

# “Innovations Cannot Last Forever..”

## Official Response to Why *Eklavya* was Axed

○ Amita Sharma

**I**n the previous article Rama Kant Agnihotri had claimed that *Eklavya* was axed by the Madhya Pradesh Government to reassert bureaucratic control over education. We sent Professor Agnihotri's critique to the Secretary, Government of Madhya Pradesh for their version. We received the following response from Amita Sharma, Secretary, Primary Education, explaining the M.P. Government's viewpoint.

Innovations emerge out of a need for reform. An innovation has to be clear about what it can expect to change and what, on its own, it cannot change. It has to understand what the 'givens' in a system are that define and limit the educational context, so that the innovation is planned and designed within those parameters. The other relevant issue is that there has to be effective interface and agreements between the innovation and the system within which it works so that their mutual expectations can be shared and acted upon. Finally, there has to be a time plan. Innovations cannot last forever. If they last beyond a certain point, they cease to be innovations. If, in their protracted existence, they do not succeed in influencing the overall educational context in a way that their inputs become usefully internalized then there is a need to critically examine the innovation and its interrelations with the system which defines its context.

In Madhya Pradesh, the NGO *Eklavya*'s Hoshangabad Science Teaching Programme (HSTP) has been in use from 1972 onwards. HSTP aimed at changing the way science was taught in government middle schools. It began in 16 selected rural

schools in Hoshangabad and spread to all the schools in Hoshangabad by 1978. The science curriculum was presented using a different set of textbooks, and required a different examination system for science in classes 6-8. After existing as an experimental programme for thirty years in the District, the District Planning Committee, a body comprised of elected representatives, took the decision to close HSTP. It demanded that the children of Hoshangabad study science using the same textbooks as children in other parts of the State.

### Government Raises Questions

*Eklavya* protested to the State government. The State government attempted to assess the contribution of the innovation to the mainstream system of public education, within which it had been given space to work for a period of thirty years. The concerns of the mainstream compelled posing a set of issues for the NGO. The State had to assess whether the NGO, over its long period of existence in the mainstream schools, had concerned itself sufficiently with the educational issues that the consumers of





mainstream education in the State demand of it. It asked the NGO to present such an assessment. Thus far, it has not received a satisfactory assessment. Such an assessment would have to include:

- One, whether HSTP forged linkages with the higher levels of the schooling cycle towards which the middle level leads.
- Two, whether it had followed the performance of its cohort in science at the successive stages of schooling after finishing the programme, especially because the HSTP used different books and different testing methods, but the children had to take a different examination at the ninth and tenth Board level.
- Three, the NGO's claim in all its documents regarding its work has been emphatic. It sees the HSTP as developing a 'scientific temperament' in its students. It is unclear whether the NGO felt they had demonstrated that the students attain a scientific temperament only by showing that they carried out the practical experiments included in their science textbooks, or in some larger way. Did they complete any evaluation to demonstrate that their innovative enquiry based methods actually

impact the logical capabilities of the child by improving these cognitive processes independent of the students' performance in the specific science topics taught? Further, did this change the cognitive or other school behaviours of the child outside the classroom?

### **Lack of Linkages?**

We have concluded that *no effort* was made by the NGO to understand how the children would transit from its innovative system to the higher levels of the mainstream. *No effort* was therefore made to create linkages in a way that would facilitate an effective basis for a smooth transition. There was *no evidence available to us or provided by HSTP that the methods of scientific enquiry adopted at the middle stage of schooling led to the development of sustainable cognitive processes that enabled comparatively more competent responses at the higher stages.* *No effort* was made to investigate the impact of the 'scientific enquiry' methods in the classroom on the whole behaviour of the child outside the classroom, to assess whether the scientific methods of thinking said to be induced in the classroom actually lead to a different

behavior that reflects the kind of qualities expected to be developed as the outcome of scientific enquiry.

Specific programmatic references in the HSTP curriculum to 'activities' and the environment were only used to reinforce the themes presented in the science textbook, not to develop methods of critical enquiry independent of their curriculum. The Programme did not move beyond the text, nor did it go beyond its science curriculum as a discrete subject, towards imparting a more general approach to scientific thinking as a way of responding to the world. Small wonder that the children resorted to mugging up the experiments through easy to memorise textbook 'Guides'. Over the years, HSTP has not progressed nor grown in stature, understanding and self reflection, nor investigated the full range, purport and potential of its endeavor to develop a scientific temperament at formative stages in the lives of children within formally structured schooling systems.

The NGO has constantly claimed that its greatest virtue is that it has not opened its own schools but has chosen to work in the mainstream so as to reform it, despite the resultant burden of the need to both struggle against the constraints of this government department while at the same time adhering to its principle of mainstream reform.

The NGO has however remained surprisingly naïve about how our mainstream educational system functions. Mainstream schooling includes a clear formal structure wherein the different stages and subjects are linked to each other, and the entire curriculum cycle is itself part of a larger system of formally structured education. It is linked with prospects for higher education in colleges and other institutions. School education as a whole and

certainly no specific stage of schooling, therefore, stands alone. *Intervention in selected schools at an intermediary stage, in select subjects without the vision that thinks through a whole reform process of education is inherently defective in concept, and design. Changing a few things in a few schools at an intermediary stage is isolating them from the mainstream, not working in the mainstream, and certainly not reform in the mainstream.*

Further, in a mainstream public schooling system, the evaluation systems established at the national level and at the State level set criteria for screening children for onward transition. These are necessities and cannot be ignored. *Since the whole school cycle is one integral unit that derives its social and academic value from the formal assessment at the terminal level of the school cycle, interventions of any kind aiming at reform at any stage will have to be sensitive to the necessity that every child, at the terminal stage of evaluation, must clear the exams with satisfactory grades.*

Since the educational system itself has created these criteria it is necessarily bound to it and has a responsibility towards its wards to negotiate their passage through it. This is not just an academic requirement. It is a social responsibility created by the educational system for itself by its own decisions. The mainstream also includes the dominant social expectations of a public school system. Parents expect their children to acquire the skills and abilities necessary to transit easily through the whole spectrum of formal education, and if they succeed to be able to access higher education institutes of merit that would further enable them to improve the

likelihood they will succeed in their adult life.

### **Social Accountability**

Success in moving through the levels of the school system has both an intellectual and a social value. The system is also designed to certify the student's level of achievement relevant for accessing further opportunities in life. Ideally, the cognitive and school achievement values should be in consonance and harmony, creating a system where information is processed into knowledge, skills into achievements in moving up the course ladder. Training in logical enquiry and value consciousness should coexist. Obviously, this is not happening in a majority of schools, whether managed by the government or private bodies. This is because neither *Eklavya* nor the school system has critically reviewed their work with a sense of social accountability; tests are simply one small part of the required but not implemented total evaluation.

It is logical to expect that, if the educational process that HSTP claims to have instituted were teaching learning as a critical evaluative process, the chances are that its students would achieve more in terms

of quality, depth and sustainability of learning. If common tests evaluating a range of skills and comprehension are given to children exposed to just memory-based teaching, and to children exposed to HSTP's innovative approach emphasizing comprehension, the expectation that the latter will perform better would logically appear stronger, assuming all other things are equal, especially if the subjects covered in the evaluation are science and mathematics, where presumably the deeper the comprehension, the better the response to evaluations. This has not been shown. It is worth examining why.

It might be maintained that the reason children in HSTP did not do better than their peer group was that their programmatic intervention was confined to the intermediary course stage. It did not concern itself with the curricular needs of the subsequent stages of schooling. And it failed in not preparing the child for the transition. While defenders of the limited intervention may make a principle out of this neglect, by arguing that they only wish to perfect their part, and in no way subscribe to or are responsible for the results in





educational systems that they substantively disagree with, the fact remains that if children do not transit with clear advantages, then there is a clear defect of design in ignoring the whole, and not factoring in requirements that give added strengths to their clientele in negotiating common texts and tests. It is a failure of a model that lacks a whole vision and is complacent in tinkering with a single part.

It is also very intriguing when an agency that condemns a system as being oriented only towards rote learning and wants to reform it, does not start with addressing the critical questions of whole school curriculum, evaluation included, especially at the terminal stage. That realistically defines the field in which the value of educational abilities gained are evaluated and certified. In fact, despite the verbal protest about the mindlessness of the main system, there is actually an acceptance of it when it is ignored, and instead the innovators settle down for thirty long years to work within it without attempting to reform it. Either HSTP has no real analysis of the implications of working solely in an intermediary stage of a

mainstream schooling cycle, which would suggest a very serious defect in the design of its intervention, or else perhaps it assumed that the methods adopted at the middle stage would create such a strong sustainable base for subsequent development that the change of methods in subsequent classes would not matter much.

However, these possible explanations cannot be correct. Actually, HSTP's evaluation system was designed only to measure the programme's own learning objectives. Either the teaching and testing methods of the experiment should have addressed the educational requirements occurring at the later stage in the system and factored those concerns in within their experimental design, or else, if this was unacceptable because of the avowed differences between the two systems, then there should have been a serious effort to create a totally new framework of evaluation for the entire school system, because such an evaluation method is what can really influence the way the curriculum gets articulated and transacted. How could any agency seriously engaged in educational reform not understand

that an evaluation system is a way of appraising learning outcomes that informs the entire school system and therefore constitutes a premise on which educational processes are built, and that a change of test systems at a select stage cannot alter that unless it is negotiated first as a whole framework?

### **Insular Approach**

The insular particularistic approach is evident in HSTP choosing two subjects to 'reform' rather than the whole curriculum. Science is one of the subjects, social science was added later. What about language and mathematics? There are obvious flaws in this choice. It does not perceive the necessary relationship between different subjects that influence learning. Poor language skills affect almost all learning, yet language has been ignored. Mathematics that seeks to sharpen tools for quantitative analysis as well as develop aptitude for abstract thinking and logic has been ignored, although this is one of the subjects where defective methods of teaching create problems for children. Under such selective reform, the children would go through a rote method of teaching for language and mathematics, but an 'enlightened' process for science. This approach rests on the fallacy that children's mind are neat compartments, one neat box for an analytical science and other boxes to be bundled off into completely opposite methods of teaching, and there would not be any need to see what the effects of polar teaching methods are on the development of children's mind. This is not only very defective educational thinking, it is unfair and unjust to the children. This indicates a complete failure to understand the intellectual, psychological and social aspects of cognition altogether.

## Reliance on *Kunjis*

A sad evidence of the consequence of the persistence of an educationally blinkered experiment and refusal to undertake any critical self review has been the proliferation of textbook 'Guides' or *kunjis* for the HSTP curriculum produced by the local markets and teachers that have been used by the children. These obviously have come into existence because of the failure of the reform pedagogy and failure to review and address the deficiencies in the design. These *kunjis* not only help mug facts, they actually help mug up sensations and observations that were supposed to have been discovered and inferred, reducing the whole presumed process of experiential learning to a travesty.

Sadder than the appearance of the *kunjis* was the failure of the NGO to seek to understand why this was happening and critically reflect upon its work in the interest of the children. The intellectual *hubris* of a reputed NGO working on improving the quality of education while refusing to undertake any analysis of the negative effects of its own work reflects negatively on its capacity and commitment because all reform of a system necessarily involves inbuilt self critical review processes.

## New Challenges Ignored

Another interesting feature of HSTP's performance is that major school issues have not been addressed while it claims that it is reforming school education. *Eklavya* did realize the need for this, but confined itself to creating supplementary support structures for academic review and support mainly at the school cluster level. It did not address systemic reform issues, without which mere pedagogic changes cannot yield sustainable results, specially not on a large scale.

This is also the reason why, when educational management began to change towards decentralisation and the importance of local bodies, the NGO failed to respond to changed school management and to establish its legitimacy *vis a vis* the new decentralized management system.

In Betul and in Hoshangabad, and in Khandwa, local panchayat bodies protested and voted out the work of HSTP mainly because the NGO had not bothered to address issues of decentralized educational management. *Innovations that are insensitive to change lose their energy as innovation and if they lack self-critical capacity, begin to atrophy.*

The cost of the NGO's experiments have been absorbed by the public exchequer that funds the mainstream, so it has an accountability to the larger society that contributes to the public exchequer, and the mainstream that invests in it. It works in government schools through government teachers, and so makes use of assets created through public funds. This work in the government system uses financial grants from the Government of India, and from philanthropic trusts. Surely, the NGO

is accountable for reporting its cumulative incremental value addition to the public system on which public funds are invested, which should have been continuously and objectively measured.

## Pedagogic Confusion

The NGO, however, has not felt itself accountable to the system within which it has worked. It has been unfair to children because it entailed having the children live in a state of pedagogic confusion even within the same class between different subjects, simply because it was interested in doing what it thought it was good at, rather than attempting a comprehensive enquiry into the whole school curriculum. The *kunjis* and guides are an indicator of the confusion it created. It has never bothered about helping create a learning continuum, or systemic reform, reducing its responses to a fragment in the middle of the primary educational system.

It has not bothered to help children cope with public exams, which they have to face. It has shown no concern for the transitions of its cohorts. Even after 30 years, it made no extra effort to make sure children are academically strong as they move



up, and this is because it stayed confined to the class contact space and never looked at its own community responsibilities. The NGO has not been accountable to local democratic bodies; it has not been able to explaining to their satisfaction HSTP's intent and accomplishments.

Simple basic data that one expects from any agency claiming to work in an area consistently and uninterruptedly with a specific mandate has been conspicuous by its absence. The NGO has not formulated and presented to the government or even to themselves an objective set of indicators that could be used as outcomes to benchmark their effectiveness. No information has been ever collected on assessing whether HSTP's retention and drop out rate are better than those of the regular program as a result of their pedagogic interventions. No study was undertaken to assess how children perform at higher levels. Even in response to the State government's queries on how the NGO itself assessed its own contributions, the NGO could not present any objective cumulative data over the entire period of its work on the key criteria that it had on its own set up for purposes of objective assessment. The studies that have been cited remain impressionistic and very limited one-time vignettes, because they do not measure performance against baseline indicators. Can any one be allowed to work with public exchequer funds without accounting by common norms for the incremental value added?

### **Isolated Experiment**

It is indeed equally the responsibility of the State government to have established a shared and transparent system of reporting and evaluating and measuring performance of innovative



programmes against clear norms. It is interesting that only after decentralization, the local panchayats and the District government questioned the rationale behind centralised policies in arbitrarily singling out certain schools for isolated experiments and asserted the right of local bodies to reject centrally imposed NGOs that have not been able to persuade local representatives about the efficacy of their contribution.

All this then amounts to a situation where an 'experiment' protracts itself without critical self-scrutiny, without accountability, and without demonstrating superior performance against common tests. It is not tenable for such a programme to continue in this form. Replication of limited interventions does not lead to reform, as has been the case here, where increase in the number of schools covered under the experiment has only meant the perpetuation of a particular form of pedagogy, not education reform. The process of reform in the public schooling system is a complex one. It has to deal with large scale, uneven levels of student performance and teaching quality, long entrenched

legacies of work cultures, inadequate resources and poor priorities and lack of accountability to the public for delivering commonly agreed upon services of satisfactory quality measured by established public norms. Public accountability and equity are its guiding norms. An innovation, like HSTP, that depends on bureaucratic fiats and seeks protection from political changes - the very fabric of democracy - lacks organic roots in the community, has failed to establish its effectiveness in the eyes of the consumer, and is inevitably, inherently, on fragile ground even in its micro space, since it does not derive its rationale and support from the context in which it presents itself. As such, *Eklavya's* demand for replication of HSTP (as it is, since its claims to archetypal perfection are said to be irrefutable!) suffers from an artifice of discourse that believes discrete elements of an education are static modules that can be put wherever desired.

Actually, educational processes are intricate and dynamic interrelationships of inherited and emerging cultures and changes have to pulsate from within. This is the challenge of any catalytic agent -

and this is why an agency itself dependent on external patronage cannot be an agent of change, and this is why democratically established systems have to be respected and strengthened and not rejected as 'inexpert' if long term sustainable change in the direction of equity and quality is to be attempted.

This is a gradual process involving intensive institution building increasingly of a more accountable character. If *Eklavya* is seriously interested in reform in collaboration with the government, it has to be willing to address complex challenges that define the institutional basis of democracy and that an elected political government has to address. Of course, if *Eklavya* wishes to position itself in opposition to government policies and not seek such collaboration, it has the privilege and freedom to choose its own places to experiment with its innovations.

The government has invited the NGO *Eklavya* because of its professed intent to collaborate with government in mainstream reform. *Eklavya* does not agree with the government policy of standard textbooks, does not trust the expertise of SCERT, and demands that there be a higher body to negotiate collaboration between *Eklavya* and government. This structure was not needed in the past by *Eklavya* so long as SCERT 'supported' HSTP and demanded no reports from *Eklavya*. *Eklavya* has asked for a Science Policy Statement from the Government. The Government has stated its position clearly. Reform is not perceived as insular interventions but mainstream State level initiatives that have the requisite scale. *Eklavya* can contribute at the State level as a technical support agency in areas where it has expertise to offer.

### Need for Uniformity

Further, the government's present stand is that there should be a uniform set of textbooks for government schools across the State. This has been the demand that has come forth from the teachers and the parents of children in these schools. This is also a common practice across the country, whereby most State government managed schools have a set of common textbooks. It ensures that text books used for children in all government schools follow a prescribed syllabus and standard and enable children to transit through stipulated public examinations. These are seen as critical minimum conditions for basic academic materials being equitably available to all. However the government has shown an interest in inviting resource agencies, like *Eklavya*, working in this area, to contribute to the task of curricular reform, of which material development processes are a part, and *Eklavya* can consider this.

The issue before the government presently is not to take quick decisions on textbook trials or plural text books, but to formulate processes on a participatory basis for *educational* reform of which

*curricular* reform is a part and science or any subject specific policy remains a subset of that subset. The issue of a committee to oversee government – *Ekalavya* collaboration is absurd because no partnerships are built on suspicion of this kind, besides being an affront to a democratically elected government. If this is supposed to mean an advisory body to SCERT, then certainly, there has always been a willingness to involve qualified people from outside the system, and persons working with *Eklavya* are even now on a number of advisory bodies.

However, serious sustainable reform demands internal institutional capacity building and not fragmentation into a committee here and there set up for piecemeal purposes. Only institutional strengthening will serve the needs of educational reform. *Eklavya* has been invited to contribute to the institutional strengthening of the SCERT and DIETS because this is a precondition for any serious academic intervention.

This is a tough task. But there are no short cuts to quality reform, not even the invocation of expert bodies on top. *Eklavya* can consider either





taking the easy way out through expert committees, really no solution, or the difficult and challenging path of working with mainstream institutional reform, the necessary condition for quality improvement.

### **Institutionalising Reform**

The government has initiated discussions, and *Eklavya* has been involved, in conceptualising the process of envisioning educational reform on a wide participatory basis. The aim is to evolve, through such a process, dynamic perspectives of a critical evaluative nature within which educational reform can be debated and decided upon. For this process to be meaningful and effective there is a need to develop institutional mechanisms with a strong democratic character and commitment to quality. This is the central mainstream responsibility that the State government has to take on and it cannot in all good conscience abdicate its responsibilities to small expert bodies or activist groups. What has been offered to *Eklavya* is the chance, even in the existing framework, of assisting the government institutions responsible for reviewing and revising existing

academic inputs such as improving existing textbooks and teacher trainings.

There are, therefore, two clear opportunities where *Eklavya* can work with the State government. One, in the immediate context, is by helping it improve existing academic inputs in the mainstream by working with State institutions. Two, it can also participate in the larger process of educational reform. If *Eklavya* chooses to be part of this larger comprehensive process of educational reform it would certainly

help it get out of its narrow groove of single item changes with no forward-backward linkages and no relationship to the whole, no accountability to the civil society or its elected representatives and institutions, a failure that has vitiated its work. The government's offer gives *Eklavya* a chance, too, to critically review its work with a sense of social accountability.

*Epilogue: We respect the professionalism of MANUSHI which gave us the opportunity to respond to the critical article by on the DPC Hoshangabad's decision to have the common textbooks of the government used in Hoshangabad, and the decision of the Government of Madhya Pradesh to uphold that view. This article had to go into some length in discussing the academic issues involved, as HSTP was basically an exercise in academic improvement, and the people upset with the decision, other than paid employees of, have been academics.* □

**All photographs accompanying this article are of children studying in government run schools in M.P. and have been sent by the author.**

## **Some Bad News**

Soon after the release of MANUSHI's special Issue No. 132 on *Corruption and Quackery in the Name of Science*, Maneka Gandhi was removed as Chairperson of CPCSEA (Committee for the Purpose of Control and Supervision of Experiments on Animals). A few days later the government announced that henceforth, no animal rights activists would be appointed to the CPCSEA. So far none of the science labs whose malpractices were exposed in our Special Issue have responded or sent any clarifications. We will publish their responses if and when they reach us. **- Editor**