Integrated approach to Technology in Education (ITE)

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Introduction

Information and Communication Technology[1] integration in education projects was first piloted in May 2012 at four supplementary education centres for adolescents in four villages of the Kandi block in the Murshidabad district of West Bengal. The purpose was to provide an opportunity for adolescents to interact, explore and authenticate their learning at school, using technology. The integrated approach to technology in education referred here, assumes the following prerequisites-

It should be:

- student use of technology to create learning artefacts
- integrated with curriculum
- focused on learning achievement
- teacher designed instruction

This concept note will share the scenario of computer use in schools in India, explain the concept of,Integrated approach to Technology in Education (ITE) used by the Trusts, share results from the Trusts' sanctioned pilot project in ITE, and present a plan for future dissemination. The sub-topics of this paper are listed in the table below:

1. Computer use in schools in India
2. Concept of Integrated Technology in Education
3. Relevance and objectives of ITE approach in Trusts supported projects
4. The pilot project in Murshidabad and its outputs
5. Other ITE approach projects initiated
6. Project design proposed
7. Annexure-International Standards for Measurement of ITE approach

1. COMPUTER USE IN SCHOOLS IN INDIA

[1] Will be referredas technology in this paper

Integrated approach to use of technology in education has been used and researched for many years, but its adaptation in underprivileged settings in India has remained at the skill level or as a teaching tool. This approach may not be rare with international schools, but remains rare and novice in schools of poor students. Installing computers in schools of poor children has gained considerable momentum in India. Organisations with corporate partners have been loading government schools with computers and fancy software. Skill based focus is another big objective of the government and many corporate CSRs. Many believe that technology taught in schools where children from underprivileged backgrounds learn will assure skilled workforce in the future. However, there are numerous computer centres and institutes even in the most backward villages that can provide technological skills. It doesn't take a whole school life cycle to learn the computer basics and advanced functions. Such a skill based motive to connect schools with technology seems superficial and a weak technical rationality to bring in social change in education for the poor.

On the other hand, the National Policy on Information and Communication Technology (ICT) In School Education (2011-draft) is a comprehensive document that envisages such approaches discussed in this paper. But its implementation is more than challenging because of many factors. The most vigilant is access and digital divide. As per a NUEPA 2007 study report, 87 percent of the schools in India do not have a single computer. However, the model school concept announced by the Prime Minister promises an ICT infrastructure in schools. The most awaited Aakash will soon hit the schools. But at this juncture, it is more about access and the systemic approach for integration within the curriculum remains a consideration.

Although access to computers has been documented as influencing classroom use of computers (Becker 1999; Becker, Ravitz&Wong, 1999; Charania & Shelley, 2007), it is not a sufficient factor for use. The World Bank study (2011) suggested that merely putting computers in schools and training teachers to use them will not improve the learning levels in students. A two year study conducted by the World Bank (2011) in Colombia where the computers were deputed in public schools from the year 2002 to 2008, showed no relationship between learning achievement and computers in the classroom. One of the obvious reasons for this as explained in the study was that the computers in the schools were used to learn computer systems and applications with no plan and efforts to integrate it with the teachingand learning in the classroom. This argument is also consistent with Koehler and Mishra (2009) claim that emphasising on learning technology will merely yield student learning of technology rather than leaning of the subject matter. Technology integration in

education as explained above is a systemic process. This has been well documented in the research and the most recent article (2012) by the MIT lab scientist and educationist Russell has through confirmatory analyses affirmed that teachers' beliefs, and professional development play a very important role.

In the Indian context, the most prevailing factors besides access are:

- failure of understanding and implementing *constructivist pedagogy* in the education system,
- the overpowering attention on *economic value* of learning technology for these students,
- and most importantly, the lack of *capacity building* of teachers and school administrators in this area.

An exploratory study: A dip and analyse technique was used to explore computers in school projects initiated by three organisations. The designated Programme Officer explored three organisations in Western and Southern India that run computer assisted learning programmes in public or aided schools. These three organisations are very well known for technology in education projects in schools. Two of the three organisations have developed their own software to promote technology in schools.

A total of five government or government aided schools were visited. These schools had adopted computer aided activities implemented by the three organisations. The detailed observations at these three organisations are documented and available. In a nutshell, computers at these projects were used to inculcate either skills based intervention or in the form of CD based learning in government or aided schools. Two of the projects had computers in the computer labs managed by computer teacher. The activities were computer centred, where children were either playing educational games or learning software applications. In one of the projects, the teachers were using open share software to create teaching tools. But even here, the students' use of computers to construct their own learning was not seen. These observations indicated that they are merely witnessing a shift from teacher centred to computer centred learning. Integration of technology in both teaching and learning processes was not seen.

Even in the developed countries, integration of technology in the curriculum and school culture was not easy. It requires a systemic approach where all the stake holders in the

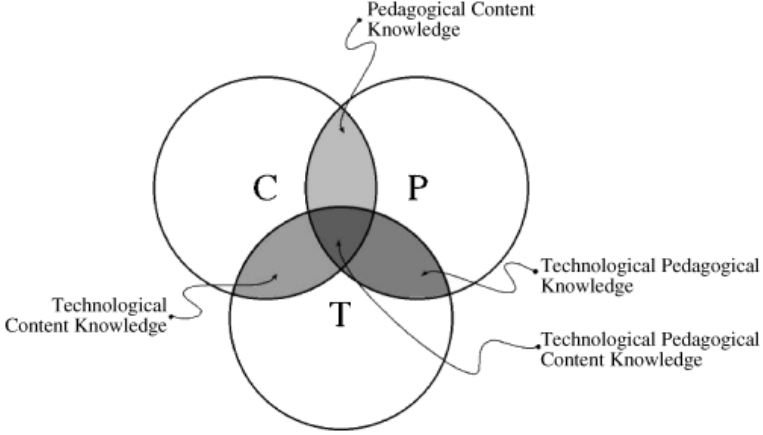
education micro-systems are involved and engaged. In India, we are witnessing the issue at a very basic level. We have not yet reached the stage where we know what successful integration means and therefore, cannot answer if we have achieved it or not. The organisations and corporations have been stuffing their fancy software in computer labs, without making any impact in the teaching and learning processes in the classroom. As Zhao (2003) claims that most software tools are rarely created as solutions to pedagogical problems. One of the reasons is their pre-occupation with learning outcomes than teaching and learning processes. The arguments raised here is not to attack educational software. It definitely has value in improving learning outcomes. The question here is why has the technology not been used as a tool to revitalise the teaching and learning pedagogy, student centred and constructive processes in classroom, and most importantly, why are computers an added layer and not integrated within the curriculum. This leads to understanding the concept of,Integrated approach to Technology in Education (ITE).

2. CONCEPT OF INTEGRATED TECHNOLOGY IN EDUCATION

Integrated Approach to Technology in Education (ITE): Technology when it fits comfortably with the curriculum or instructional plans of teaching is an indicative of integrated technology. Thus, technology rather than an additional layer in the classroom is embedded within the design of the teacher's lesson plan and the pedagogy. Thus, in this approach, the teacher designs learning activities and students use technology to construct their own learning. For example, the students use technology for seeking information, construct and organise their learning and represent it through computer applications. Thus, the teacher plays a role of a facilitator and student as a constructionist of his or her own learning. Such an approach considers technology as a tool rather than an end itself, defines the teachers' role as a facilitator and designer of the learning environment, emphasisesthe student's use of technology, and authentic assessments and activities using technology in the classroom (Grabe and Grabe cited in Charania, 2011).

An Illustration of Classroom Implementation using ITE Approach Follows:

Ms. Nirmala had designed a four day lesson plan on carbohydrates. On the second day, one group of students was busy reading a chapter on carbohydrates from the textbook, and a few in their group were taking notes. Another group was reading and discussing from some 4 to 5 printouts from different websites on the role of carbohydrates in the diet and the recent



trends. The third group was at the computer station in the classroom, formatting a spreadsheet that had various columns. The first column had names of the dishes which the group members had over dinner last night, the second column had the main food ingredients in the dishes and their picture, and the third had its carbohydrate content per 100 grams. They were working on creating a graph in the spreadsheet that would compare the carbohydrate contents of various foods. The teacher went around group by group asking questions like which food has the highest and lowest carbohydrate content, what will happen if you double the amount of potatoes in your diet- in general prompting them towards higher order thinking and structuring their task.

In the example above, the technology is integrated in the curriculum and pedagogy. The teacher selects and applies a variety of applications that best suits the task and the learning process; in this case use of spreadsheet and Internet. Thus, technology is more at a service to the learning process and students facilitated by the teacher play an active role. The example above also emancipated the collaborative learning environment carefully designed and facilitated by the teacher. It is best implemented within the classroom than in the computer labs. Moreover, such an approach brings together technology, subject matter and pedagogy is thereforecalled an integrative approach. The theoretical framework rooted in such an approach is described on the next page.

Theoretical framework supporting an integrated approach: Teacher's simultaneous use of Technology, Pedagogy, and Content Knowledge brings into play what is known as a TPCK model by Kohler and Mishra (2009), and originally based on Shulman's framework of PCK. This framework underlines that Technology, Content or subject matter, and Pedagogy are not isolated components. Successful integration is possible when the teacher assimilates his or her Knowledge of Pedagogy, Knowledge of Content, and Knowledge of Technology. This framework clearly explains why professional development of teachers in technological skills did not yield integration of technology in classroom. A full version of this framework by Mishra and Kohler (2009) is available.

3. RELEVANCE OF ITE APPROACH IN TRUSTS SUPPORTED PROJECTS

It is not unusual to find teaching aids like flash cards, abacus, drawing, painting, and craft material, early reading books, blocks, and puzzles at an education project site. These concrete applications or hands-on learning tools have been proved as useful learning materials for younger children. But as the children reach pre-adolescence and enter an abstract reasoning stage of cognitive development, these materials cease to challenge and nurture the advent of abstract and higher order thinking skills.

The basic literacy skills and life skills provided in the adolescent education projects are very useful tools for adolescents who had dropped out of mainstream education. These skills are precursors to bridge the opportunity gap, but in itself are not enough to help this age group indulge deeply with the subject matter appropriate to their potential cognitive stage. The state textbooks, blackboards, poorly trained teachers and certainly TLMs designed for children are poor aids for learning and teaching.

Technology if used appropriately promises to deliver the learning lift required at this age group. Firstly, it provides a context which is otherwise not accessible in the real world. Thus, for example, a group of eight graders exploring the NASA website as an extension to their geography chapter on the Solar System is a virtual learning experience which otherwise cannot be matched through traditional ways or with TLMs. One of the live examples would beduring the Trusts' field visit, a bunch of secondary students were so engrossed in finding a picture of Humayun and its tomb on the Internet which was otherwise conveniently missing in their textbook chapter on the Mughal emperor. Some of the student-created projects from the pilot show student use of pictures form the Internet which has rivers, mountains and other geographical content from all over the world. This kind of exposure and application of technology is in tune with the latest learning theory for the digital age, connectivism (Siemen, 2004). Where connecting with information available outside one's repertoire plays a vital role in learning.

Authentic activities like students creating a video for community awareness and using the video as a tool for improving English conversations can prove to be powerful technology tools for direct impact. Nevertheless, using Internet communication tools to showcase self created technology artefacts and connect with the outside world are now plausible avenues, opening a wider scope to not only connect but also assess the live impact.

Computer and Internet as tools for learning provide a scaffolding for self constructed learning at an individualised pace. The outputs of such a learning environment can easily be demonstrated and therefore, the instruction can be any time analysed and modified. For example, the student created projects from the pilot were analysed after 2 to 3 months of the project initiation. This helped develop the next set of training for the teachers. The teachers were asked to reduce the number of projects and motivate students for more in-depth projects. The opportunities are endless and will even grow with time. The four main objectives of the ITE approach for the Trusts' projects are summarised below:

Objectives:

- Bridge the digital divide and foster digital citizenship
- Create learning interest, attendance and retention
- Learning achievement
- Improve learning processes and pedagogy

Bridge the Digital Divide and Foster Digital Citizenship: Most of the places where the Trusts' education projects are located, placing a computer itself in a learning centre is an incentive for the students to attend. For many children, it is their first exposure to computers. The government scheme has computer/s in government schools, but in remote areas, these are either non-existent or locked up for safety. In places where it is used, the student to computer ratio is very high and therefore, exerts not much value for existence. In some of the Trusts' projects a few computers are visible and children are often seen using paint and brush software or playing games. Bridging the digital divide also entails proficiency in technical skills ensuring a better future for the children and adolescents supported under the education projects of the Trusts.

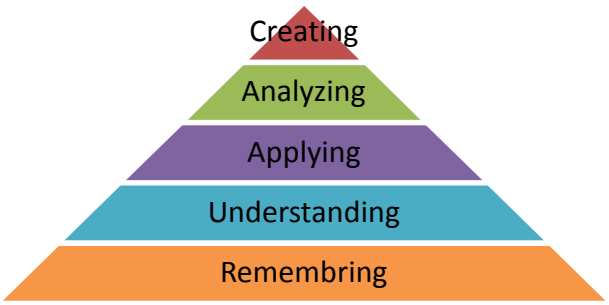
Thus, one of the objectives of the ITE project is to bridge the digital divide in all Trusts' projects and offer an opportunity to the underprivileged children to be responsible digital citizens. Digital citizenship here refers to the ethical use of technology for life-long learning and exhibit leadership for digital citizenship (NETS, 2007). The teacher training curriculum has a substantial component on the ethical use of technology both for teachers and students. The student-centered pedagogy implemented within ITE like group projects, authentic tasks will nurture leadership abilities in the adolescents to thrive and sustain as digital citizens.

Using computers as a tool for their own learning will help these students grow as digital citizens ready for their counterparts raised in a digital environment.

Create Learning Interest, Attendance and Retention: There is no doubt that placing computers in the learning centres will itself bring up the numbers in the classroom/learning centers. There is also anecdotal and quantitative data from the pilot project to support this claim. In the pilot, it was found that adolescents who would otherwise spend all their time wandering and fishing, started spending hours in the learning centre making subject focused projects.

ITE will create an interest in the subject matter as given in the school textbooks. This genuine interest in learning and the opportunity to create something of their own, using computers, cameras, and phones will attract the learner to knowledge creating resources. Also, this will, in itself make school relevant and connected with the learning centres.

Learning Achievement: The well known and used Bloom's Taxonomy (revised-David and Krathwohl, 2002) has different learning levels. Bloom's Taxonomy helps frame statements of learning expectations from students as a result of instruction. These levels are: remembering, understanding, applying, analysing, evaluating, and creating. The current situation of learning in schools stops at remembering and understanding. The ITE approach by design has apparatus to help students reach the application, analyse and create levels. However, unlike Bloom's Taxonomy, the attainment of learning levels in the ITE approach may not be linear. Students while **creating** a diet chart in a spreadsheet (using computer) will **apply** the understanding of chapter on nutrition, **analyse** its different components, and **apply** in a given problem based scenario.



Besides, student created projects, school grades can be expected to improve through this approach. Standardised tests in schools often require students to respond from remembering. However, content processed at different cognitive levels do tend to improve remembering.The pilot shows an overall positive trend in test scores, this will be discussed under the section under outputs from the pilot.

Improve Learning Processes and Pedagogy: The technology as an information processing tool takes away the traditional information giving role of the teacher. This basic functionality of technology by default requires the teachers to take a facilitative than an informative role. The ITE approach requires the teachers to play a central role. The teachers design instruction and integrate technology and then facilitate students to process the content to create learning artifacts using technology. Thus, this approach by design requires a student-centred pedagogy.

4. THE PILOT PROJECT IN MURSHIDABAD

A very first attempt to introduce and implement ITE approach for the adolescents from the underprivileged background was launched this year by the Trusts. A three year pilot of the integrated approach supported by the Trusts was implemented by the designated ProgrammeOfficer and ProgrammeAssociate in the villages of the Kandi subdivision in Murshidabad, West Bengal. The project was implemented in the existing Trusts-funded study centres for Muslim children (90 percent) in the rural villages of the Kandi subdivision.

These supplementary centres are for students in grades 6 to 12 and basically help children stay and not dropout from secondary schools. Each centre has multiple small rooms where the students come before and after school hours and do their home-work and receive lessons mostly in a teacher centred method from their coaching teachers. Teaching and learning in student centred pedagogy was far from reality at these centres.

Teacher training for ITE took place in two modules spread out during this year. The first module was conducted as a four day workshop in May 2012. The purpose of the workshop was to instil student centred pedagogy and help the teachers to understand and practice integration of three computer applications within their lesson plans and therefore, within the curriculum standards. Based on the feedback and implementation in the field, a second workshop was conducted in October 2012. A brief structure of workshop 1 and workshop 2 are available.

During the first workshop, the computer skills of these teachers ranged from nil to typing and using excel sheets. There were four computer teachers who aided the teachers in the workshops' tasks. The teachers were also engaged in making individual student projects using three computer applications. These projects were made by all the teachers on topics from

the course work they teach. They were asked to make these projects as if they were students and this was part of their assignment as designed by the teacher in the lesson plan.

Thus, for example in the morning, the teachers would prepare lesson plans for a topic that would be most suitable to integrate spreadsheets. One of the activities in the lesson plan on a subject would be: students will make spreadsheets. These lesson plans were discussed and ratified by the facilitator. In the afternoon, the teachers would make the spreadsheets project as if they were students. For example, a geography chapter on the climate, where there will be scope for students to use spreadsheets and Internet to plot the weather of different places and create graphs for comparison. The teachers were given ample practice to plan the lesson and activities form their course work where spreadsheets, multimedia projects, and DTP would be more meaningful for the student's use of technology. It was reinforced that these student-made projects will be integrated as one of the steps in the lesson plans.

The learning curve was huge, as first they had to select the lesson they would teach where these application were best suited for students to make projects. There were some teachers who had never operated a computer, and there were teachers who could use cell phones to access Internet and take pictures with it. It was emphasised that each teacher will make lesson plans and student-made projects related to all three applications (DTP, Spreadsheets and Multi-media). The real issues related to technology and lack of resources was dealt each day. For example, some teachers used cell phones to click pictures, took pictures from the environment when Internet was slow, integrated video in the multi-media projects, collaborated with peers to seek help with the projects, dealt patiently with virus on computers and so on. The workshop did not directly teach any technological skills, but these were learned with hands-on practice. Initially there was lot of confusion in understanding the integrated approach, teachers' role and student-made projects. Moreover, the teachers working in groups making their individual projects and seeking help from the computer teachers kind of mirrored the scenario they would expect to be when they will implement this approach with students at the coaching centres.

The most difficult part was to facilitate them in making their lesson plans, selecting topics where a particular computer application would fit. Towards the end, they had lesson plans and student-made projects (which they actually made imagining themselves as students). Each teacher presented their lesson plan and the artefacts they created as student-made

projects. Some of these artefacts were very impressive. For example, an eighth grade teacher made a lesson plan for English grammar on nouns, adverbs, and verbs. In his lesson plan, he integrated students making of a multi media project demonstrating an understanding of nouns, verbs, and adverbs. He then made a student-made project where he chose a short story from the text, collected and inserted pictures relevant to the story, typed the story from text on each slide, hyperlinked each noun, verb, and adverb in the story to its respective slides identifying and describing the respective categories. Thus, for example, the hyperlink of the word Ishwar would lead to a slide called "Noun" and would describe what a noun is. Similarly the word "learn" would be hyperlinked to the slide called "Verb" and would describe what a verb is.

Another example of a spreadsheet project on the 6th grade geography chapter is of Weather and Climate. The lesson plan involved textbook reading, discussion, Internet surfing of climate and weather in different parts of the state, students using Internet to record weather in the different cities of West Bengal then the student making a spreadsheet recording and charting the weather. Thus comparing and contrasting weather in the different cities and rural areas and prompting towards scope of discussing the causal factors behind the difference in temperatures. The teachers were further challenged to use formula and "what if questions" which are typical higher order thinking cues in spreadsheets. Thus, if Kolkata is 36 degrees and Murshidabad 32 degrees today, what if due to global warming these temperatures were increased by 5 percent in 10 years, use formulas in spreadsheet to calculate 5 percent increase in temperatures in 10 years.

This course and workshop is aligned with the conceptual framework of TPCK. Where the teacher's hands-on experience with designing integrated activities, will generate knowledge in technology, knowledge in pedagogy, and use their knowledge in the content. Such exercises were rigorous but played a significant role in understanding the integrated technology concept. This hands-on practice helped them to understand the integrated approach and gain confidence in carrying it out with their students in the coaching centres.

Outputs from the Pilot

The ITE approach has been successfully implemented and results of its five months have been compiled as follows:

a. Conceptual understanding of the teachers: The preliminary data was conducted to understand the conceptual understanding of these teachers on the concept of integrated technology approach during the first workshop. The conceptual understanding was during the workshop studied through pre and post definitions. The pre-definitions were collected after briefly discussing on what integrated technology means in the classroom. The post-definitions were collected on the last day of the workshop when the teachers had lots of hands-on practice in developing lesson plans and projects based on the integrated project. The pre-definitions had comments that defined the approach as a process of integrating computers in classroom, importance of students learning technology, and importance of computers.

The post-definitions in general, captured themes like teacher made lesson plans, project based, within the subject, use of textbook, use of computers, students make projects using word, excel or power point. A majority of responses described the approach descriptively, reflecting the process where teachers choose a subject; make a lesson plan, and students make a project using a technological application. This pre-post comparison of their definition indicated that when they had first-hand experience exploring and creating artefacts in the integrated approach, they acquired a basic understanding of the approach.

During the second workshop in October 2012, the teachers demonstrated a clear understanding of the ITE concept. They were prepared to use video and Internet based learning activities as integrated tools in the curriculum. The teachers, who were new and replaced the teachers at the first workshop, did not find it very difficult to understand the concept because they had learned through practice at the centres by observing other teachers.

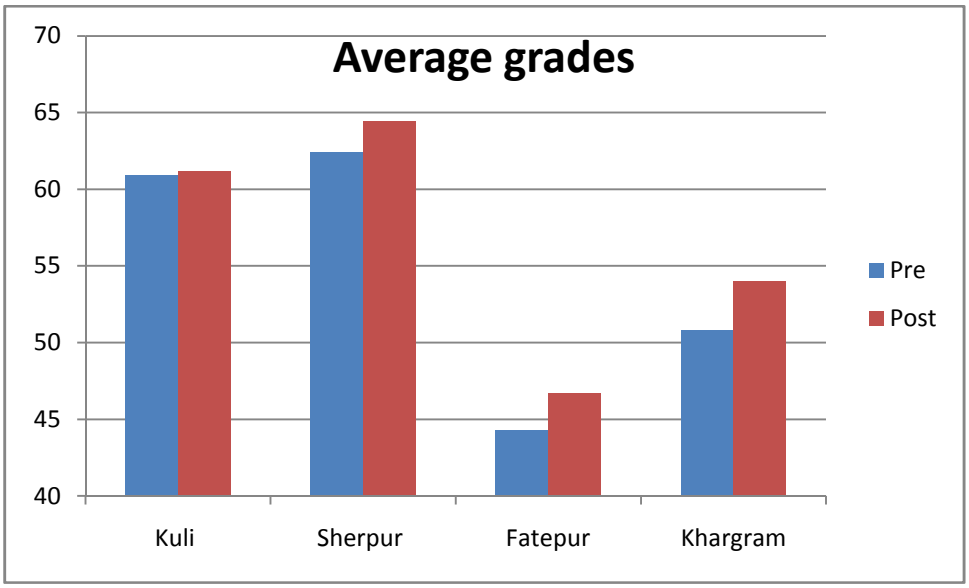
b. **Learning Achievement:** Learning achievement as one of the objectives of the project could be best gauged by student created learning artefacts**.**

- **Students created Learning artefacts using Computers and other Technology devices:** Many student-made projects were collected and it demonstrates a good level of student interest in the learning content, compilation skills, creativity, and technology skills. This observation was also made during the centre visit in October 2012. Two centres out of four were visited in October 2012. It was observed that students were using technology applications to create their class projects. An instant topic was picked up by the designated Programme Officer, and the students were asked to make a project using PowerPoint. The students responded very well,

could find pictures and information from the web, textbook, and could compile the resources into slides. This was definitely a 360 shift from their learning process before the ITE approach, which was mostly based on rote learning. The student projects are available with the designated Programme Officer.

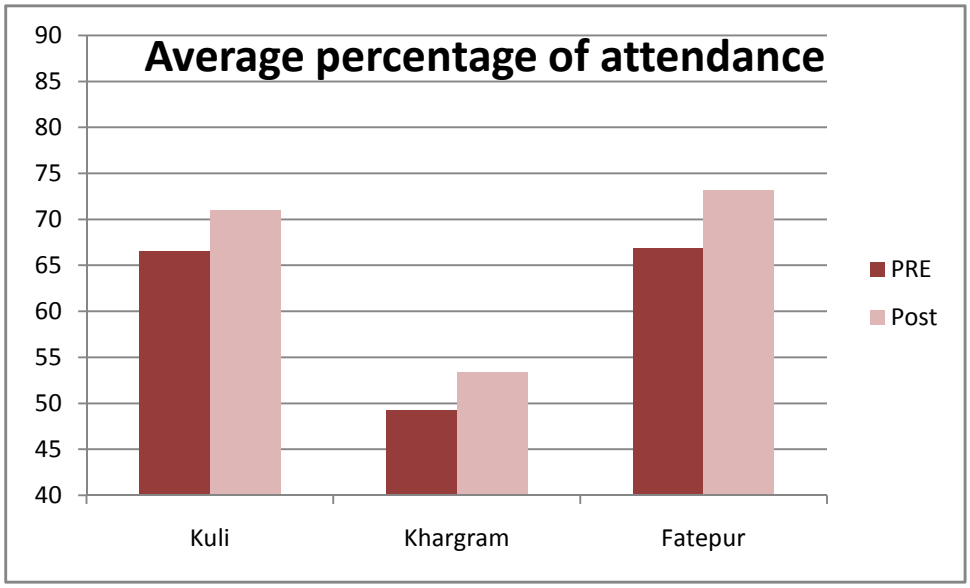
- The teachers were further instructed to challenge the students, probe more, and encourage them to produce content in their own words. To improve the quality of the projects, teachers were instructed to reduce the ITE class projects to only two per month, use competition to motivate the students, and upload best projects onthe SDTT-Street Survivors web site. This is an online database to be created to post student projects.

Test Scores: The RTE act has discarded grade retention (repeating in the same class).This has released a lot of anxiety and time for the teachers and students to try out a different pedagogy till the eighth grade. Although test scores most often capture memory or remembering (first stage of Bloom's Taxonomy), its significance in the Indian context is crucial for completing high school. Since the ITE approach only deal with topics in the textbook, its relation with test scores were compared. The test scores in April and May were averaged as pre ITE scores, and the test scores from June to September were averaged as post ITE test scores. The data for same students were analysed for all five months. Any absenteeism in a single test was adjusted in the overall total for a fair average. If a student data was found missing for more than three subjects in the same month, then that case/student data was deleted from the data sheet. The graph below indicates an overall improvement in the average test scores from pre to post ITE.



This data is preliminary but an initial positive trend is motivating to structure periodic collection and follow-up of test scores.

Attendance: During the second workshop, the teachers demonstrated through role plays that due to the ITE approach, the attendance of the students and their punctuality has improved. The following chart demonstrates the average attendance from pre (average April and May 2012) to post (average June to September) ITE project period. The data from the three centres indicate an increase in the average attendance in the centre after the ITE project. This data also overruled the expected attendance decrease in the month of August (post ITE period) due to fasting for Ramadan (about 90 percent students are Muslim).



The teachers also shared cases of adolescent boys who used to otherwise loiter around fishing, but now spend hours making projects in the computer kiosks in the centre. The teachers try to use this platform, to develop their interest in learning and gradually motivate them to attend schools.

c. **Learning Process and Pedagogy:** During the Trusts visit by the designated ProgrammeOfficer in September 2010, the supplementary education centres used the usual coaching style of teaching where rote learning was reiterated as a regular teaching practice. In October 2012 at the time of the second ITE training workshop, the scenario changed. During this visit, it was found that besides using ITE, the teachers were asking thought provoking questions to the students, were using library, using maps, small games, and in general seem interested and motivated using methods other than lecturing. Some of the teachers indicated that this is due to the lesson planning activity which they learnt as part of the ITE training. In general, this was an indication of acknowledgement in students constructing their own learning and projects, and their role as facilitators.

Technical Difficulties in the Pilot: TheKandi subdivision is a rural area and electricity is not continuous. A request for strong power back up has been brought up by the organisation and is currently under process for budget reallocation. With this power back up, a lot of time will be saved. Internet connection is also not regular in all the centres, and needs some more investment to install a reliable connection.

5. OTHER ITE APPROACH INITIATED/EXPLORED WITHIN THE TRUSTS' PROJECTS

The projects in East and North East that has computers in their sanctioned budgets were given an initial training workshop on ITE. The first and the second workshop hosted by the pilot project organisation included two teachers from Suchana, in Birbhum-West Bengal. CINI hosted another workshop and included 27 of their teachers from the current Siliguiri and Murshidabad project in West Bengal. Other partner organisations included here were Asha Kiran from South Odisha, VHAT from South Tripura, and Gramya Vikas Mancha from Assam. This orientation workshop has oriented them to use the ITE approach. Gramya Vikas Mancha in Nalbari-Assam has successfully completed a one year pilot of the adolescent education programme. The ITE approach has been integrated in this programme. Two of their staff members were also included in this orientation and they were confident about implementing this approach in their new adolescent education project. The orientation gave plenty of

hands-on activities with technology and its integration. Reports on all three workshops are available.

Pre-visits for selection of partners from other regions: Other ProgrammeOfficers from West, South and Northern India were consulted to suggest organisations where the ITE approach can be integrated in the existing project. Although, there are many projects that need the ITE approach, certain criteria have been set for selection. First of all, it should be an organisation which has demonstrated student centred teaching and learning practices, has the willingness to adopt ITE, has the capacity to disseminate this approach to other organisations in their geography, and do not have the baggage of any readymade software brand created or promoted through their organisation. As such six organisations were selected. Each of these organisations' field areas were visited by the designated ProgrammeOfficer for ITE. Thereby, one out of six organisations was not selected due to their lack of preparedness and current status of the existing project. Below are the details of the selected organisations.

a. Vikramshila: Current partner since the year 2008. Implements supplementary education centres in association with the Kolkata police for 3 to 18 years old children in Kolkata's crime prone areas. Works as a resource organisation for the government and other organisations in the area of teaching pedagogy.

b. Suchana: Small organisation in Bolpur-Birbhum district of West Bengal. Has demonstrated the student centred approach for Kora and Santhal tribal children. Have transformed these children into confident, English speaking and tech-savvy individuals in the community. Last year, they were invited by the secondary government schools to start ICT in education. They have responded very well in hosting field visits for other organisations and have the potential to step up as a resource organisation. Two of their teachers have also attended two trainings in Street Survivors and have found opportunities to implement the ITE approach in their centre and a neighbouring government school.

c. Nalanda: Has been the Trusts' partner since the year 1998. Has very successfully transformed, the adopted Madrasas in Barabanki and Sitapur as learning centres, ready and open to learn the child centred approaches. They have been engaged with training of many other organisations and are one of the pioneers in modernising Madrasa education. The community, teachers and the staff at Nalanda

have shown keen interest and readiness to adopt the ITE approach. Although they only work for the teachers who teach from grades 1 to 5, they have acknowledged that grades 4 and 5 will benefit from this approach.

d. PVCHR: The designated Programme Officer for ITE had visited PVCHR in the year 2010. They have been working for Muslim children in Varanasi through modernising Madrasas. They can work on the ITE approach under the guidance of Nalanda.

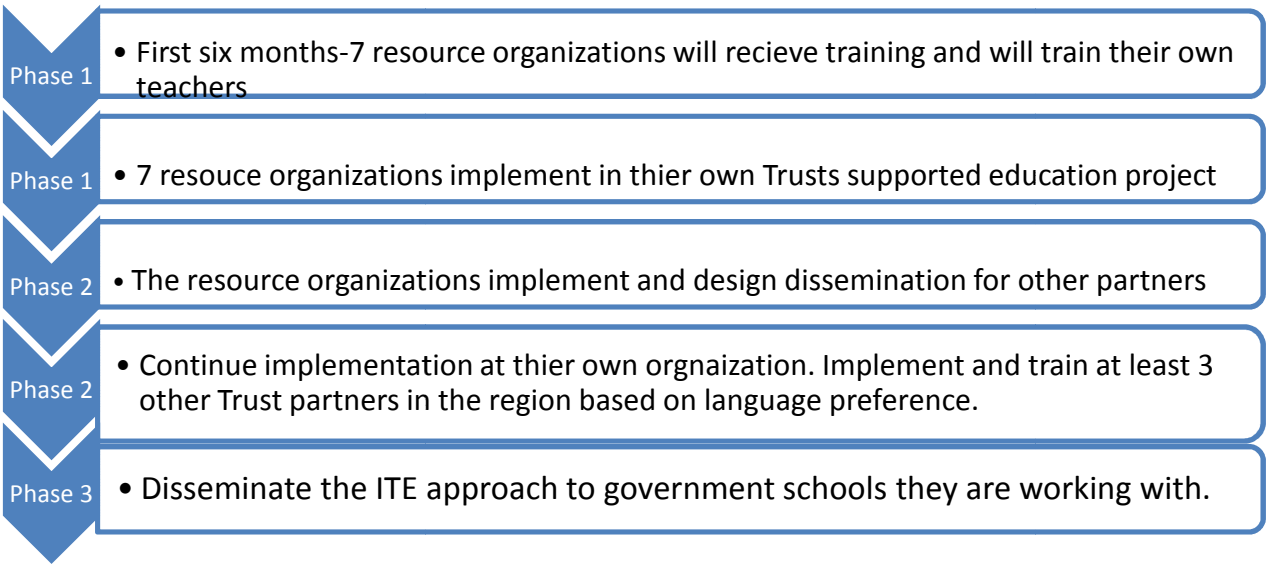
e. Mahita: The Hyderabad based organisation has been the Trusts' partner since 2007. They run supplementary centres in the slums of Hyderabad mostly attended by children and adolescents who go to government schools and/or Madrasas. They are very well connected with the education district administrator and would like to take the ITE approach to their centres as well as about 5 government schools which their centre children attend.

f. CINI, West Bengal: CINI, West Bengal had been part of the orientation workshop on the ITE approach. Apart from their field areas in Murshidabad and Siliguri, they as a resource organisation have the capacity to take this approach forward in Dinajpur-one of the most backward areas in West Bengal.

g. Gramya Vikas Mancha: For the very first time, an ITE project has been proposed (in circulation) integrated within a Doosra Dashak project. The ITE approach will be used in 165 days residential camps for dropout adolescents and then in learning centres in the villages targeted by Gramya Vikas Mancha. Two of the teachers from the organisation are already trained in this concept and with more training will guide other teachers.

6. PROGRAMME DESIGN AND APPROACH

This ITE approach will be offered to all Trusts supported projects in elementary education, adolescent education and child protection. A resource team will be prepared from the 7 resource organisations mentioned in the section above. Based on their geography and expertise these resource organisations will disseminate ITE trainings to other partners. Before the resource team takes on the training role, they will have to implement the ITE approach within their own organisation for at least a year.



Training of the resource organisations (TOT): The designated Programme Officer with the help of other education team members will design and conduct a 'train the trainer' module for all the selected organisations. These organisations will send the best of their representatives for this TOT. Implementation plan after the TOT and programme output documentation and measurable will also be designed during this TOT. After which, these selected organisations will implement the project in their existing projects. Student learning artefacts will be conducted and a six monthly visit to evaluate the progress will be conducted by the education team of the Trusts. After a year, the progress will be evaluated, a second TOT will be organised and a plan will be made to disseminate ITE in other projects by the Trusts' partners. These seven organisations will then work as resource organisations and conduct training for other organisations. The diagram above narrates the design.

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