CERTIFICATE PROGRAMME

IN

FOUNDATIONS OF EDUCATION

Brief Report

Workshop III
(April 06-17, 2008)

DIGANTAR

Todi Ramjanipura, Kho Nagoriyan Road, Jagatpura, Jaipur- 302 025
Phone:+91-0141-2750310, 2750230; **Fax:** +91-0141- 2751268
E-mail: rdhankar@ricmail.com, reenadas@dil.in
Web: www.digantar.org

Certificate Programme in Foundations of Education

Brief Report

Workshop III

(April 06-17, 2008)

The third workshop of the third series under the *Certificate Programme in Foundations of Education* run by DIGANTAR was held from April 6, 2008 to April 17, 2008 on the premises of DIGANTAR in Jaipur. The number of participants was 21 – 19 from the Azim Premji Foundation and 2 from DIGANTAR. This workshop's focus was on the Nature and Pedagogy of History, the Nature and Pedagogy of Mathematics, and the Nature and Pedagogy of Social Sciences.

NATURE AND PEDAGOGY OF MATHEMATICS

Resource Person: Mr. Rohit Dhankar (DIGANTAR)

I. An Appraisal

The workshop began with "stock-taking" in terms of how comfortable the participants were with the discipline of Mathematics. Of those who had studied beyond matriculation, *four* had studied it till 12th. And just *one* beyond that. Just *five* participants responded by saying that they liked to play with numbers (interestingly, none of them had studied Mathematics beyond 10th!), whereas *five* had a serious dislike for the subject; the rest of the *six* were reportedly indifferent towards the subject.

II. DOING MATHEMATICS

A major part of this segment of the workshop was spent in *doing* mathematics and, in the process, getting acquainted with the peculiar nature of the discipline that seems to revel in patterns and rules emerging therefrom – this was something that the participants repeatedly came across during the course of the work they did.

To begin with, there was this interesting "offer" at hand : suppose, said the Resource Person, that I give you Rs.1000/- daily in return for one rupee on the first day, two rupees on the second day, three on the third, four on the fourth and so on (the amount being doubled each day). How many would be ready to take up this proposal and for how many days? After a bit of thinking and quick back-of-the-envelope calculations, four were ready to take up the offer for 10 days – and four, for 15 !

Out came the pens, and after a flurry of calculative activity it came to be known that those who had taken up the challenge for **10 days** would *gain* Rs.8,977 but those who had banked upon a **fortnight** would stand to *lose* Rs.17,767/- ! How much money would have to be paid by the fortieth day ? It turned out to be Rupees 1 lakh 9 thousand crores !

Deriving General Rules

General rules were sought to be derived on the basis of certain observations emerging from this small exercise. (i)It was observed during the course of the calculations that a *'minus one rule'* could be derived on the basis of an observable pattern: the total of the amount given on days 1 and 2 (Re.1 + Re.2 = Rs.3) was seen to come to 1 less than the amount to be paid on day 3 (i.e.Rs.4); the similar, added up amount for days 1,2,3 (Re.1 + Rs.2 + Rs.4 = Rs.7) comes to 1 less than the amount to be paid on day 4 (i.e. Rs.8) – and this was seen to be the case right up to the fifteenth day (that is, the *total* amount to be paid *upto a previous day*, say, the thirteenth day, was found to be *always* 1 less than the amount to be paid on the next day).This could be said to be the *general rule derived on the basis of a pattern* emerging *for this specific context* in the course of the exercise undertaken.

(ii) Given the long drawn out process involved in this, the question was posed : how do we calculate large figures without having to write down everything in all its detail? Recourse was taken to the concept of 'raised to the power of'. Thus

$2^4 = 2x2x2x2 = 16$

In consonance with the earlier derived 'minus one rule', the amount of money for the fortieth day would thus be $2^{40} - 1$. (And the general rule thus derived for finding the amount to be paid on a specified day in this context is $2^n - 1$).

(iii) This possibility of deriving a general rule on the basis of observation was again in evidence while working on another "problem": what is the value of 2^0? Three possible answers were proposed – 0, 2 , 1 – and two of them were ruled out on the basis of mathematical logic based on observation to arrive at the correct answer. So, if $2^2x2 = 2^3$,then

$2^1x2 = 2^{1+1} = 2^2$

$2^0x2 = 2^{0+1} = 2^1$

The general rule then is $2^nx2 = 2^{n+1}$

Now, if $2^0=0$, then $2^0x2 = 0x2 = 0$
And, if $2^0=2$, then $2^0x2 = 2x2= 4$

In both these cases the table above was seen to be disturbed as the derivation for 2^0x2 in the table did not conform to either of these two results. Thus two of

the options were ruled out. Therefore, as a next step it was supposed that $2^0=1$ - then $2^0 \times 2 = 1 \times 2 = 2$, which is seen to be true as per the table above.

Thus was derived the result that $2^0=1$, and the general rule that $n^0=1$, where 'n' would mean any number.

It was thus observed that in the course of taking up certain mathematical problems, patterns could be seen to emerge, and on the basis of these patterns certain general rules could be derived. This observation would have implications for the teaching and learning of Mathematics, to be realised later in the course of the workshop. And it was reinforced by the experience of the participants working in groups on mathematical problems: a pattern was seen to emerge in the course of the attempt to reach each of these solutions, and a formula was derived on the basis of this pattern, leading to some general conclusions and going on to the level of formal proof. The participants were made aware of the fact that through this process, mathematicians ultimately reach the stage of *formal proof* in which typical mathematical terminology is used for the generalised formula.

GROUP WORK

Four tasks were set for **groups to work on**.

1. Chapters from the NCERT book for Class VII, and the Rajasthan State Board book for Class VI were to be read and analysed - which of them used a better methodology for teaching Mathematics? The group was also supposed to give reasons for its conclusions.

2. The digits of a now extinct ancient civilisation, it was proposed, have survived. Only five digits are known to be there.

i) How would you write 49?
ii) How would you write 93?
iii) How would you solve 93 – 49 = ?
iv) How would you solve 93 + 49 = ?

In other words, the group was to generate the rules from the given number system, in order to solve the four problems. The number system was supposed to be :

γ signifying no things;
$\int$ signifying 1 thing;
$\int$ signifying 2 things;
$\int$ signifying 3 things;
$\int$ signifying 4 things.

3. The following questions were to be answered :

i) 1+2+3+……+100 = ?

ii) 1+3+5+……+101 = ?

iii) $1^2 + 2^2 + 3^2 + \ldots\ldots\ldots\ldots + 100^2 = ?$

4. This group had to prove the first five propositions of Euclid.

PRESENTATIONS

Task 2 : Generating Rules from a given Number-System - In the open session, the group shared the problems it had to face in **working out the new representational digit system on the basis of the five symbols** it had as a base. Their initial smooth ride, for example, came to a grounding halt at one stage and they realised that the *concepts of place value and carry-over* had to be worked out in this new system. These concepts were worked out in this new scheme of things in the open session on the basis of the principle of one symbol, one place value. Thereafter, the problem – of writing the numbers 49 and 93, adding the two, and subtracting the former from the latter – was undertaken with painstaking effort on the basis of the new notation.

The exercise led to a realisation of the intricacies and complexities involved in the process of developing a number system – and how our present number system must have developed.

The presentation on this task – and on tasks 3 and 4 - gave the participants a feel of how mathematical systems must have developed.

Task 1 : Task 1 (comparing and contrasting the NCERT and the Rajasthan State Board text-books) dealt with the more concrete aspects of pedagogy in terms of methodology to be adopted for teaching Mathematics.The chapter in question was on vertically opposite angles. The group that worked on this task felt that the method adopted by **NCERT** was the better one. It took the child along from the concrete to the abstract. The chapter continuously engages the child and also tries to link her to the surroundings, for she is asked to look for examples of vertically opposite angles in her surroundings.

The textbook of the **Rajasthan Board**, it was felt, would fail to generate interest in the child. It does not try to *involve* the child in any activity of her interest, rather the focus is on geometry as something not to be discovered but as being a truth that is to be proved - by measurement alone. In the NCERT methodology the child is taken through a *process* of giving formal mathematical proof and it

becomes a journey of discovery for her. The child is guided along – one formal proof is given, and having given sufficient grounding, she is expected to do the next.

By now,the sequence to be adopted in the teaching of Mathematics was firmly fore-grounded : initiate concepts, observe patterns etc., and then move on to abstract levels of understanding.

Till *the level of upper primary education, then, the method of developing patterns could be followed* – given the level of understanding of children of this age, it would be a good enough way of teaching them Mathematics. For the higher classes, a much more rigorous exercise would be required and the students should be made conversant with the methods of formal proof too. The way to go about till upper primary would thus be to (i) pose a problem, (ii) look for a pattern in the process of arriving at the solution,(iii) convert the generalised pattern into a formula, (iv) test the formula for a few numbers, and then (v) derive a general principle of Mathematics.

III. THEORETICAL ASPECTS

From doing *mathematics and trying to understand the processes involved therein, the proceedings shifted to developing a theoretical understanding of the discipline and coming to grips with the various positions taken in this regard. A* ***Paper by Paul Ernst*** *(University of Exeter) was taken up for reading and presentation by two participants jointly –* ***Social Constructivism as a Philosophy of Mathematics : Radical Constructivism Rehabilitated ?***

THE PRESENTATION

The gist of the Paper was put forth in the presentation, the Resource Person pitching in with his insights as and when required.

The Paper focuses on the two philosophical perspectives of Mathematics : the ***absolutist view*** *and the* ***conceptual change view*** *of Mathematics. Adherents of the former consider Mathematics to be logical: they posit mathematical truths as a body of absolute and certain knowledge, something that is culture and value-free, based on purely deductive logic. The Conceptual Change View, on the other hand, considers mathematical knowledge to be fallible and affected by the socio-cultural world – Mathematics comes across as a cultural product. The positions and counter-positions taken by the adherents of the two views were brought into focus, the criticisms taken into consideration, questions related to the certainty and consistency of Mathematics posed and discussed.*

Some time was also spent on ***the role of language*** *in Mathematics – how, without language Mathematics would be severely hampered, for without it there could be no mathematical formulations – and how Mathematics links with other disciplines through language.*

The last part of the Paper was presented as giving a brief, comment-based account of what the social constructivist position has given to ***radical constructivism****.*

After the presentation, some ***doubts were sought to be clarified*** *– and the Resource Person gave his view on them.*

1. A question regarding ***form and structure*** *in the context of Mathematics was responded to : Mathematics is a study of statements of the nature of* form - 2 + 3 = 5. *The things in question here should be of the same category and distinctly countable – this is the basic minimum requirement, the rest is inconsequential; it is the form that is of real significance, not the content.*

2. The grounds for considering ***mathematics as a cultural product*** *were further elaborated.*

3. The question of ***language and mathematics*** *was further explored. The interactive web of Mathematics, Language and Logic was dwelt upon : how Language may be considered to be part of a bigger sack, how Logic comes from a smaller one within the larger one, how Mathematics emerges from Logic - and how the forms of mathematical language were socially constructed over a period of time as a result of this three-way interface.*

4. The issue of ***subjectivity*** *of knowledge also came up for discussion, especially* in the definitive context of the philosophical bases covered by the Paper . *Does the question of knowledge depend on the knower alone? Is knowledge constituted of just our cognitive structures or is it something much more than that?*

5. The reference in the Paper to ***Peano's Arithmetic*** *was not clear to all, and therefore needed some elaboration – and this aspect was also adequately dealt with.*

IV. PEDAGOGY OF MATHEMATICS

A.) PAPER – The Teaching and Learning of Mathematics : Rohit Dhankar

The "mathematicaljourney" was now firmly on course and one could now move on to the teaching-learning process. Two papers – one on the pedagogy of Mathematics, and another on the implications of good teaching in Mathematics – were discussed.

The salient features of the Paper The Teaching and Learning of Mathematics, *by Rohit Dhankar, were presented jointly by two participants. Considerable attention was*

paid to the issues contained in it as they unfolded during the presentation - issues of basic understanding; the distinguishing features of Mathematics; its conceptual framework and validation procedures; the implications of all these aspects for curriculum, and – above all – the question as to why Mathematics is considered a difficult subject by students.

B.) PAPER – Theory and Practice in Elementary Education : Effective Teachers of Numeracy

(A research project by King's College, London – sponsored by the Teacher Training Agency)

Some of the points raised by this Paper (based on the findings of a research project on theory and practice in elementary education - covering a sample of 90 teachers and 2000 pupils from 11 primary schools in United Kingdom) were discussed by the participants in order to derive tentative conclusions about pedagogy. Significantly, the Paper focused on investigations that apparently lend weight to a view of teaching-learning Mathematics that is not generally in vogue. It was observed that though there have always been people advocating the off-beat "conceptual understanding" path of teaching-learning Mathematics, empirical evidence for the correctness of this position was lacking – this study on British schools seems to provide such evidence.

Open Session : Addressing Wider Issues,Queries

In the wider background of alternative methods of teaching Mathematics, questions were raised about the ***"traditional" method of teaching*** *the subject, and this was discussed for some time even as it was contrasted with the sort of methodology that was being advocated in the Paper on the teaching and learning of Mathematics. Also given some time was the question : can* ***Vedic Mathematics*** *be considered to have claim to recognition as a full-fledged discipline in itself – to the extent that it can be considered at par with Formal Mathematics being taught in our educational institutions? Another poser: will the* ***alternative system of pedagogy*** *being propounded in the Paper just presented lead to an improvement in the levels of achievement?*

The last leg *of the sessions on the Nature and Pedagogy of Mathematics was an attempt at a* ***union of pedagogy and practice****, and this was sought to be done through* ***group-work*** *: a question was posed - are there any concepts in primary/ upper primary Mathematics that we are not clear about? Seven brave souls volunteered this information and seven concepts were lined up:*

1. *Multiplication of algebraic expressions, like* $(a + b)^2 = a^2 + b^2 + 2ab$
2. *L.C.M.-H.C.F.*
3. *Decimal points (Why decimals are written this way – and their addition)*
4. *BODMAS*
5. *Square root of natural numbers*

6. *Work and Time*
7. *Compound Interest*

Braver souls were now sought – to launch the brave ones on the journey of learning mathematical concepts – and there was no lack of such souls too. They were the ones who were to lead their ***groups*** *in this endeavour –* ***groups of four each were formed and they were to work on these concepts*** *: the brave souls being "students", the braver ones "the faculty". The presentations on the work done in the groups were the culmination of the process of getting acquainted with the nature and pedagogy of Mathematics – though, given the pressure of time, all presentations could not be made.*

NATURE AND PEDAGOGY OF SOCIAL SCIENCES

Resource Persons : Ms. Rashmi Paliwal (EKLAVYA)

Mr. Manoj Kumar (DIGANTAR)

Work on Social Sciences began with a quick unravelling, by the ***Resource Person, Mr. Manoj Kumar****, of some of the main areas covered by the* Position Paper *of the* National Focus Group on Teaching of Social Sciences. *Some of the major aspects of the Position Paper that caught the attention of the participants included the issue (i) of developing what the Paper calls "a critical understanding of society" in students; (ii) of what the Paper possibly meant by - "social science teaching should aim at investing in children a critical moral and mental energy to make them alert to the social forces that threaten" certain values; (iii) of inter-relationships between disciplines, and an integrated approach to curriculum.*

GROUP-WORK : Round 1 – Citizenship, Social Science Curriculum

Papers/Articles that were taken up dealt primarily with various aspects of Social Studies and Civics, the idea and image of a "citizen", the existing state of affairs in this context, and the alternatives that need to be explored and brought into practice. One group of participants worked on the Position Paper mentioned above; two more groups, on two more Articles.

Group I *: The Position Paper on Teaching of Social Sciences*

Group II *: Social Studies and Civics – Past and Present in the Curriculum (Article by Manish Jain in* Economic and Political Weekly*)*

***Group III**: Making Good Citizens – Teaching Fundamental Duties in Schools (Article by Anupama Roy in* Economic and Political Weekly*)*

*Some of the **salient features of these articles** that, during the presentations, **crystallised as issues that need to be addressed** were:*

(i) *The prevalence of a "passive" sort of citizenship rooted in the fact that the definitive status of citizenship has been regulated by the ruling class till now – the relationship between the individual and the State has been primarily defined by the State. Moreover, our civics textbooks "have no space for questioning the structures and institutions of State."*

(ii) *The article on Fundamental Duties presents an alternative scenario: the "nationalist" construct should not be given precedence at the cost of democracy and democratic values – what is important is the "elements that lend to citizenship its character as camaraderie of equals."*

(iii) *The question of hegemony and dominance, especially in the context of "the hegemonic impulses of the ruling classes" leading to "hegemonically conceived national identity".*

(iv) *The need for active citizenship rather than the passive variant that our curricular texts reflect as of now.*

(v) *Urgent need to redefine the Social Sciences curriculum – and to ensure that it is intellectually and professionally viable.*

(vi) *In contrast to the earlier developmentalist approach, the need to take on board an approach that recognises multiplicities – that accommodates "the multiple ways of imagining the Indian nation."*

(vii) *In the context of "an alternate, more decentralised mechanism of knowledge-generation" and decentralised ways of textbook production, the need to incorporate local content in courses, giving space to local histories, and the diversities inherent at the regional level.*

(viii) *The question – whether (and if yes, how) the change of nomenclature from Civics to Political Science will affect the perceptions of the child.*

(ix) *How can "critical understanding of society" be developed in children through a social science curriculum?*

Group-Work : Round 2 – Philosophical and Methodological Aspects, Problematising Three Papers

Three papers were worked on in groups – Philosophy of Social Science *by Martin Hollis,* Method of Social Science *by Max Weber, and* Culture, Cognitive Pluralism and Rationality *by Colin W.Evers (Faculty of Education, The*

University of Hong Kong). Each of the three groups was to work on two questions each.

Group I : The Martin Hollis Paper

1. If we are concerned about human freedom, should we be more worried by a social science which binds individuals by social laws or a social science which reduces individuals to mere carriers of culture?

2. How is human action different from human behaviour? How can we make sense of social actions when the only thing perceptible to us is human behaviour?

Group II*: *The Max Weber Paper

1. *Can Ideal Types help to explain social action?*
2. *Does any account of Natural Science provide a model on which Social Science might reasonably be based?*

Group III : The Colin Evers Paper

1. *How do different conceptions of rationality affect our account of Social Sciences?*
2. *Is it a mistake to seek a universal Social Science to cover all societies?*

Issues raised

The Martin Hollis Paper *and the questions related to it raised concerns related to human freedom, free will, the role of cultural norms and social laws in relation to an individual's scope for action. The Paper covered by Group III raised issues related to concepts of rationality, the question of the means and processes that may take one to a particular goal but in different ways (depending upon the culture to which one belongs), the factors and concerns that come into play in the course of this journey. Also, how the local, the pluralistic and the universal aspects of an issue can be sought to be covered in a Social Sciences curricular framework. Unravelling Weber was as much a challenge for the participants as was understanding Immanuel Kant (in the first workshop). The question of the methods and objectives of Natural Sciences and Social Sciences, the feasibility of the use of one for the other, how the conceptual frameworks of these two arenas can or cannot be used interchangeably (given the fact that the social sphere is subject to variables) came into focus. Also, how these concepts and methods and objectives can have a role to play in the classroom.*

GROUP_WORK : Round 3 - WORKING ON N.C.E.R.T. TEXTBOOK-LESSONS

The philosophical and curricular concerns addressed in some measure, the participants now worked on the ***practical aspect of Social Science Teaching****. Three groups were supposed to work on two chapters each from the Social Science textbook of National Council for Educational Research and Training (N.C.E.R.T.) for Class VI. Lessons plans for the following chapters were to be prepared and presented by the groups.*

Group I *: (i) Rural Livelihoods (ii) Urban Livelihoods*

Group II *: (i) Understanding Media (ii) Understanding Advertising*

Group III *: (i) Understanding Diversity (ii) Diversity and Discrimination*

SOCIAL SCIENCE -TEACHING: A PRACTISING ALTERNATIVE

The Opening

The second segment of the Social Sciences part of the workshop provided the participants an opportunity to get to know about Social Science teaching through a first-hand account of the pioneering work done in this field by the voluntary organisation EKLAVYA since the early 1980s. ***Ms. RASHMI PALIWAL****, working with this organisation from around the time of its inception, was the* ***Resource Person*** *(Mr. N.Subramaniam, Director,* Eklavya *- the Resource Person for* the Nature and Pedagogy of History *segment of the workshop - too was present, and added value to the proceedings with his occasional insights).*

Embedded in a brief historical account of the organisation's experience, the major issues the organisation has paid attention to down the years were fore-grounded by the Resource Person. In an interactive session, the experiences of ***textbook-preparation*** *for classes VI to VIII, and* ***the challenges*** *faced during this process were highlighted : these textbooks aimed at drawing the student away from rote-learning, were prepared with the purpose of creating an awareness of social structures and an understanding of pluralities in society, as also inculcating a rational approach based on critical thinking. Initially used in 9 schools in Madhya Pradesh with the permission and consent of the State Government, they were revised repeatedly over a period of 16 years from 1986 to 2002 when the programme was closed by the government. The issues of teacher-training and sustenance of motivation-levels, of working within the structures of the academic disciplines and yet looking for an inter-disciplinary approach, of how the earlier textbooks were re-*

shaped and changed in consonance with Eklavya's *framework were also briefly touched upon. This initial session gave the participants a fairly good idea of how, as a "successor" to the Hoshangabad Science Teaching Programme (that had led to the realisation of work needing to be done in the social sciences too),* Eklavya *had brought a fresh whiff of air into the arena of social science-teaching and textbook-preparation – the levels of input and enthusiastic energy that went into the effort too came alive in this interaction.*

Reading and Analysing a Chapter from Class VI Civics* (Eklavya *textbook) : Farmers and Labourers

In an interactive session with the Resource Person, the participants voiced their observations and opinions, and raised queries on the aforementioned chapter. Some of the aspects that found voice included issues like the objectives of the lesson; whether the lesson had scope for providing children an opportunity to generate their own point of view; how within this lesson, very subtly, other disciplines like Economics and Geography were also being covered; the village dynamics and the village economy being given place in a very integrated manner; and the role of the teacher in the transaction of the lesson. This session gave the participants a taste of the ***teaching-learning methodology*** *used in the* Eklavya *framework of things, a sense of the sort of lessons and exercises developed by the organisation, as also the organisation's live relationship with the teachers who were trained in the alternative methodology. The aspect of field-testing of the lessons, and improving upon them on the basis of feedback was also touched upon by the Resource Person.*

Broader Issues of the* Eklavya *Experience

Four broad areas of the rich experience of Eklavya *were touched upon by the Resource Person, discussed and debated in lively interactive sessions with the participants : selection of content and issues in that, the processes of evaluation and teacher-training, attempts at integration of disciplines, and working for education based on local contexts.*

The very intensive process involving wide-ranging discussions within the Eklavya *team and interaction with leading academics outside in terms of* ***preparing the course content*** *for the History and Geography textbooks was recalled – various options were looked into, tested and debated before the final decisions were taken, finally leading up to a re-shaping of the existing course-content for Classes VI to VIII. In* ***History****, for instance, four options were explored : (i) writing a chronological history of India right from ancient times, linking it up with social formations down the ages;(ii) begin with the present and go backwards in time; (iii) instead of a chronological base, take up a theme-based approach; (iv) make pluralistic*

history the point of departure. Similarly, in ***Geography*** *various options were researched, topics that were felt to be beyond the levels of comprehension for a child studying in the classes under question were sought to be either restructured or left out for some later stage of schooling (the topic related to movements of the earth, for instance). The reservations and objections of specialists of the subject were sought to be met through discussions, by trying to convince them about the stance being taken. A critical pedagogical approach was preferred rather than just trying to "cover all the topics" of the formal stream of education in the concerned subject. An attempt was also made to locate some aspects of the course-content in the local context.*

In terms of ***Evaluation****, the experience of the* ***Open Book pattern of examination*** *was shared with the participants: the preliminary hiccups in its implementation, the students' response to it, the practical aspects in terms of weightage of marks and evaluation, the impact of weak language skills on evaluation – indeed, the change in mindset that this system required, was brought into focus.*

NATURE AND PEDAGOGY OF HISTORY

Resource Person : Mr. N.Subramaniam (Director,* Eklavya*)

After a brief session of familiarising, getting to know how the participants viewed history as a subject, the agenda was set.

A./ READINGS

Quite a lot of time was spent in reading various texts of history in order to get a taste and flavour of what good history could be like - and of what historians do when they get down to writing it.

I.The Advent and Triumph of the Watermill – Marc Bloch

This initial reading – a classical essay by a French historian - was taken up by all individually. Impressions and insights were shared in an open session, focusing on the various facets of the role of an innovation in the development of human history; also reflecting on the relationship between invention and social necessity that the piece mirrors. The historian's craft was also taken note of – how he has to take within his fold various sources that span the arenas of literature, geography, economics – and more.

The reading sensitised the participants to the sweep and depth, the all-encompassing quality of great history-writing.

II. Four Readings, in groups – and the Open Session

Four texts were taken up for being read in groups - with each individual free to make his/her own choice of the text – followed by a discussion in an open session.

(i) ***Urbanism*** *[from* Enquiries into the Political Organisation of Harappan Society*] by Shereen Ratnagar: The text gave the participants a taste of what the archaeologist's art entails : the methodology adopted by the archaeologist to reach certain conclusions on the basis of observations and findings from a particular site - and food for thought as to where archaeology begins and history ends. Interesting, fascinating details of the civilisation of Mohenjodaro were opened up for all by the archaeologist's description of how the concept of urbanism must have developed in that ancient era of Indian history. The contemporary understanding of concepts also shed significant light on the reading that dealt with the ancient past.*

(ii) ***Introduction of*** **Symbols of Substance** *by S.Subramanyam, V.Narayana Rao and David Shulman :The excerpt (written by a trio of writers – a historian, a literary critic and an anthropologist) opened a window on the history of South India – through a literary depiction of the 17th. century South. Rooted in an imaginary travelogue of two gandharvas flying over South India, and the story of a rich man who fantasises of achieving greatness, the reading depicts a complex social world of the times. This text gave a fascinating past-present interaction with the writers of today trying to make sense of how 17th century writers might have viewed their world.*

(iii) ***The World of the Mughal Family*** *by Harbans Mukhia [from* ***The Mughals****] : an off-beat view of the royal family in Mughal times, giving, among other things, a vivid account of the role of the mother within the family, the harem and its dynamics, the position of women in the family, the rules of inheritance – and how marriages came about.*

(iv) ***Origins and Transformations of the Devi*** *by David Hardiman [from* ***The Coming of the Devi****] : a historical-cum-anthropological account of the "journey" of a* devi *of a propitiation cult in the 1920s - an interesting account of an attempt to track the devi's origins and route of travel, and a depiction of how cultural and commercial interests of various people tied up with it.*

III. Second Set of Readings in Groups – and coming together in Open Session

(i) Agrarian Class Structure and Economic Development in Pre-Industrial Europe *by Robert Brenner [A* ***Paper*** *published in the journal* Past and Present*]*

(ii) The Agrarian Crisis of the Mughal Empire *by Irfan Habib [from* ***Agrarian System of Mughal India****]*

(iii) The Idea and Image of 'Bodhi' *by Nihar Ranjan Roy [from* ***Idea and Image in Indian Art****]*

(iv) Merchant's Time and Church's Time in the Middle Ages *by Jacques Le Goff [from* **French Studies in History : II** *]*

(v) Mass Conversions to Islam : Theories and Protagonists *by Richard Eaton*

This set of readings, basically of texts written by and for historians, gave the participants an insight into the various facets of history, each of the texts dealing with one or the other of the wider concerns of the discipline, and opening up an alternative view of history as opposed to the sort of history the participants had admittedly been exposed to in school. The second, third and fifth readings were discussed in the open session.

*Chapter VIII (*Body Language and Sex*) of* ***Montaillou*** *by E. Le Roy La Durie, an account of the socio-cultural life of 13th century France was also read by the participants individually – and commented upon in a session.*

B./ MAJOR THEMES discussed in interactive mode

The issue of subjectivity : *What is 'subjectivity' in contrast to 'objectivity'? How questions concerned with the construction of knowledge relate to subjectivity ; how the purpose behind acting or viewing something in a particular way relates to subjectivity. How the issue of identity links up with subjectivity, and with knowledge, leading to issues of ascribed and achieved identities; and how identity-building comes to influence our view of history (and curriculum). Also, the contrast between history and literature – and the necessity to look at multiple experiences, trying to understand the other's viewpoint.*

The Concepts of Time and the evolving views on History : *Understanding and explaining change over time, the primary concern of a historian – change* and *continuities. The role of other disciplines in this probing of Time. Various notions of Time – the Puranic Model, the Islamic/Christian notion, the modern sense of it. The*

Capitalist and the Marxist view of History. The Space-Time axes in History – and their inter-relation.

Pedagogical implications of aspects of Subjectivity, Time and Sense of Time : *The question of the child's context, and her curiosity. The power and attraction of larger, even remoter contexts for the child. Need to go outside immediate realm – and to realise the state of disconnect from knowledge about the immediate context (do we know which trees around us shed leaves when?). Need to go into the 'why' of things, to go to the root of causal connections.*

The Historian's craft – the Method of History :

1. Difference between a historian and an antiquarian. History's engagement with issues of human concern, and with politics. The questioning nature of History – asking how, why? The 'why' of why. Requirement of a diversified understanding to be able to ask relevant, good questions. Significance of the world-view of the historian for the kind of questions that are asked. Debates for power and social movements, their linkage with the drive for knowledge – and with how History is viewed and historical frameworks established.

2. How does the historian find out about the past?

3.The role of interpretation and validation.

In the course of the deliberations on various aspects of History, its "intersection" with myth, movies, television and religion also came into focus.

C./ PEDAGOGY OF HISTORY – EVALUATING EKLAVYA *TEXTBOOK-CHAPTERS*

After a brief interactive session focussing on the classroom processes that should be factored in by curriculum designers, two chapters from the Class VIII History textbook of Eklavya (Amirs of the Mughal Empire*, and* Village Life in Mughal Times*) were worked upon in groups of three participants each. The chapters were discussed in the context of the following factors :*

(i) Classroom diversity

(ii) Experiences of teachers and learners

(iii) Requirements of stage of mental development of children

(iv) The role of teachers – and their biases

(v) Textual richness and coherence

(vi) Space for thinking and articulation

(vii) Cognitive devices

(viii) Narrative to abstraction (i.e. definition)

(ix) Handling time

This evaluatory session was followed by a discussion on issues related to teacher-training, methods of training children to look for change and developing their understanding of history, use of various sources – stories, pictures, graphics, descriptions – in the process of teaching, of how to create a space for marginalized identities in history-teaching, elevating history-teaching from being seen in terms of 'history of….' to being a far richer experience, and taking children from the concrete, immediate levels to the abstract level of ideas.

******

Report Writing and Documentation:

Dr.Ramneek Mohan
Lecturer
Department of English
All India Jat Heroes' Memorial College, Rohtak