

## DEVELOPING TLMS WITH THE USE OF WASTE NEWSPAPERS FOR STUDENTS OF CLASS 1 TO 8

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Shri Ramjibhai has been working at the Tokariya Primary School of Palanpur taluka of Banaskantha district for the past 15 years. Years of experience have taught him the importance of teaching aids in teaching. He has been using teaching learning materials (TLMs) in his class and most of his aids are inexpensive and sourced from the surroundings. He even enlists the help of students in finding them, thus enriching their learning experience. Besides, the students also profit in terms of new skill development, and which they can use to their advantage.

During his work as a teacher, Shri Rotatar noticed that sharpening of pencils left behind shavings which he thought he could use constructively as teaching aids.

Firstly, during the Pragna (Activity-Based Learning) class, the students were asked to collect their pencil shavings in a cup which was placed in the room instead of throwing them in the

dustbin. Next, in the drawing class, the students drew outlines of animals, birds, flowers, fruits and shapes. They then pasted the pencil shavings within the outlines, thus, giving creative shape to the pictures. The drawing teacher then collected the drawings and put them in file. The children also color these shavings and give wings to their creativity. The activity was a perfect example of best out of waste. Buoyed by his success, then turned his attention to newspapers, leveraging them for a number of activities some of which are listed below:

- Rhymes
- Collection of sayings and quotes
- Birds
- Animals
- Stories
- Puzzle and riddle collection
- Children's songs
- General Knowledge



An exhibition of innovative material produced by a teacher



Literature made from news papers and other waste material

- Local historical knowledge of Banaskantha district
- Tourist spots in Gujarat
- Tourist spots of India
- Tourist spots around the world
- Akbar Birbal stories
- Thought for the day
- Inspirational stories
- Information about successful women and inspirational stories about women
- Political Science
- Collection of scientific knowledge (192 items in all),
- Information about Scientists both in Gujarati and English.

Some of his other innovations include: shapes of numbers from 1 to 100 from waste pieces of bangles; a file of all the important and significant days from January to December with pictures; yoga and health file; and a file on medicinal herbs. Story charts were also prepared; for example, 38 charts using collected articles, coloured pictures and stories related to Gandhiji. These charts were pasted on hard board, each of size 3 feet by 2 feet. This set was taken to other schools as well. However, it was difficult to carry these educational charts from one place to another and required some means of transport, and so this activity was discontinued. In its place, small cuttings from newspapers and hand-made notes were prepared and pasted on canvas cloth with Fevicol—the cloth was six metres long, and carried 500 pictures. This canvas cloth could be rolled up and carried easily by one person. This teaching aid has been exhibited in many schools within the district and outside. More expensive

options of A4 sized colour printouts, and spiral binding the papers have also been tried.

Shri Rotatar has also prepared mathematical models:

- Number wheel – this wheel was meant to teach children numbers from 1 to 10.
- Place Value – this model for teaching place value had three circular wheels. These wheels had units, tens and hundreds on them.
- T.L.M to teach about triangles from its sides
- T.L.M to teach about triangles from its angles
- T.L.M to teach about even/odd numbers
- Laminated cards for days of the week
- Laminated cards to know names of months according to Gujarati calendar
- Laminated cards to teach numbers from 1 to 100
- Laminated cards to know names of months according to English calendar
- Number bar – colorful numbers from calendars and stuck on wooden strips, to teach numbers from 1 to 50.
- T.L.M to teach geometric shapes
- T.L.M to teach about cars
- Cards to teach fractions

The materials used include cloth, chocolate wrappers, pictures of vegetables, fruits, flowers and tools, feathers and leaves, and so on.

To gauge performance of students using these aids, an evaluation was conducted comprising of written and oral tests. The results were encouraging with students registering an



Ramji Bhai explaining his work at the Innovation Fair

improvement in performance. The school's grading also improved to A. It also did well in various activities and competitions adding to its bouquet 16 certificates and 6 shields in just one year.

This project has received a welcome response from children, parents and teachers in various districts. Both parents and teachers are appreciative of the activity voicing why they had not thought of using materials such as newspapers before to supplement students' learning.

Shri Rotatar is now planning to digitize this material for the benefit of other schools and students. Through these innovations, people will be able to learn how to use waste materials for constructive purposes. The teachers will also be able to make the best TLMs at a negligible cost.

Shri Rotatar's work has been recognized by many authorities including Mehsana Yuva Green Team, The Indian Red Cross Society of Palanpur, GCERT and IIM Ahmedabad (first Educational Innovation Fair and Mobile Discussion forum, Gujarat Vidyapith, and Bharat Vikas Parishad. Shri Rotatar wants to digitize his work so that it can be shared more easily; at present, he has to take leave to visit other schools. This innovative project was disseminated through social media such as Whatsapp groups, Facebook, Instagram, Twitter, Youtube, and Blog, in the form of videos and PDF files.



#### QUESTIONS FOR TEACHERS

1. What other activities can be done in school to increase the confidence of children?
2. What is the effect of teaching through educational products and teaching through narration method on the study of children?
3. What activities can be done for children to celebrate special days and explain their importance?

#### QUESTIONS FOR TRAINEES

1. For which standards does the use of educational tools seem more effective?
2. How do educational tools work to motivate children for self-study?
3. What items are available in the school to make educational tools?