



## Regional Resource Centre for Elementary Education

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## 1. BACKGROUND

As part of the sub-theme on 'Nurturing education as a discipline', Sir Ratan Tata Trust (the Trust) facilitates linkages between institutes of higher learning and elementary schools for mutual learning and sharing. This in turn is expected to address one of the key recommendations of the Strategic review of Education (2005) as well as key national commissions on education. University School Resource Network is one of the key projects under this sub-theme that brings two key Universities and teacher education colleges to purposively engage with schools and sectoral challenges of elementary education.

The University-School Resource Network (USRN) is a network of institutions<sup>1</sup> that are concerned with school education and have resources and expertise to address issues of quality and equity in education. The underlying thrust is to evolve a Network that can strengthen school education and enable institutions of higher education to play a creative role in this process. The field of education has usually seen a divide between academics and practitioners, teacher educators and administrators of schools. The Network is also an attempt to enable these boundaries to become porous, so that there is mutual sharing and learning in the effort to address issues that are pertinent for education, particularly for groups whose participation has hitherto been marginal.

In its attempt to implement one of the key recommendations of the Strategic Review of the Education portfolio (2005), the Trust has begun to support: (i) initiatives to promote linkages between universities and schools; and (ii) knowledge building through research as part of the sub theme 'Nurturing Education as a Discipline'. The grant under consideration is to enable Delhi University to strengthen the Regional Resource Centre (RRC) set up in its Education Department for deeper engagement with schools, teachers, student teachers and teacher educators.

Established in 1922, Delhi University (DU) is one of the oldest and largest Universities in the country. Delhi University comprises of 14 faculties/schools, 86 academic departments and 79 colleges and about 220,000 students. Central Institute of Education (CIE), later referred to as the Department of Education was founded in 1949. In 1990, Maulana Azad Centre for Elementary and Social Education (MACESE) was established in CIE after it was recognized as an Institute of Advance Study in Education (IASE). MACESE developed a flagship, four year under graduate professional programme of Elementary Teacher Education which is currently being offered in eight colleges of the University of Delhi. Stemming for its mandate to provide academic leadership and support to elementary teacher education colleges, the RRC attempts to create a space where teachers, student teachers and teacher educators can access resources, professional development opportunities and mutual sharing.

The Trust wanted a study of the RRCE project to review its impact, vis-a-vis its initial plans to identify future directions of its work and to improve its effectiveness and this note is a report of the study.

The study team would like to thank RRCE team and all the USRN partners who organised the meetings for the study as well as the records/materials required, and to the teacher fellows, mentors who spared their valuable time for the study.





## 2. OBJECTIVES, SCOPE AND METHODOLOGY OF STUDY

The objective of the study was to:

- Conduct an impact assessment of the 'Regional Resource Centre for Elementary Education' project. Review proposed impact indicators (when proposal was finalised) and capture impact of the programme using qualitative and quantitative parameters.
- Make recommendations based on the study for defining future direction of the work and improving its effectiveness. Also make recommendations on ways in which ongoing impact assessment of the programme can be strengthened to generate relevant data over time, especially with regard to the resource library, web portal and ex- teacher fellows.

### 2.1 SCOPE OF STUDY

The scope of the impact study covered following areas/aspects:

1. Teacher Fellows: Evaluation of the teacher fellow programme in terms of the nature of support received and usefulness of the study sessions organised for the teacher fellows.
2. Resource Centre: Assess impact of the resource library set up
3. USRN partners: Views of USRN partners on how far the portal has created a resource-base and platform for facilitating and enhancing networking amongst the USRN partners and on-line community. How has it helped / strengthened USRN's knowledge and networking needs?
4. Web portal: Review the portal in terms of on-line resources, user friendliness and usage
5. Outreach: Assess the outreach activities of RRCEE in various government and public schools and B.El.Ed colleges of Delhi vis-à-vis the web portal, resource library and public lecture series organized and its impact as perceived by these participants.
6. DIET Curriculum: Review at least three revised D.Ed courses

### 2.2 METHODOLOGY OF STUDY

To do this, the study covered the following

1. Desk review of reports submitted to the Trust
2. Interactions with current and ex-teacher fellows, mentors and RRC programme staff.
3. Visit to the resource library and study of the documentation pertaining to usage.
4. Review of the web portal and qualitative and quantitative feedback from registered users
5. Meetings with USRN project partners representatives i.e. Coordinators of USRN-JNU, IHE and Mirambika; SCERT faculty, teacher educators, registered portal users, visitors to resource library and student-teachers
6. Review of select revised D.Ed courses in detail and interactions with members involved in development of two courses to understand the process and role of RRC.
7. Study of the transcript / footage of two public reports and understand way in which feedback has been collected by the RRC team.





The report is organised according to the key programmatic areas / components of the RRCE – teacher fellowship, library, web portal and public events. In each of these, the feedback collected from those met is discussed, suggestions/ recommendations are also provided along with the feedback comments since these two aspects are closely linked in most cases. Some overarching thoughts are provided in the last section of the report.

## 3. FINDINGS AND RECOMMENDATIONS

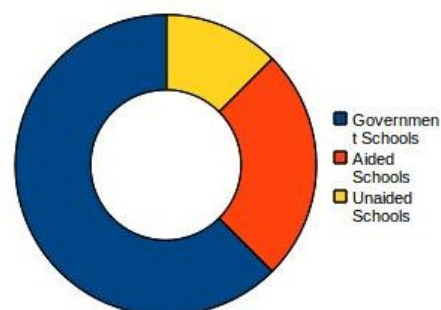
### 3.1 TEACHER FELLOWSHIP

The objective of the Teacher Fellowship programme was to provide a platform for teachers to undertake classroom based research through a formal programme, aiming to make teachers independent learners, and in the process broaden their understanding of children and education, and encourage them to enhance their knowledge of subject-content. The 'formal support' covered mentorship, study sessions, access to resources in the library and web portal and participation in public events.

*Profile of teacher fellows met*

Work Experience	Completed years
0 – 5 years	2
5 – 10 years	3
10 – 20 years	1
Over 20 years	2

Type	Number
Government Schools	5
Aided Schools	2
Unaided Schools	1



#### *Key feedback/comments*

This was seen as the most crucial component of the RRCE program, which helped fulfill its primary goal of encouraging teachers to actively reflect. It supported self directed learning possibilities in an environment of real autonomy for the fellow. School teachers conducting research with mentor support was seen as helping teachers to move out of their mode of teaching for long periods in didactic manners. Specifically, teacher fellows mentioned following benefits from the fellowship

1. Programme was non-hierarchical and promoted peer / collaborative learning
2. Better understanding of theories learnt in earlier BED / BEL ED programs (linking of theory to practice, by linking their B EL Ed classroom learning to their classroom practices as practitioner





teachers)

3. Fellowship helped in making more coherent, ongoing work on this issue by the teacher, and also gave them a platform to share
4. Helped fellows who earlier had black and white views on issues, to far more nuanced views now
5. Helped in improved understanding of child cognition, such as children's perception on reading and how reading can be supported
6. Helped in better subject matter understanding, e.g. of children's mathematics difficulties – why children make mistakes in mathematics
7. Helped in becoming conversant with research methods and tools
8. Helped in building a practice of writing and reflective practice<sup>2</sup>.

The fellows appreciated that their research topics were carefully chosen based on their own interests as well as being relevant to their professional needs.

One fellow presented her work in a seminar. She saw a MCD teacher making such a journey as important milestone, even psychologically (her work was a direct refutation of a comment she heard during the seminar where she presented her research, that MCD teachers are 'not capable' of such efforts). The fellowship has served to create role models which helps other teachers to open themselves up to these possibilities.

### *Challenges:*

On the other hand, fellows mentioned that their school system was often not supportive - School HMs tended to react in hostile manner to their taking time off on the program. Teacher feels alone in her school and this can affect morale.

### *Recommendations*

Having an orientation of school administration on fellowship so that school becomes supportive of fellowship. Greater interaction with school would help in getting better buy in of HM. A session with the school (on site) at beginning and end of program to bring school into this research effort and see benefits for themselves – can help in providing a favorable environment to the teacher.

### *Mentorship*

#### *• Key feedback/comments*

Mentoring was seen as an indispensable part of the fellowship program. Guidance from the mentor on research methodology, initial scoping of project/ refining objectives, review of their work and outputs were seen as valuable as also inputs on aspects such as how to see a school environment, observe classroom processes, take feedback from other teachers. For many fellows not in touch with academics for long, the mentor provided more rigor to their work by raising issues/challenging their assumptions and assertions, thereby refining their ideas and research methodologies and help in getting clarity and better understanding of the issue. The mentor also







provided references / readings, shared material, shared theoretical inputs, facilitated their reflecting together, The mentorship thus provided a space for interactions, thinking, reflection and strengthening the professional identity of the fellow.

Interactions between fellows and with mentor appeared to be quite varied, Though most tended to be initially more active (initially meeting the fellow once/twice a week, later around once a month), then tapered/stabilised over time and again peaked towards the report writing phase. Interactions were through phone, over email, and also physical meetings very useful.

### • *Challenges:*

However apart from both mentors and fellows being full time professionals which limited their time availability, equally critical issue was difficulty in synchronisation of mutual availabilities and mentors felt sometimes teachers assumed that mentors would be available when they were free. Some teacher fellows did feel that the interactions were inadequate and they could not get support as much as they needed. They felt mentors needed to give more time/commit time, review their work in person also, physical meetings were seen necessary apart from email / phone based interactions.

Some mentors felt that meetings do not take place as regularly as they should. This project needs lot of dialogue but teachers are not able to give the time. Challenge is both availability and synchronization of time. When teachers have time they think mentors should – else teachers have paramount teaching commitments.. The project needs much more rigorous work. Student could have done much more and there could be many more drafts of their writings for feedback/review. There also needs to be space for more institutionalized dialogue amongst students and mentors. Though teachers regular mundane life makes this important they are not able to break through. Mentors felt that the quality of work was affected because teachers were not able to read as much as should. Summer vacation may not always provide the space for this as teachers also tend to take a break. Hence fellows are not able to create space in addition to teaching work for this. The program demands much more rigor and professionalism – should be clearly seen –. How much can we make it a professional goal rather than a personal goal, for example by creating mechanisms for fellows to formally share their work with their own school. Also taking more teachers from one school may make this a larger professional pursuit than a personal one. For the mentors, working with their teacher fellow was seen as rewarding, it got the school experiences understanding - early years of teachers are one of struggle and learning, which helped them in evolving their own understanding of school education, including getting a good understanding of the teachers context, limitations etc.

### • *Recommendations*

Mentorship is an indispensable component, hence program needs to see how this can not become a constraint, one of the ideas was to consider allow a mentor to guide more than one teacher; a second idea was to formally reach out to many more university faculty to play this role. Also one suggestion was that just as the program had a time-plan for all activities in fellowships, there





should also be pre-planned sessions with mentors. On the other hand, the mentor needs to be more firm with deadlines of teachers, tighter system, how can help teachers to begin writing.

### *Study sessions - Key feedback/comments*

The study sessions<sup>3</sup> in which RRCE team facilitated discussions amongst the fellows on issues relating to the wider educational and socio-political contexts/issues, were seen as being well facilitated, with pre-planned agenda, which expanded the scope of fellows study and broadened their understanding beyond 'narrow' research interests. Readings, themes of study sessions were shared at the beginning helping in good participation. Participants shared from their diary of things that happen in the school, which was not connected only with their research project, this helped trigger questions and for useful discussions of real life situations. The sessions also provided to fellows an useful opportunity to network with other fellows – to meet others from different contexts, with divergent views on programs and participants mentioned they developed an appreciation on diversity of views through these sessions, which helped in building tolerance for alternate views and adjusting better with other teachers in their and other schools.

However, given the intense efforts at planning and organizing these sessions, it is necessary to ensure that a reasonably large number of teachers participate and benefit<sup>4</sup>. One way is to include past teacher fellows as well as selectively invite those who applied but did not get the fellowship or teachers who are keen to broaden their interests beyond classroom practice.

*Research methodology workshop and writing workshops* addressed critical needs of the fellows who as 'teachers' had not considered themselves (nor were they considered by others) as writers and researchers as well. One suggestion was to add a session on research orientation in the beginning, in addition to the writing workshop.

### *Tabulation of fellow's feedback*

The table overleaf provides the responses of the eight short term fellows interviewed, on different program components. The fellows were asked to rate each of these items on a scale of 1-5, with 5 being most positive feedback on the component. If the fellow had not participated in a specific component's processes then the score used was NA (Not Applicable).

All components have received favorable reviews, with the score 1 and 2 not used at all by any fellow for any component. 4 is the most used rating except for mentorship support where 5, the maximum score is used the most.

This table along with the second one on weighted percentage ratings can give some pointers for increased effort in some areas in a relative sense at least. The web portal training has the lowest of the percentage weighted rating scores while the mentorship support has the highest. While reading the tables, the small sample size of eight fellows, must be factored in while making any conclusion.

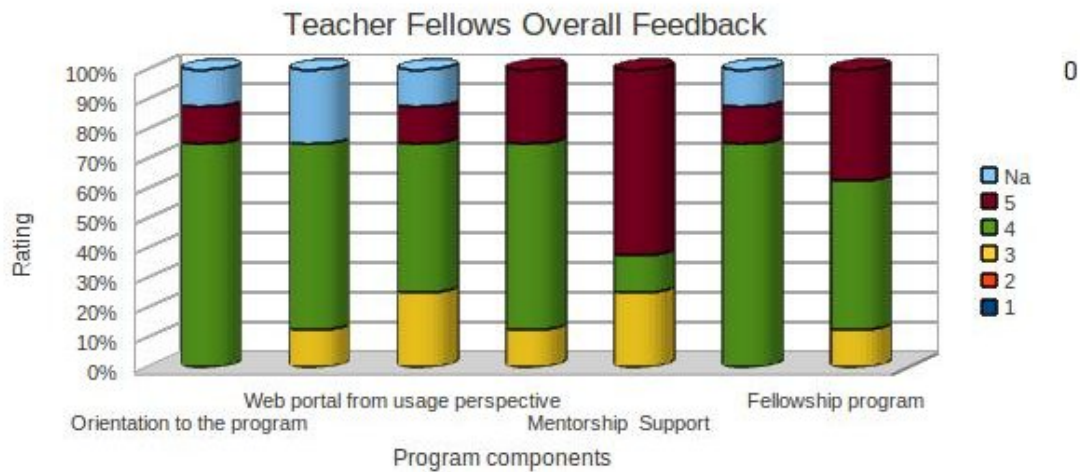




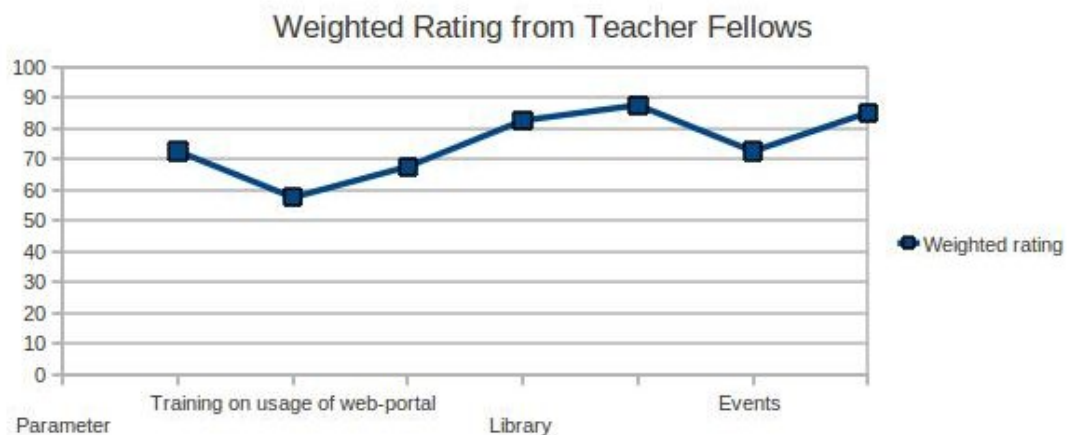
## Fellowship responses on the different components of the program

Overall feedback	Value						
Parameter	1	2	3	4	5	Na	Total
Orientation to the program	0	0	0	6	1	1	8
Training on usage of web-portal	0	0	1	5	0	2	8
Web portal from usage perspective	0	0	2	4	1	1	8
Library	0	0	1	5	2	0	8
Mentorship Support	0	0	2	1	5	0	8
Events	0	0	0	6	1	1	8
Fellowship program	0	0	1	4	3	0	8

Note – Fractional scores rounded off to nearest integer



Overall feedback	Weighted rating
Parameter	
Orientation to the program	72.5
Training on usage of web-portal	57.5
Web portal from usage perspective	67.5
Library	82.5
Mentorship Support	87.5
Events	72.5
Fellowship program	85







## *Fellowship administration*

All fellows mentioned that the process of applying for the fellowship was found to be easy simple, web portal communicated, lot of time given, good questions emerged etc. RRCE engaged with fellows and provided space and time to help teachers identify real issues to work on and provided useful interaction opportunities with previous year fellows. The fellowship program has taken root and from the increased number of applications, it appears that many teachers are eager to do fellowship.

The Indian education system has struggled with the teacher education component – large scale supply driven teacher training programs have been seen as largely ineffectual. The fellowship program which is a 'demand driven' and larger 'professional development' effort has shown benefits. In the context of RTE, teacher development is perhaps the most critical need and the program can be an important role model. Mainstreaming/'upscaling' its key insights/processes is a challenge that needs to be considered. Much wider publicity to attract more applications, specially from the formal government system and seek more mentors will be one of the tasks towards this.

One of the aspects of the study is to explore 'metrics' aspects – information elements which the program should collate and analyse so as to help in its assessment. For the fellowship program, information could be collected along following lines – reasons for teachers who are applying for fellowship, profile of applicants, feedback on the application and orientation processes<sup>5</sup>, regular (yearly or half yearly) feedback from fellows on use of library, web portal, interactions with mentors, events and study circles, their information and networking (professional communication) needs can be collated to get a better picture of this flagship component of the program. The goal would be to get across to more teachers, ensure diversity in applicants, diversity in topics sought to be studied/subject of research and for greater bonding amongst the fellows, with program team with mentors and with other teachers as well.

## 3.2 LIBRARY

The library<sup>6</sup> is seen as a niche one, meeting specific needs of the fellows. There are diverse methods of access to the library; some regularly visit, while others come often while writing their report, While some referred to journals, articles, children's literature, others focused on resources that met their research needs. Hindi resources were used selectively only by some who felt the need, but they were very appreciative of their utility, since such resources are rare/limited. A number of hindi translations were quite useful to SCERT/DIET Personnel as well

### *Challenges:*

The location of the library/RRCE in north Delhi meant that access was not easy for those living in parts far away.

### *Recommendations:*

Fellows made strong demand that library should also issue books journals, have many more





copies, allow photocopying, allow access beyond physical space, store and share more multimedia resources for use in their own schools. Library should increase collection on specific research areas chosen (classroom practices), more books on different areas, more journals such as national geographic, publications where teachers are speaking. Users also felt that the library should allow CDs/DVDs to be taken home / their schools, since cheap to duplicate and should allow copies to be made on cost recovery basis<sup>7</sup>.

### *Translation needs:*

Though the RRCE has a full time writer/transcreator of articles into hindi, given the volume of the task and the slow progress from fully manual efforts<sup>8</sup>, RRCE should explore the use of machine translation (Google) feature. Even if this is initially slower, over time, as the vocabulary gets developed with the repository, the extent of its correctness would increase over time, as has happened with many other languages on Google translator. This would perhaps be necessary in

### *How Is Google Translate Different From Other On line Translation Tools?*

Google Translate, in comparison to other language translation tool, is using a "statistical translation system for the language pairs" instead of the rule-based approach that "requires a lot of work to define grammar and vocabularies." What the company actually means with their technology is that they "feed the computer billions of words of text, both monolingual text in the target language, and aligned text consisting of examples of human translations between the languages. We then apply statistical learning techniques to build a translation model."

"Google is fervently interested in better machine translation. With it, it can use its search technology to link people with data around the world, regardless of language barriers, making its search engine significantly more powerful. Google executives have given indications recently about just how grand the company's ambitions are for the automated language translation. The company wants people from any major language to understand any other." "We will eventually do 100 by 100 languages, to take this set of languages and convert to another," Google Chief Executive Eric Schmidt said in a June talk.

(Source: <http://www.gfanatic.com/google-translate-accuracy>)

"Google prefers to rely on computer algorithms rather than humans, so at first glance the Google Translation Center looks somewhat anomalous, even though Google is only playing a middleman role. But it's possible that the human translators might be gradually improving Google's machine translation technology as they work, in effect helping to put themselves out of a job. That's because Google's translation system uses a statistical model that works better the more it can compare the same text in two different languages. And Google evidently will track translation work in its database; according to the center's introduction for translators, "our translation search feature matches your current translation with previous translations, so you don't have to translate over and over again."

(Source: [http://news.cnet.com/8301-1023\\_3-10005605-93.html](http://news.cnet.com/8301-1023_3-10005605-93.html))





the long run to make hindi transcreated material available in very high volumes (the power of a search engine comes from the certainty of finding many articles on any topic in English and if material is sparsely available it would discourage efforts to seek it.

Suggestions for hindi translations included picking up simpler readings first and aiming to cover key in a wide variety of areas. This could strengthen the niche nature of the library, providing a one stop service for good writings in Hindi pertaining to education and related areas, which would serve a critical need of the northern hindi speaking belt.

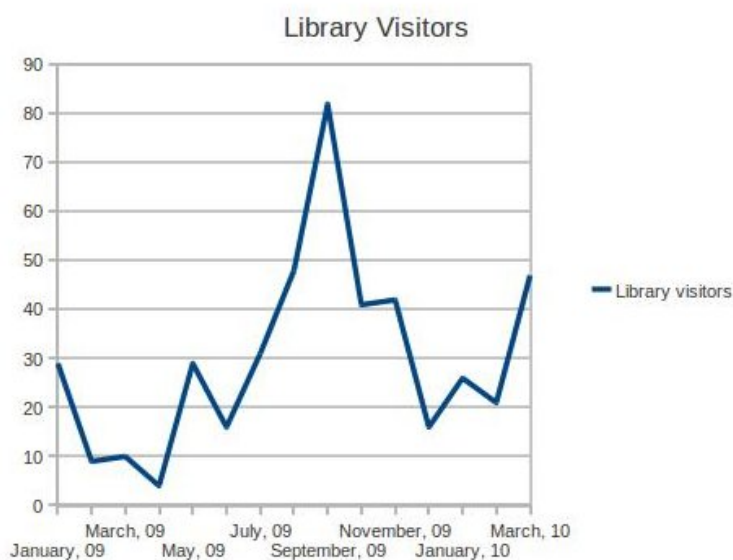
Google is even more ambitious (see box), it wants that any hindi speaking person should be able to access all English resources on the Internet, using its search engine and translator. But this requires sufficient 'human translations' to build the database of aligned texts.

Google's translation tool differs from previous machine translation tools and is so superior in its design, that over time it is likely to become the default translator in many languages. It 'remembers and supplies' individual translators preferences for specific words and refines its database using the work of translators.

Those using the library were also asked to rate the library and their use on a 5 point scale. However the numbers met represent a small sample to share the findings of their responses. A slightly larger survey of library users is being done which could give us a more quantitative feel of

*Visitors to the library over last fifteen months<sup>9</sup>*

Month / Year	Library visitors
January, 09	29
February, 09	9
March, 09	10
April, 09	4
May, 09	29
June, 09	16
July, 09	31
August, 09	48
September, 09	82
October, 09	41
November, 09	42
December, 09	16
January, 10	26
February, 10	21
March, 10	47





the utility of the web portal.

As the table indicates, the library has a varying stream of visitors, with lean periods, such as during examination times (April 09). The librarian has also clarified that there are visitors who do not enter their names into the register, so the real numbers are understated by perhaps around 20 – 30 %. Though the traffic was quite low, in single digits in April 09, it has picked up later, with a dip during the vacation period in December. However the number of visitors confirms that the library caters to niche requirements of specific groups which are currently numerically small.

#### *Recommendations:*

Since the list of books is available on the web portal, library can consider making a facility available in which members who are far away can access the book through courier service and return the same, paying costs incurred. This may increase the use of the books beyond those who come to the library (making library accessible beyond physical access could be a thrust area for the library since physical visitors are unlikely to be much higher, given issues of commuting in Delhi).

In terms of metrics, there are two parts – the actual usage, which is usually collected through record of visits of users as well as books issued to them. What will be useful to collect is also suggestions of what is seen as required but not available, their can be a separate register for this which users can be encouraged to update. It will encourage users to update this, if the program team can try and source the required publication (from the Internet if it is publicly available in digital form) and upload on the portal as well. Metrics on publications by number of times borrowed can also give an idea of the kind of needs. The feedback from the library users met, for improvements, has also been quite lucid.

### 3.3 WEB PORTAL

The web portal ([www.eledu.net](http://www.eledu.net)) is a unique and pioneering effort of RRCE to support continuing teacher professional development. This was echoed by almost all the fellows. They found the portal to be a space where there were good discussions on issues (users found blogs useful), and good resources were available at one place. These exposed one to different kinds of work done by others, quality of resources inspires. The portal strengthens teachers voice/ share in educational discourse and can be a good method to link of teachers, diet faculty etc, get teachers to share ideas on the portal.

#### *Challenges:*

Most users admitted that they were not coming on-line with their comments/postings as much as they could. Some were diffident while others did not find any interesting issue to post or respond even if want to. Those who posted were affected by non responses to their posts. Many of the teacher fellows can be termed as “tech illiterate” and did not use it much, inspite of RRCE encouragement. For some lack of access to no computer at home or school was an obstacle.







## *Recommendations:*

Most people also emphasised that more awareness of portal is must, reaching out to mainstream teachers beyond B. El. Ed. students as well as people working in the educations system and made many suggestions to increase the awareness of the portal, its resourcefulness, as well as to enhance interactions on it.

### *3.3.1 Awareness of portal*

There is a need to build greater awareness of the portal, so that many more teachers can access the portal, again through different methods. Some possible methods to do this are listed below:

1. Linking the portal to many other sites such as of those of NCERT, CIE, DU, LSR, Digantar etc.
2. Circular to schools of portal and also of events for greater publicity
3. Whenever workshops are conducted, get participants/teachers to make email ids and share information about project activities through emails
4. Ask users to recommend it to others, especially Hindi material, as a valuable resource. Ask each member to introduce portal to others – each fellow can get fellow teachers to join
5. 'Viral marketing' of the portal . Request educational institutions NGOs to provide link to portal on their own websites and provide it in the signature of the emails of members of USRN, teacher fellows etc
6. Need to bring in more institutions into the network, including schools. Make short presentations to teachers / schools<sup>10</sup> about RRCE beyond who is part of it. Build links to MCD and other schools at an institutional level
7. Get more and more people into the network, who are not in touch with academics, who think in hindi – try and get many more MDC schools teachers to become part of the portal
8. Follow up meetings of fellows and ex fellows – periodic physical meetings needed
9. Have more experienced people participate in discussions and respond to postings
10. Link the portal to accounts in a social networking application as FaceBook, and publish information about events on Facebook, Twitter etc. While there can be serious concerns about the kind of 'public pedagogy' implications of social networking, these are tools that are becoming default communication tools for younger people and as they become more popular, it may not be effective to ignore them. Hence the USRN/RRCE could open up accounts in Facebook and other applications like Twitter and Scribd<sup>11</sup>.

Though the target group is clear to RRCE, it would be useful to look at the portal from the expectation of each of the user segments – teacher fellows, government school teachers, private school teachers, teacher educators working in government and private

**Though the target group is clear to RRCE, it would be useful to look at the portal from the expectation of each of the user segments and see how the portal can meet the needs of each of these groups.**







institutions, educational researchers, university/college faculty, policy makers and see how the portal can meet the needs of each of these groups.

### *3.3.2 Interactions on portal*

Some possibilities to increase membership of the portal as well as use of resources and participation in discussions could be:

1. Encourage/require fellows to initiate discussions on their research themes
2. Create email lists (using tools like mailman or googlegroups) which can support more 'closed door' discussions amongst small groups with similar interests. There could be multiple lists, one for all members and others for specific sub groups such as teacher fellows (current year), all teacher fellows, participants in public events etc. Each would require a 'moderators' role who can initiate discussions, respond to postings etc.
3. Mentors/project staff to informally take on responsibility of responding to/facilitating web discussions
4. Program could explore possibilities of interest free loan to fellow to purchase laptops<sup>12</sup>. This will support much higher participation and easier familiarization for the those not familiar. It may be useful to think of a 12,000 rupee device as an essential part of any teachers' tool set, rather than see it as a luxury. Not only the eledu.net portal, but many more links (useful for both English and other language resources). RRCE processes will enable the teachers to get into the 'habit' of using this tool for their self-directed, interest based learning. This will also strengthen the network.
5. Interactions on the portal would also be strengthened by increasing the resources on the portal and increasing its awareness amongst its target groups
6. The portal has potential to support the networking needs of USRN partners and with interested others working in the school education domain. For it to become a place for such people to flock to, it needs substantial investment in following areas
  - a) Creating /sourcing/linking resources of much higher magnitude to the extent it is considered a default stop for anyone looking at resources on Indian education, especially in Hindi
  - b) Web design as a thought out communications strategy will require professional consultations with experts who are well versed in the way a site needs to be designed to attract visitors and meet their needs in the simplest/best ways. This can also include adding specific tools for managing discussions, easy archiving of related documents that can support network partner interactions
  - c) Greater awareness of the portal through both on-line and of-line modes.

### *3.3.3 Resources on the portal*

Some possibilities to increase availability of resources on the portal:

1. Add more articles on actual school / classroom practices for practitioners, in addition to academic articles and news articles –
2. Add links to websites where users can access what they want .





3. Increase resources - text books, English learning resources, hindi materials, access to journals etc,
4. Add entries in Hindi Wikipedia on basic educational terms (can also be a fallout of the glossary of terms project planned)
5. Can the project support creation and dissemination of newsletters for teachers, by teachers
6. Put / link topical articles/news from papers which are interesting
7. Can SRTT require all grantees (education domain) to make their knowledge outputs available to portal
8. Need more specific hindi materials for B EL Ed program
9. It is important to provide a large and varied collection of resources in Hindi. One of the biggest motivators to use a search engine is the certainty that each search phrase will yield either large number of articles (when exploring) or a specific article one is seeking. This is much truer in English than in Hindi. To make the portal host thousands of articles, it is necessary to setup processes that can source articles being written (which are from credible sources) which would invariably already be in a digital format. e.g. all past issues of Vimarsh or Pitara should be sourced from their publishers (almost all NGOs, public institutions working in the education domain would be happy to find a source for dissemination of their writings) – but these need to be made available by issue/theme/topic, such that a person seeking a resource on mathematics assessment can find at least 3-5 good articles on the same. This requires a good librarian (cataloging, providing appropriate keywords, ensuring crisp blurbs for each link etc). The web portal represents a good (even unique) opportunity to make available large collection of good hindi resources relating to education (which would also cover articles on wider social/political/philosophical aspects/issues)

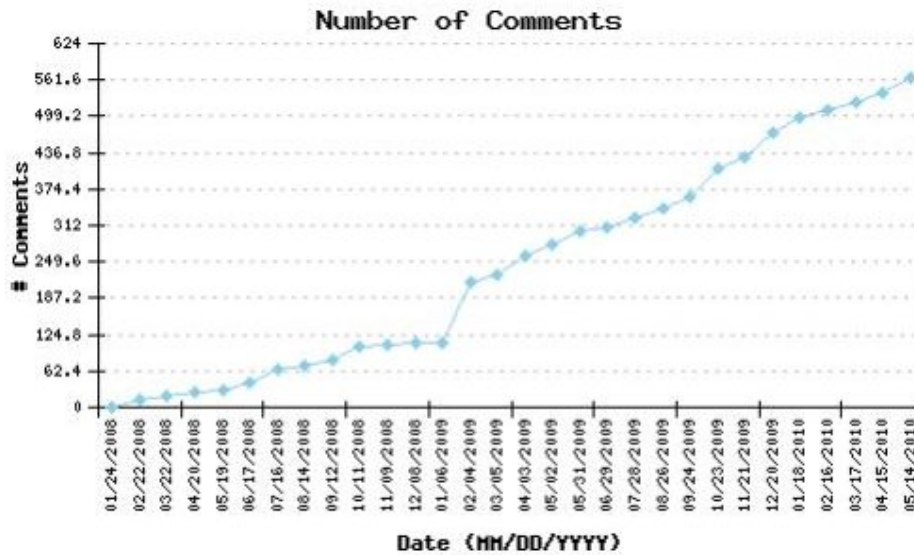
Those using the portal were also asked to rate the portal and their use on a 5 point scale. However the numbers met represent a small sample to share the findings of their responses. A wider email/web based survey of users is being done which could give us a more quantitative feel of the utility of the web portal.

The graph on number of comments<sup>13</sup> (cumulative) since late 2008 and provided below. They show a steady increase over time and it is mostly linear suggesting roughly the same rate of growth, with the exception of a spike in the number of comments in June 2009.





Web Portal usage				
Month / Year	Number of blog entries	Number of discussions	No. of registrations	Cumulative registrations
January, 09	12	33	103	103
February, 09	2	1	62	165
March, 09	6	1	36	201
April, 09	7	2	22	223
May, 09	12	1	19	242
June, 09	9	NA	75	317
July, 09	4	3	80	397
August, 09	3	1	38	435
September, 09	14	1	30	465
October, 09	12	3	60	525
November, 09	1	NA	30	555
December, 09	9	1	26	581
January, 10	7	3	26	607
February, 10	13	NA	21	628
March, 10	8	3	22	650





## Web user survey

**W1 What would best describe your current role ?**

- 1 Fellow in the RRCEE program
- 2 Student Teacher (DEd, BEd, MEd, B Ed Ed)
- 3 Teacher
- 4 Mentor
- 5 RRCEE Staff
- 6 Others

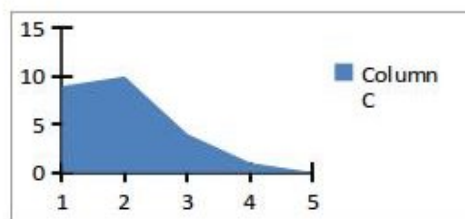
2  
4  
5  
1  
3  
9



**W2 How satisfied are you with the eledu.net web portal ? Why?**

- 1 Very satisfied
- 2 Somewhat satisfied
- 3 Neutral
- 4 Somewhat dissatisfied
- 5 Very Dissatisfied

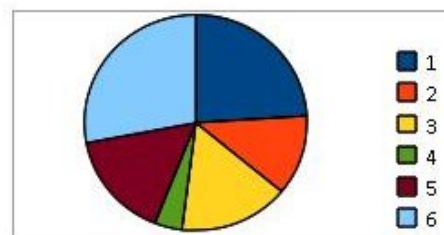
9  
10  
4  
1  
0



**W3 How did you learn about eledu.net? Through/from?**

- 1 Colleague at work place
- 2 Friend
- 3 Public Event/Talk/Film Screening
- 4 Teacher Fellowship program
- 5 Internet
- 6 Other (please specify)

6  
3  
4  
1  
4  
7



**W4 How do you access the eledu.net portal ?**

- 1 Home
- 2 Work
- 3 Internet cafe
- 4 Other (please specify)

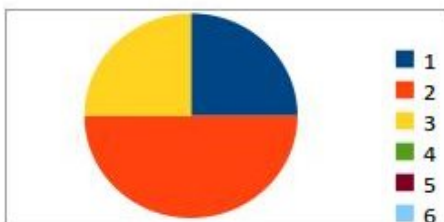
14  
7  
0  
0



**W5 How often do you login to the eledu.net web portal ? At least**

- 1 Daily
- 2 Weekly
- 3 Monthly
- 4 Quarterly
- 5 Annually
- 6 Not at all

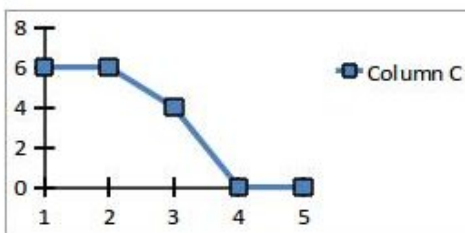
4  
8  
4  
0  
0  
0



**W6 Approximately how many posts have you initiated/posted on the forum ?**

- 1 Initiated and Posted None
- 2 Initiated 1-2 , posted 1-5
- 3 Initiated 2-5, posted 5-20
- 4 Initiated 6-10, posted 11-15
- 5 Initiated > 10, posted >15

6  
6  
6  
0  
0

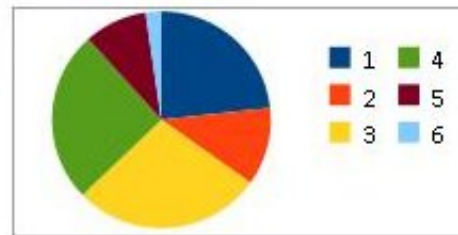






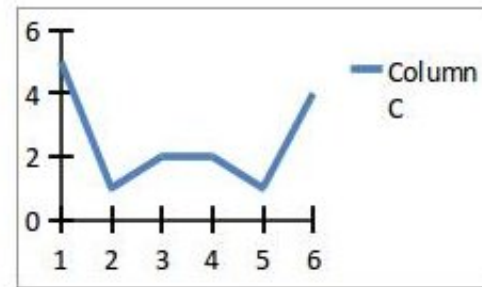
**W7 What are the primary reasons you login**

- 1 Forums 10
- 2 Media News 5
- 3 Online resources 12
- 4 For news of upcoming events 11
- 5 Network with other teachers 4
- 6 Other 1



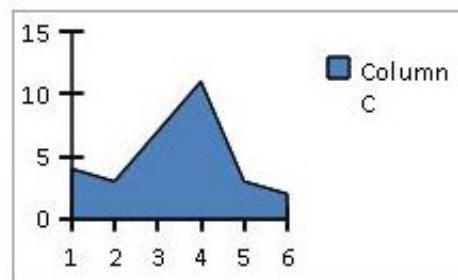
**W8 If you have never initiated or posted in the forum, what are your main reasons**

- 1 I don't have time 5
- 2 I feel my language is a barrier 1
- 3 I feel I'm not an expert 2
- 4 I did not have specific comments on the discussions 2
- 5 Forums are not interesting/relevant 1
- 6 Other (please specify) 4



**W9 How does the portal help you? Please explain.**

- 1 Stay connected with peers 4
- 2 Helped in my day-to-day work 3
- 3 Attended the events posted on the notice board 7
- 4 Use the resources posted on the portal 11
- 5 Encouraged my peers to join the portal 3
- 6 Other (please specify) 2

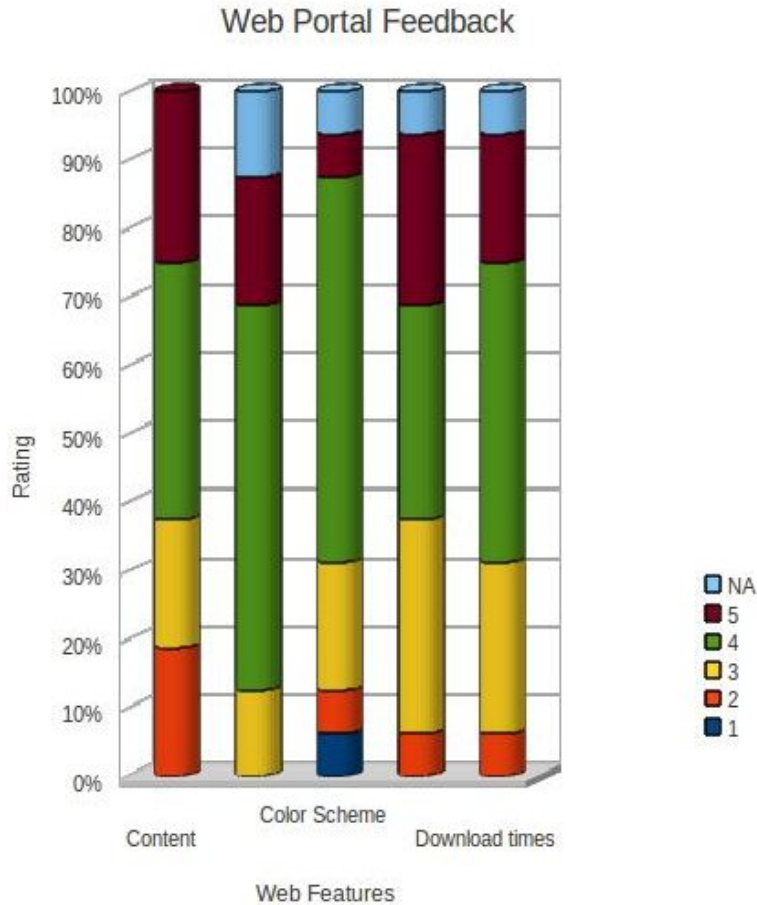


**W10 Please rate the following on a scale of 1 to 5**

Parameter	1	2	3	4	5	NA	Total
1 Content	0	3	3	6	4	0	16
2 Organization of Data	0	0	2	9	3	2	16
3 Color Scheme	1	1	3	9	1	1	16
4 "User-Friendliness" (any other factors)	0	1	5	5	4	1	16
5 Download times	0	1	4	7	3	1	16







Some inferences from the tables<sup>14</sup> above

- 1.W1 table suggests that the portal has a wider user base, beyond the students and teachers / mentors who are part of the program. 18 of the 24 respondents (75 %) in W1 are not directly part of the program, while the remaining 6 are – as fellows (2), mentors (1) or staff (3).
- 2.The W2 tables is represented through an 'area' diagram to show the high rate of satisfaction with the portal, with maximum area under the 'very' or 'somewhat satisfied' categories.
- 3.W3 suggests that users have heard about the portal from wide variety of sources. However, the largest (excluding others) is from a colleague, perhaps this points to a scope for mass media avenues for creating greater awareness about the portal. (If articles on the portal can be shared through the mass media, especially Hindi media, it may help generate much higher user base)
- 4.W4 suggests that users find the 'comfort of home' as the best place to access the portal. It is perhaps the case that most teachers do not find sufficient time at school to spend time on the Internet and do not favor cyber cafes. There is a scope for RRCE to persuade teachers to consider laptops as personal learning tools, essential for their professional development. (Given





**Users find the 'comfort of home' as the best place to access the portal, perhaps because most teachers do not find sufficient time at school to spend time on the Internet and do not favor cyber cafes. There is a scope for RRCE to persuade teachers to consider laptops as personal learning tools, essential for their professional development.**

the steps they took on their way to becoming dependent on this medium for their learning and other needs.

6.W6 suggests that the actual participation of users on portal, in discussions etc is still skewed. While this is usually the case in most digital networks (unlike a physical meeting those who don't participate are unseen and hence invisible) which feature 80 – 90% lurkers, it would be useful to collate the statistic of number of total registered users and distinct users who participate in a given period. The reasons for non posting (W8) are mixed and do not give any clear indication of key causes that could be sought to be addressed.

7.The main reasons for login to the portal are for accessing the on-line resources (W7 and W9) and for the discussions fora. This suggests a mix of both information as well as communication/networking needs being met. Networking teachers in a way that they seek one another for support and help would be extremely powerful method for teacher development. Social networking has become the one of most important reasons (and has been rapidly becoming more important) for people to connect to the net and there are specialized tools like Facebook<sup>15</sup> which meet this need for the more sophisticated web users. A continuous watch on Facebook and similar sites can give ideas to the RRCE web team on features they could consider adding to the portal keeping in mind the goals of the program.

8.The overall feedback on the site features in terms of organization of data, color schemes etc is quite similar, the weighted average ratings are all around 70%, which does not give us clear picture of specific improvement aspects from the web survey. This is to be expected since many users, especially of the eledu portal are likely to be recent users and hence may not be able to give clear feedback on improvement possibilities. However, the detailed feedback received in the face to face interviews on the portal has been shared separately. User feedback/design

the much lower costs at which net-books are now available, at around a months salary for a typical government teacher, these can no longer considered as not being affordable or as luxuries; this has been discussed in another section in this report).

5.W5 does not give much indication of frequency of login, though the number of respondents for this is the least amongst all the survey questions. This points to the challenge in getting users to login regularly – the use of digital platforms is a habit that is acquired through time and usage and there is value in trying to understand from teachers who have become regular users, what were





expertise can be accessed, to look at technical aspects such as color scheme, use of animations, personalized blogs etc. Web sites benefit from periodic change in the CMS<sup>16</sup> 'template' used which gives a new look to the site without any coding efforts.

### *Portal use aspects*

Though training on use of portal was carried out, users need regular practice till use of Internet / surfing of the site becomes a habit – this needs a period of intensive usage. During the period post training / orientation, users need to have a regular interaction – maybe through emails which require / encourage access to the portal (to access specific resources). This could be set up through automatic triggers for users.

Metrics collection on websites has matured and there are several web metrics engines that can be used to collect information on a variety of aspects, including pages visited, number of hits, users, time spent on a page, number of downloads, location from where user was directed to the portal, user characteristics such as physical location etc.

Specific comments on the portal as well as suggestions on website management are provided in annexure to this report.

### 3.4 PUBLIC EVENTS

The project planned periodic 'events' in the form of talks and film screenings on important issues (not necessarily academic in the narrow sense, but discussing broad social issues of interest/concern). RRCE organized eight Public Lecture Series over the past two years. Some of these were video recorded for sharing in posterity and these have also been uploaded on the portal. The discussions in some of the events were transcribed and transcriptions of texts have also been uploaded on the portal.

### *Key feedback/comments:*

Both subject (education/pedagogical issues) as well as broader socio-political issues were appreciated by the those met, who specifically commended the events for the following aspects: Developing empathy for people issues. understanding characters, information on new teaching methods, highly participatory nature of discussions, good topics chosen etc. The events served as a platform for discussions and helped participants to look at things more critically, helped meet fellow teachers and share views/peer learning, all of which helped shape their professional identity. The diversity of views from different teachers in different contexts added to the experience.

The variety in the topics/themes chosen for the events was useful - different events/screenings were popular with different teacher fellows –

**Beyond trainings, Internet/surfing requires regular practice to become a habit. During the period post training/orientation, automatic triggers can encourage regular interaction with the portal.**





participants recollected the those relating to Rajasthan water harvesting, A for magarmuch , Irom Sharmila as having had a significant impact on them.

Some teacher fellows as well as mentors and USRN partners missed most lectures, due to their work pressures. Some felt that the while the after school events were tiring, events during school hours made it difficult for them to participate.

We went through the transcription of one event ("Baby Haldar Baby Halder in conversation with Urvashi Butaila") and saw the 'A for Magarmuch' film screening. The high quality of both events is quite discernible from the footage/transcript and the fellows we interviewed confirmed this too. The challenge would lie more in the area of how to get people who have not been to the event to best experience the same through the film or the transcript. The size of the transcript/footage would pose a limitation in making it available. To get these valuable resources across to larger audiences would require the next level of sophistication in communication, one way would be to cut the entire transcript/footage into much smaller pieces on some coherent thematic basis, provide blurbs for each of these, provide each as hyper links for specific requirements etc. This is easier said than done, for it requires different set of skills (knowing what is valuable and to who, editing, video editing etc), however this may be the next step in this process to help many more get the value of these events.

#### *Recommendations:*

Suggestions to make these events even more popular and effective included the following:

- 1.Events should be on holidays, else not many people are not able to come, can we coordinate with system so that diet faculty can also come as part of their learning
- 2.Should have tie up with schools so that they can attend these and treat as part of formal work (though teachers were not expected to take leave for this, some had to do it for these sessions, how can this be avoided)
- 3.Need to organize public events and workshops for teacher educators.
- 4.Alternative locations can be explored for the same event and different events
- 5.More people can be formally informed of the events, methods to involve many more school teachers including through letters can be written to and through the directorate, publicising on the web portal and email lists in advance to give more notice to teachers can all help in getting more people to participate. Some events, especially the film screenings can be repeated in different locations in Delhi to enable many more, from local areas to participate. The project needs a formal Publicity/communications/outreach role for public events

### 3.5 PRE-SERVICE (D.ED.) CURRICULUM REVISION

This was not originally planned in the project, but was seen as a good opportunity to strengthen linkages between university and DIETs. SCERT approached RRCE to review its DED curriculum which was last revised in 1992. SCERT felt the current curriculum was didactic and needed revision in light of NCF 2005. However, since SCERT and DIETs have issues of time and capacities, SCERT wanted RRCE to lead this effort. RRCE helped SCERT to establish curriculum design teams







in different areas, each headed by a DIET faculty acting as 'convenor' and organised initial workshops to outline courses. However, the RRCE role increased since DIET faculty were too busy to lead the effort and also this was not something that they had done earlier. To move this forward, RRCE identified co convenors from within these teams, who were B.El.Ed. teachers. Since the last year, this component has made progress and topic outlines and course readings have been written for many topics. Each team also as an external expert reviewer and three of the courses have been reviewed by them. The next step is to finalize the curricular contents, with a review for all topics.

Though initially the plan was for RRCE to play a supportive role to the DIET faculty in this revision. However due to the difficulties faced by DIET faculty, the course revision was at a standstill for several months. To break this stalemate. RRCE took on a leadership role and organised 'co convenors ' from amongst the B.El.Ed. Teachers who facilitated the entire process. This change was done in a sensitive manner since in most cases the co convenors were young teachers while the DIET faculty were much senior and part of a system where hierarchy has an important place. RRCE provided support and guidance to the co convenors which helped to move this project forward through regular meetings and workshops and identifying suitable resource persons for the different courses.

One of the benefits of this process was the adapting of some good elements of the B.El.Ed. Program in the D.Ed course, such as the nature of the practicum, use of audio-visual resources, emphasis on variety of readings, inter-linkages amongst topics/course, constructivistic approaches, etc. For the co convenors also, it meant donning the hat of a 'teacher educator', which was a new role that provided a good learning experience. This experience also helped them re-look at their own role as teachers as well. This experience also emphasised for the course team, the importance of inter-disciplinary approach to teacher education, linking areas such as current socio-political issues affecting education, gender issues, with aims of education theoretical aspects etc.

### *Key feedback/comments:*

Curriculum redesign process itself has had several benefits, SCERT and DIET faculty appreciate even more the importance of readings and are asking DIETs to get more books for their libraries. The process has also exposed them to new ideas/perspectives including from that NCF 2005. The redesign has brought in new aspects such as including a project in each, use of audio visuals in course, conceptualizing intersections amongst issues, including newspaper readings to link the course to daily issues etc.

This experience has been helpful to the co-convenors as well, it helped some of in their own teaching of the same subject. The experience has been seen by SCERT as being very useful and SCERT wants to come back to RRCE for support in new areas, such as curricular needs for "out of school girls", how to handle multi level classrooms etc.







## *Challenges:*

The process was not as collaborative, which would have strengthened the network/relationship between the DIETs and the RRCE, as RRCE had hoped for, since DIET faculty could not devote the required time. This also presents a key challenge of integration of the curriculum into the system, since DIET faculty are not familiar with many of the assumptions and approaches.

The new courses are seen as ambitious, the materials selected are seen to be of a high level, which need to be contextualized to the background of the undergraduate students as well as the DIET faculty and may need 'toning down'. Through the review processes, the content has been simplified, but more work may be needed in this direction by 'thinking through' the transaction and assessment processes for the revised course.

In addition, there is a need to orient teacher educators and in in service the new curriculum, teachers world views would need to change. Since new curriculum makes high dependence on chalk and talk method difficult, to get the PSTE wing to transact using the new curriculum implies that their preparation is critical. This would be a challenging process since new curriculum and pedagogies/ can not be imposed on them, but if well done, can be an empowering process in itself for government school teachers, who are marginalized within the education system.

The revision to the curriculum also will also benefit from revision to the existing assessment processes which needs to be carefully planned since it affects the mainstream teacher education system.

As a part of the study, we looked at the curriculum design for two courses, which is provided in Annexe B.

As per the initial proposal from USRN/RRCE, there was an objective to establish a "Teacher Learning Centre in the DIET". *The RRC will undertake the task of providing on-site support to the DIET engaged in partnership with USRN for establishing a Teacher Learning Centre (FLC) which serves as a structural space for forging links between pre-service and in-service teacher education.* However, it appears that, despite efforts, such a centre has not been possible to setup within the (Motibagh) DIET, as the DIET faculty were unable to provide the required support for this effort.

## **4. SOME OVERALL OBSERVATIONS AND INFERENCES**

### **4.1 TEACHER IDENTITY SHAPING**

The program played a significant role for teachers to strengthen their identity as professionals. This was expressed by them in many ways (see box). Many were able to see the link between this process and the teaching learning processes in classrooms as well.

Teacher fellows were articulate about how the program had changed way they looked at their classroom and their students. They had a better internalization of the need to start from where the students are – greater awareness of the social contexts of the children, that they were not alone in their struggles, that many others too faced the same challenges – these insights gave them courage to persist in seeking out answers and in sharing/reaching out in this process. The program has encouraged fellows to read more – newspapers, journals, books. Their research outputs are useful knowledge outputs and represent collaborative knowledge construction. Through the





A teacher can work in multiple modes, not just lecture. Need to move from one way transmission  
A 'crafts teacher' can do much more  
We are able to make changes in system – there are institutions to support us and we are not alone  
We can imagine their role beyond the classroom - intellectual imagination affect classroom practice  
A good network with other teachers helps us to reconnect to educational processes/larger system.  
Look at alternate schools – government/private/ to get cross understanding  
Our language pedagogy understanding has increased.  
We need to look at individual children more closely and especially explore the efforts of 'low scoring'  
children, in their case, different set of assessment processes can help.  
Go beyond errors made by students, to explore logic, look at alternate causes for failure  
Changed culture of reading in our classrooms, we read the material - and talk to it based on classroom  
practice  
We got back in touch with education issues – study sessions helped and broadened knowledge

different methods – mentoring, study sessions, peer/shared reflections, accessing resources – digital, library and public events helped mature and enrich the researchers understanding of the specific research issue as well as background information which has helped good quality research to be done.

The program was seen to be making real, possibilities of teachers forming 'communities of learning'. Through different components/ strategies which meshed well. The events triggered thoughts, study sessions brought in more ideas and understanding, the web portal provided good resources, interesting readings, events were source of interacting with varied people / exposures / talks, all these in tandem have helped participants grow as a professional teachers.

## 4.2 COLLABORATIVE CREATION OF RESOURCES

The project has been able to make significant contribution to the academic resources, especially in the Hindi language. There is a critical need for foundational resources to be available in Hindi and the project has made a good beginning by making 25 translations available. The teacher fellows reports also represent bring into academic discourse issues, challenges, practices and possibilities relating to teachers work in schools and classrooms. The web site is seen as an important resource portal which can support discussions amongst teachers, teacher educators and over time has the potential to connect teachers in elementary schools to the educational discourse and have their challenges and priorities be heard by policy makers.

## 4.3 PIONEERING USE OF NEW ICTs

Thousands of crores of rupees are being spent by governments on ICTs in school education. In almost all cases, these have been on projects where technology companies have been asked to install and maintain computers and supply computer faculty to teach students. These programs have largely bypassed teachers. The RRCE project uses ICTs to create and build network of teachers and link

**Many teachers were able to see the link between the program and the teaching learning processes in classrooms.**





them with teacher educators and other professionals in the domain, pioneering new models of teacher education. With the RTE<sup>17</sup> requiring large number of new recruitments as well as their training as well as those in-service, the experiences of this project need to be seriously considered by policy makers. Focusing on co-creating digital learning resources, making foundational resources available in hindi as a part of establishing and supporting teacher professional development networks can be a powerful method for in-service teacher education as the RRCE project suggests.

ICTs are an emerging pedagogical method/tool. Their use can have significant benefits, however for these benefits to be realised, approaches that are firmly grounded in the right perspectives are essential. The default movements that ICTs generate may not be beneficial as form may take precedence over substance, the digital medium favors brevity that can encourage superficial processes and poor quality. However the balance is a delicate one and initially it may be necessary to provide greater leeway (with control) and encourage contributions. The project provides facilitation to support the use of ICTs for self directed professional growth of teachers.

#### 4.4 NETWORK OF INSTITUTIONS

One of the goals of the project is to build a network amongst different institutions working in education and bring multi-disciplinary expertise in universities to engage with school education. Network building is a new area, though its criticality is being increasingly acknowledged. USRN comes across as a loose network, these strategic choices need to be carefully made and regularly reviewed<sup>18</sup>. Too much structuring of a network can kill it but inadequate structuring can make it ineffective. There is a need to build on work done towards the next level of cohesion and alignment, that would further synergise the working of the institutions in the network. This could need further formalising the role of network coordinator to enable her to give adequate time and energies for network building. The focus can be to both broaden the network (get more institutions within the geography and few outside geography whose work is very aligned to USRN goals) and deepen it (within existing institution involve more individuals and in more activities).

While the approach of deriving network goals and priorities from those of its constituent institutions has worked well, the network should also look at formally deriving its own larger goals and plans (based on those of constituent institutions) with more specificity, which would help in conscious synchronisation of mutual priorities / focus areas as well as identify gaps/limitations which could trigger thoughts/action from network partners on addressing these. Broadening/deepening the network can bring in relevant resources towards these issues. This process would require the network to prepare its own programs / action plans for the year / plan period, to meet overall networks goals. The discussions on such planning processes could, with

**The RRCE project uses ICTs to create and build network of teachers and link them with teacher educators and other professionals in the domain, pioneering new models of teacher education.**





the required facilitation, also serve to better align the priorities, plans and actions of the different network partners, making the network itself stronger in its knowledge construction, networking, research and advocacy activities. Periodic scheduled reviews amongst network members would help in channelizing energies and addressing issues and challenges.

The web portal is considered an important tool for information sharing and communication amongst the various groups connected to school education. It has however not been used as such by the USRN partners to strengthen their own inter institutional relationships. Most partners do not access the portal regularly or see it as a source of information for their own needs (which would be quite different from the 'basic needs' of school teachers or student teachers) or as a fora for communicating with other USRN members, though they are clear about the potential of the portal in this regard. To make the web portal a significant resource for partners for their information and communication needs would require investment, both in terms of time of partners as well as in terms of ensuring that the portal has relevant resources that meet their information needs. This needs thinking through on goals/design/implementation aspects. One of the ways to encourage partners to start using the site would be for them to write blogs on issues relating to education – the blog format is not intended to be 'academic' in its rigor which is its limitation but also its strength in terms of relative lesser investment of time /energies required. Apart from helping partners, who are all key people in Indian education domain, to share their thoughts/reflections on various issues affecting Indian education, it would also be a good resource for others visiting the site. This over time, with effort could become a resource like [www.TruthOut.org](http://www.TruthOut.org) which features writings on different socio-political issues by many writers from different fields, writing in reflective but not necessarily academic manner. A 'information needs assessment' of partners would help in identifying resources that the portal must have, to attract them to visit the site. In terms of networking, another possibility is for each partner to share their work periodically on the portal in terms of formal status reports as well as informal updates (e.g. <http://aifde.blogspot.com/>). This of course calls for balancing between superficial information deluge and using such tools.

The network itself needs to be seen as a new form of organization<sup>19</sup>, with its own 'dharma'. Just as the organization as a collaboration of individuals often brings in far greater effectiveness and power compared to actions of member individuals, the network as a collaboration of organisations can increase manifold the power/reach of these member organisations as well. However correspondingly, institutional egos tend to be more complex than individual egos and this means network building is a difficult political task. The possibilities of the benefits of the network and the increasing need for networks in a complex society mean that this investment is necessary and beneficial.

**RRCE meets a very important need of bringing practice and concept/theory together, bringing teachers and teacher educators together, building a discourse of education based on actual classroom practices.**







## 4.5 OVERALL

The two primary goals of RRCE—creating networks of sharing/learning/development amongst teachers and with teacher educators, researchers, those working on wider issues of social concern and the collaborative creation of resources, including in Hindi, deriving from both theory and practice have been largely achieved. RRCE thus meets a very important need of bringing practice and concept/theory together, bringing teachers and teacher educators together, building a discourse of education based on actual classroom practices. The network is quite rich and varied, covers teachers – government, aided and unaided schools, student teachers, DIET faculty, teacher educators and educationists.

The RRCE has been able to demonstrate a new method of teacher professional development, building networks of teachers with others working in the education domain and needs to continue its journey onto higher levels of development and maturity.





## ENDNOTES

- 1 EDUSAT was implemented in few districts of Karnataka, which includes Gulbarga. Yadgir was a part of Gulbarga district until December 31st 2009
- 2 <http://planning.kar.nic.in/khdr2005/eindex.htm>
- 3 "Education Scenario of Yadgir Block, Yadgir education district" by Akshara Foundation, Community Development Foundation and Social Initiative for rural empowerment (SIRE)
- 4 The newly constituted Yadgir revenue district consists of Sedam, Shorapur and Yadgir blocks
- 5 As per 2001 Census, the literacy rate in Gulbarga district is 48.70% (<http://www.censusindia.gov.in/default.aspx>)
- 6 Paper by Prof. Chaya Degaonkar on "Quality Elementary Education and Regional Development Status (Perspectives and Experiences of North Karnataka with focus on Yadgir Region)"
- 7 Around 62% of children in age group of 6-14 years have reported that they migrate at this time. See "Education Scenario of Yadgir Block, Yadgir education district"
- 8 Paper by Prof. Chaya Degaonkar on "Quality Elementary Education and Regional Development Status (Perspectives and Experiences of North Karnataka with focus on Yadgir Region)"
- 9 As discussed in the District Level Consultative Workshop on "Quality Education and Regional Development: Status, perspectives and experiences of Yadgir region"
- 10 "Education Scenario of Yadgir Block, Yadgir education district"
- 11 Check Appendix for specific Objectives of EDUSAT programme
- 12 <http://pcf4.dec.uwi.edu/viewpaper.php?id=357&print=1>
- 13 <http://dsert.kar.nic.in/html/chapter09.html>
- 14 <http://dsert.kar.nic.in/html/chapter09.html>
- 15 Later was called Computer Aided Learning Centres or CALCs
- 16 <http://www.csdms.in/gesci/PromotingtheuseofICTsforEducationinIndia-AmitDabla.asp>
- 17 <http://dsert.kar.nic.in/html/chapter06.html>
- 18 Please check Appendix for list of schools and their details.
- 19 Please refer Appendix for list of questionnaires
- 20 Receive Only Terminals, which receive the signals from the satellite
- 21 Recently the vendor faculty have been asked to train teachers every saturday.
- 22 This can only happen if the broadcast is significantly decentralised to block or even cluster level. With FM radio (community or campus radio) such decentralised broadcasting is possible. Each district AIR can have its own programme scheduling. Campus radio broadcasting at BRC/CRCs can also be thought of.
- 23 National Curriculum Framework (NCF) 2005, Position Paper on Educational Technology
- 24 Once the programme is in a school, the teacher does not have a choice but to implement it. Hence for programmes like EDUSAT or Keli Kali, the class has to tune into the programme irrespective of the teachers views on its utility.
- 25 In the Mahiti Sindhu programme, the vendor faculty have gone on strikes many times to alert the state level authorities about their poor working conditions, which includes non payment of salaries in time, non remittance of their PF dues, refusing leave etc. Even in the case of ICT@Schools programme, vendor faculty are unaware of their actual compensation arrangements, for eg if they have PF or not.





26 The ICT@Schools phase I and II vendor faculty have received little or no training in GNU/Linux – some of the phase II faculty have received a one time one day orientation on GNU/Linux. They have no awareness about the educational tools available freely on GNU/Linux or even of tools such as Open Office or Firefox or Gimp.

27 See <http://www.schoolwiki.in>

28 [Www.wikipedia/foss](http://www.wikipedia/foss)

29 Pp vii NCF 2005, Position Paper on ET

30 Constructivism is a philosophy of learning founded on the premise that, by reflecting on our experiences, we construct our own understanding of the world we live in. Each of us generates our own “rules” and “mental models,” which we use to make sense of our experiences. Learning, therefore, is simply the process of adjusting our mental models to accommodate new experiences. (<http://www.funderstanding.com/content/constructivism>)

31 Term coined by Seymour Papert to explain the constructivistic possibilities of computers/Internet

32 Computer Learning programmes in Schools: Moving from BOOT models to an Integrated Approach, May 2009

33 Which means security upgrades are not available on these older versions, from Microsoft

34 NCF 2005, The Position Paper on “Teacher Education for Curriculum Revival”





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IT for Change (ITfC) is a non-profit organisation located in Bengaluru (India) that works for an innovative and effective use of ICTs to promote socio-economic change in the global South. IT for Change's research and advocacy work in gender, education and governance aims to influence the information society discourse and policy spaces at global, national and local levels, seeking to build cutting edge theoretical concepts and policy responses from a pro-South standpoint.

[www.ITforChange.net](http://www.ITforChange.net)

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