructivist pedagogy. Fortunately, Indian constructivism is of a cautious variety and, therefore, can admit to the ultimate need of some authenticating procedures or criteria for knowledge. While at the stage of learning, particularly for children, the authentication primarily resides in the psychological processes of the learner herself. Children are seen as constructors of their own knowledge (NCERT, 2005, p. 11); and learning is seen as “a process of construction of knowledge. Learners actively construct their own knowledge by connecting new ideas to the existing ideas on the basis of materials/activities presented to them (experience).” (NCERT, 2005, p. 14) What is constructed are “mental representations (images) of external reality (transport system) through a given set of activities (experiences). Structuring and restructuring of ideas are essential features as the learners progress in learning.” (ibid) “Construction indicates that each learner individually and socially constructs meaning as he/she learns. Constructing meaning is learning.” (ibid, p. 16) Learning tasks should be such that they seek knowledge outside the textbook and communicate “the philosophy that learning and knowledge are to be sought out, authenticated and thereby constructed, and that neither the textbook nor the teacher is an authority.” (ibid, p. 19) This view of knowledge construction is all encompassing, “we need to view the child as ‘constructing knowledge’, all the time. This is true not only for ‘cognitive subjects’ such as mathematics and science, language and social science, but equally of values, skills and attitudes.” (ibid, p. 20) This is a brief and rough sketch of concepts of knowledge, learning, and authentication of knowledge acquired.

This view might be, arguably, accepted as far as what could be called psychological constructivism goes. Every child, and adult for that matter, makes her own meaning; no one else can ever do that for her. Thus, the active participation and primacy of the learner is central to learning in this sense. However, this meaning making can be aided by others; things, ideas and connections could be pointed out and, through language, thought processes could be influenced. Thus, the singular emphasis on children as “constructors of their own knowledge” may be read as “sole constructors of their own knowledge”. The more intractable problem is that of authentication. This view tells us that the textbook and the teacher are not the authority. So far so good, and may be considered a good beginning to challenge the authoritarian view of knowledge. But this claim invites a further question: how does, then, one differentiate authentic knowledge from unauthentic? Are all beliefs formed of equal worth? Are they equally ‘true’? And what would truth mean in this scheme of things? Can we legitimately assume that since the child’s knowledge is ‘socially constructed’, it shall automatically answer the questions of validity? These questions are not answered in the FVK, and that raises doubts about its use in curriculum development. This primarily is an involved description of pedagogy and is negligent to need of public criteria for knowledge. Here learning is the goal. It is very doubtful whether even learning defined in this manner can be of much educational use. For having learnt X necessarily implies having come up to some standards in X. (Peters and Hirst, 1970, p. 75). Without such a standard, one may be
able to define learning as a change in behaviour, knowledge or disposition, but its relevance to educational aims cannot be established.

This brings us to the second view of knowledge (SVK) in NCF2005. The SVK is somewhat more clearly delineated in the document. SVK suggests that "knowledge can be conceived as experience organised, through language, into patterns of thought (or structures of concepts), thus creating meaning, which in turn helps understand the world we live in. It can also be conceived of as patterns of activity, or physical dexterity with thought, contributing to acting in the world, creating and making of things." (NCERT, 2005, p. 23) One obvious problem with this definition is that it tries to encompass origin and use of knowledge as well as the concept of knowledge and thus becomes somewhat obscure due to its ambitions. In plain language, knowledge is defined as "structures of concepts" and also "patterns of activity" which involve thought. The first indicates propositional knowledge, while the second indicates skills or procedural knowledge. The basis of concepts and their structures as well as that of skills is said to be experience, and the use is suggested to be either making sense of the world or acting upon it. Most of these points could be reasonably argued for, and so far this characterisation of knowledge is not in tension with FVK.

It is further claimed that humans have created bodies of knowledge as well as ways of construction of knowledge, of thinking, feeling and acting. All children are supposed to recreate the relevant parts of this repertoire of knowledge; this involves both knowledge as a 'accepted conclusions' (propositional knowledge) though always open to re-examination, as well as principles and methods of creating new knowledge and examining proposed candidates for the status of knowledge.

Further, knowledge is seen in two inter-related parts: knowledge in practice and forms of understanding. What are usually called vocational crafts like carpentry and are thought to be mere skills involving only practice and very little reflection and conceptual basis is reasonably broadened in "knowledge in practice". This recognises the tacit understanding and various interrelationships of crafts and trades with propositional knowledge, thus providing a richer concept of crafts like carpentry, games like kabaddi and so on. Propositional knowledge is further categorised into forms of understanding on the basis of the nature of concepts involved in various forms and validation criteria used, roughly following Hirst’s and Dearden’s categorisation. This scheme lends itself easily to selection and organisation of curricular content in spite of not being perfect. Here the issue of procedures, validation and publicly recognised norms for the same is briefly tackled.

Right after the articulation of SVK the document reemphasises FVK, and shows considerable hesitation in using the former for subject organisation, content selection and pedagogical implications. For selecting knowledge, it mentions relevance, interest and meaningfulness as important criteria. (NCERT, 2005, p. 30). About half a dozen problems in subject based curriculum are elaborated upon. (ibid, p. 31). It is not noticed that SVK may provide effective solutions to many of them, such as subjects being watertight, disconnected and packaging knowledge as finished product. The solutions to all those real problems can be attempted from the epistemic angle as well as from the more emphasised subjective psychological angle. The total neglect to notice the possible epistemological solutions and sole emphasis on psychological processes creates an impression of epistemic criteria being the problem rather than a step towards a solution. However, the possibility of use of forms of understanding in organising curriculum and pedagogy at the upper primary stage is conceded.

In the document the two views seem to cordially coexist with each other rather than informing each other and integrating into a coherent epistemology. Unfortunately, both are only partially articulated. FVK does not elaborate upon criteria for validation of knowledge and it gives an impression that all beliefs and opinions created by the learner are automatically granted the status of knowledge. SVK does not articulate its relationship with
learning, organisation of school subjects, and therefore, can be misinterpreted as arguing for
disconnected watertight subject areas and neglecting child’s interests, existing
understanding and active engagement. This incomplete articulation also leaves out
questions of distinction between knowledge and information, relationship between
knowledge and values, and role of knowledge in skill development.

The tension between and partial articulation of FVK and SVK in the chapter on
learning and knowledge, however, is somewhat rectified in the descriptions of subject areas.
All discussions on subjects articulate objectives, pay attention to nature of knowledge and
validation criteria. Particularly the discussion on science includes a six fold criteria of validity
for a good science curriculum. (NCERT, 2005, p. 46) These criteria take into account
cognitive processes of the child, epistemic and historical demands and well as
environmental and ethical considerations. But that is not entirely consistent with FVK’s
constructivism. However, in spite of considerable ambiguity in the document, NCF2005
signifies an enormous improvement on NCF1988 and NCF2000 as far as epistemology is
considered. This is because it not only recognises need for epistemological considerations,
but also attempts to provide an epistemic framework for connecting aims and objectives to
content and pedagogical processes, however deficient this may be.

Conclusion

The Indian national curriculum frameworks have, over a period of time, reasonably clarified
the initial confusion in values and aims of education between 1988 and 2005. The
articulation of values and aims has become more coherent and consistent with the
democratic ethos of the country. Thus, one could say that socio-political assumptions are
better articulated now. Similarly, there is a shift in the pedagogy and psychology of education
that can be argued to take into account current pedagogical developments, though not with
the same clarity in assumptions as in the socio-political sphere. The context of children,
which we have not considered here, has been emphasised from the beginning and need to
relate pedagogical process and curricular content to context is clearly
articulated.

In NCF2005 an awareness of need for epistemological considerations is very much
visible. Where there was almost total absence of felt need of any epistemology, now there is
an interest and recognition of the possible contribution of it to better curriculum development.
However, no clear picture of accepted epistemology emerges. There are half articulated
views on knowledge and they seem to be in tension with each other, though, logically
speaking, these tensions can perhaps be resolved. However, this is a larger issue that would
require further analysis. This possibility presents itself as constructivist epistemology as
hinted in the pedagogy and FVK is not of radical variety. There remain many unconsidered
questions which need attention for a better curriculum planning. A clear and well considered
stand on curricular epistemology is potentially capable of informing various learner
achievement studies and influencing their findings. Also, in the long run, it may contribute to
better student achievements.

It does not seem to be possible to challenge the entrenched rote learning pedagogy
in Indian classroom and constantly increasing curricular load without taking a more clear,
robust and coherent epistemological position. The claim here is not that a better articulated
and sounder epistemological position by itself can solve these problems; rather, it is a
weaker claim that it is a necessary weapon in the arsenal of educational reforms if success
is desired.

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