RISHI VALLEY EDUCATION CENTRE

Krishnamurthi Foundation

The RiVER Learning Ladders - Making Education Easy, Accessible and Joyful

MILLENNIUM ALLIANCE
Inspiring Innovation. Sharing Solutions.

The right to education is a fundamental human right and plays a pivotal role in shaping the developmental journey of a child. The Government of India's initiatives such as Sarva Shiksha Abhiyan[1] and the Right to Education have played an important part in reducing the education disparity in the country. Yet many children, especially from the economically vulnerable backgrounds, fall between the cracks.

A child's educational journey starts at the primary school level, where the foundation is built. Thereafter, how the child develops is subject to their access to schools, quality of teachers as well as the curriculum. This is especially true for children belonging to economically vulnerable backgrounds with limited or no alternatives to how and where they access education. Many a times economic compulsions force children to drop out of school at a young age and enter the work force or take care of the household and their younger siblings. Even if the child was to re-join school months later, they would still be far behind their peers, resulting in a lack of interest and motivation to continue with their education. Additionally, in many schools in rural India, a single teacher handles multiple grades in one classroom, this puts immense burden on the teachers and impacts the quality of education provided.

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[1]SSA is Government of India's flagship program for achievement of Universalization of Elementary Education (UEE) in a time bound manner. The scheme was started in 2001. This was followed by the RTE Act, 2009, with a similar aim of universalizing elementary education

Multi Grade Multi Level (MGML) program

To counter this dual-problem, the Multi Grade Multi Level (MGML) program titled 'School in a Box' was initiated by the Rishi Valley Institute for Educational Resources, or RiVER in 1993. The program consists of a network of Satellite Schools where a community-based academic curriculum is taught by trained village youth. The curriculum is grounded in up-to-date information, framed in the local idiom and integrated with various creative activities.

The Multi Grade Multi Level (MGML) program is structured so a teacher in a single classroom is able to teach children of variying ages and abilities who would normally belong in different grade levels. A multigrade classroom, also known as mixed age classroom or vertically grouped classroom, accommodates children of different ages with varied learning backgrounds.

On the other hand, students in monograde classrooms are horizontally grouped so that pupils of more or less the same age learn together. The pedagogy is based on the assumption that a numbered class, such as 7 or 8, roughly indicates a student's actual or potential achievement level in subjects taught in that particular classroom – reading, writing, arithmetic, history, geography and so on. Teachers generally teach from prescribed textbooks and students keep up with the time schedule set by teachers.

The MGML program is an activity-based 'Joyful Learning Approach' which focuses on the primary schools (Grade 1-5) and allows children to learn at their own pace. It also eases the burden on teachers and gives them the flexibility to handle multi-grade classes in a creative way. The creativity of this methodology was well-aligned with the Millennium Alliance's vision of promoting local innovative solutions. RiVER was awarded by the Millennium Alliance (MA) in 2016 with a grant of INR 60 Lacs, to implement the MGML model in 6 government schools in Andhra Pradesh for a period of two years.

RiVER Learning Ladders

RiVER's MGML program consists of an educational kit comprising of small meaningful modules called 'RiVER Learning Ladders'. This Ladder traces the learning trajectory of the students. According to Rama, Co-Director of RiVER, "On each ladder, there are milestones which can be considered a level and each milestone will have steps which are sub-levels".
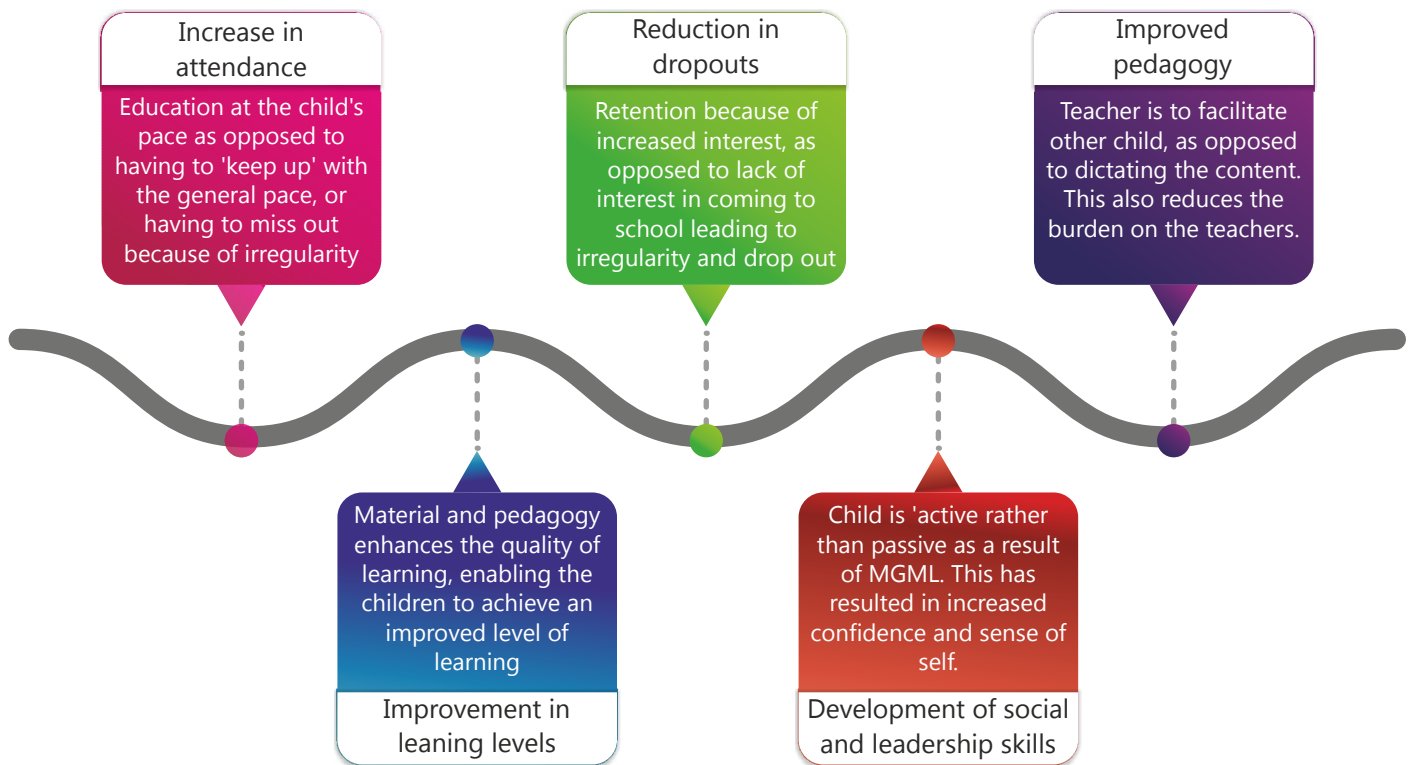
The Ladder is central to the RIVER pedagogy. It has the flexibility of a template with a variety of content based on cultural, linguistic and regional considerations, filled into its flexible spaces. The most contingent features consist of the content, guided by the curriculum filled out by cards or textbooks. These are influenced by theories of learning, cultural features and textual preferences that students mount on to the Ladder.

Each milestone consists of carefully graded cards marked with a logo of animals, toys, birds, etc. mapped against a subject-specific "Learning Ladder". These cards explain a concept, its application and ways, and means to evaluate students' understanding of the concept. The series of cards is supplemented with puppetry, folk art, songs, local stories & legends of the villages in which the schools are established to better facilitate education within the local context. Students in classrooms work in smaller groups, which are formed along the following lines: there is a teacher-assisted group to which students embarking on a new unit are assigned; peer assisted groups in which more advanced students assist younger ones, and self-learners who work on their own.

The program allows a child to mark his or her current level of understanding on the ladder within the broad confines of the milestones, creating their own individualistic path from grade one to five. A student who may be in level 3 Mathematics can sit with students in level 4 English. In this way, it frees the students from the single textbook regime; each student is able to move at his or her own pace through a subject, mapped by teachers. So, even if the student has to leave school due to economic obligations, upon their return they can continue from where they left off. This system also encourages self-learning, peer learning and teacher support, depending on the level they are at. Therefore, since each student is moving at his/her own pace, it makes them more independent, creative and allows them to get personalized attention from the teacher. This unique ladder learning approach has also been certified by the United Nations (UN) as a pedagogical innovation.

The MGML program enables each student to move at their own pace and imparts basic life skills such as creativity, logical and critical thinking along with social and emotional independence. The program also encourages community participation and connects local stories and legends to the syllabus, thus preserving the local culture and traditions.

Due to the short duration of the project in the state of Andhra Pradesh, quantitative data is limited. However, insights gained from interactions with the students and teachers paint a positive picture of improvement in learning levels coupled with emotional and social development. Below are some of the benefits of the program being run in the Millennium Alliance supported schools:

Increase in attendance
Education at the child's pace as opposed to having to 'keep up' with the general pace, or having to miss out because of irregularity

Reduction in dropouts
Retention because of increased interest, as opposed to lack of interest in coming to school leading to irregularity and drop out

Improved pedagogy
Teacher is to facilitate other child, as opposed to dictating the content. This also reduces the burden on the teachers.

Material and pedagogy enhances the quality of learning, enabling the children to achieve an improved level of learning
Improvement in leaning levels

Child is 'active rather than passive as a result of MGML. This has resulted in increased confidence and sense of self.
Development of social and leadership skills

The process instils a sense of community ownership.

"Communities have pooled INR fifty thousand to two lakhs and painted the schools, provided tables, blackboards, writing supplies and planted trees. They look at the MA schools like it is tables, blackboards, writing supplies and planted trees. They look at the MA schools like it is their own" - Rao, River

Promoting Digital Literacy in India

Children using tablets at the MA school

According to the Mandal Education Officer (MEO) from the KN Kota Mandal, what attracted the government to the Millennium Alliance (MA) funded schools was the simple concept of "learning by doing". The use of tablets, the attractive material and the committed and trained teachers have ensured "holistic development of the students."

According to him, the tablets are necessary for children to not just be aware of how to use technology but to be proficient in it. The material stimulates the mind and promotes learning as it makes the children "eager to touch them, use them and learn from them". He went on to say that the MA supported schools have also been able to develop the social skills of the students, who are now more confident, active and no longer "shy away from strangers"

Digital Technology in RIVER classroom

> "All children in the catchment area of the MA school in this mandal are going to government rather than private school. The existence of the MA school has changed the mind-set of the community. Parents feel the MA school is more valuable." - MEO, KN Kota Mandal

The shift to the MGML methodology has had a two-fold impact on the economic and educational dynamics of the mandals. Firstly, reducing the educational expenditure per household as families from the local community now see value in the quality of education provided and choose to send their children to government schools. Secondly, this decision by parents has forced private schools to improve their educational standards. The integration of technology, such as the use of tablets, along with the traditional methods is also in line with the government's vision of promoting digital literacy in India.

Funding and Strategic Partnerships

The RiVER's MGML methodology is being used in **sixteen states** in India including Tamil Nadu, Chhattisgarh, Uttar Pradesh, Bihar, Jharkhand and Madhya Pradesh. It is also being used by several countries such as Ethiopia, Ivory Coast, Germany, Mozambique, Nepal, Sri Lanka and Bangladesh, where it has received extremely positive feedback.

Children studying in dynamic groups using the activity cards in the MA school

Chhattisgarh, 2007-2015
- The *Srujana* initiative comprised 36,000 schools in the state where RiVER's MGML methodology was practised; more than a 100 were in Dantewada district - this program became a grass-roots movement there
- School teacher, in conjunction with RiVER experts, developed the teaching materials

Government of India - UNICEF project, 2003-2006
- In cooperation with GoI and UNICEF, RiVER launched a project with an aim to provide an integrated package of quality education to children in approximately 1000 schools in each of twelve states in India, totalling 12,000 schools
- This project was part of the Sarva Shiksha Abhiyaan, a program for universalisation of Quality Elementary education

RiVER has successfully raised INR 1.26 Crore from the District Education Department, Chittoor District, Andhra Pradesh for the MGML Project. They were successful in implementing the MGML methodology in 100 primary schools (Grades 1&2), benefitting 2,500 children and training 200 teachers over a period of one year.

The Millennium Alliance funding and handholding support played a pivotal role in the expansion of the project in Andhra Pradesh, RiVER's home state. According to Y.A Padmanabh Rao, Director of RiVER, "MA supported schools inspired the government to take note of its success." The success of these schools brought it to the attention of the Commissionerate of School Education (CSE), Andhra Pradesh and the state's Sarva Shiksha Abhiyan (SSA) Project Director, who visited the schools to evaluate the RiVER model. The effectiveness of this methodology led to the selection of RiVER by the state government to implement it's pedagogy under the AP State Council of Educational Research & Training (APSCERT) supported Ananda Lahari Abhyasana (ALA)[2] program for all government primary schools.

Since 2017 this program is being implemented in a phased manner, covering 25,600 students of grades 1 & 2 and 2,694 teachers across 1,347 schools in Andhra Pradesh in the first phase of Ananda Lahari Abhyasana (ALA). The government further increased the number of schools to include grades 3 – 5 as well, raising the total number of schools to 1,571 with 69,327 students of grades 1 – 5 and 3,142 teachers in the second phase.

The illustration below highlights the impact of the MA funding on the growth of the MGML Project		
2016-17	2017-18	2018-19
6 schools	1,347 schools	1,571 schools
240 students	25,600 students	69,324 students

Sustainability and Scalability

Having scaled to 1,571 schools in the state of Andhra Pradesh, the RiVER team has ensured that the MA funding is being used for government schools in order to showcase the effectiveness and utility of this methodology. Proper training was given to the government teachers, along with the onus of responsibility to tailor the program to suit the needs of their students. This ensured that the program continues to run strong once RiVER steps away.

Additionally, RiVER pedagogy and Interactive Teaching and Learning Materials (TLM) have been integrated into the AP SCERT curriculum and textbooks for grades 1-5. This has been achieved through combined efforts of professors from the State Council of Educational Research and Training (SCERT), at least two lecturers of the District Institutes of Education and Training (DIET), four strong government teachers, five practitioners, the Mandal Education Officer (MEO) and at least one representative from all the districts in the state. This group of individuals collectively ensured that there was government ownership in terms of the curriculum development. ALA is also involving RiVER in equipping every classroom with RiVER Learning Infrastructure (RLI).

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[2]ALA seeks to strengthen the capacity of all relevant stakeholders involved with the education system in the state related to Teacher Training, Curriculum Development, Technology and Process sustenance.

" To truly create impact you need to work with the Government. "

Financial sustainability is another aspect that the program takes into account. A school within this program can be run within INR 1,40,000. This reasonable cost is something the government is willing to bear to ensure that students and teachers across the state receive this innovative approach to education.

Community driven support and donations

Community involvement is another aspect that has been a key factor in the success and long -term sustainability of the program. The MA schools received extensive support from the community such as donations of INR 20,000 to the MPPS Narlapalli school to install a water purifier in the school and a donation of INR 100,000 to the KN Kota school for procuring new furniture, sound system, a computer as well as for overall infrastructure upgradation.

Overall, the MA supported RiVER schools have had a sustained positive impact on the quality of primary education in rural Andhra Pradesh for the past three years. It has also successfully integrated its pedagogy with the government curriculum, impacting primary education at the state level. Currently, schools are operating without assistance from RiVER, which speaks for the sustainability of the project.