

## USING TRANSPARENT PLASTIC SHEETS TO REDUCE NOTEBOOK PAPER WASTE

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Shri Mingma Sherpa was born in 1967 and was the first in his family to get educated. Since the nearest schools were far away (Ghattey Dara School was seven km away and Singtam School was ten Km away) his early education was in a community school which was run in an evacuated PWD Bungalow. In 1974, he was admitted to the Guards School Gangtok in Class-2. However, after Sikkim became India's 22nd state in 1975, the school was closed. Shri Mingma then joined the Ghattey Dara JHS in Class-4 and studied there up to Class 10, which he completed in 1983. In 1985, he became a primary school teacher at Chubba Lower Primary School. He enjoyed working in rural areas with deprived people.

Shri Sherpa observed that he had to come up with a way to help pre-school children write confidently on paper. They would make mistakes and then rub off the paper, along with their mistakes, with a rubber or moist fingers. They would then start all over again on the next page, and in this way, end up ruining and wasting about one-third of their notebooks. The teachers would then ask the parents to purchase new notebooks for their wards; since the parents were economically



Children learning using a transparent sheet

backward, buying new notebooks was an added expense. As a solution to this problem, Shri Mingma came up with the innovative idea to use plastic folders as writing sheets.

The idea was to develop a transparent plastic writing pad through which the students could see the letters their teachers had written. They had to then trace the letters with a whiteboard marker. Any mistake they made, they could delete with the duster and reuse the plastic sheet again. His first such experiment was with polythene bags which were at first easily available but later banned from use.

For class 5, he came up with the idea to draw geometrical figures and ask the students to calculate their area using a grid. He then used the same method to teach numbers to class 1 and 2 students, also helping them with their writing skills. The students therefore had greater motor control over their fingers before transitioning to the notebooks.

Similarly, he also created worksheet for the Nepali and English alphabets. By the year, 2019, he had sheets for addition, subtraction, number system, fractions, dot grid and square grid sheet, and four liner sheets for English writing.

The plastic writing pad proved especially useful with a child with disability, who could not hold a pencil. But he really enjoyed the plastic writing pad and was gradually able to improve his handwriting.

Shri Sherpa also provided the children with plastic laminated pads for home use – they could use them to do rough work and write the final answers in their notebooks.

Shri Sherpa has developed different types of Mathematics worksheets for school children. He constantly shares his work through WhatsApp. Some pre-service teacher trainees have adopted



Literature prepared by the teacher



Transparent sheet of English alphabet

his innovation. The parents are highly appreciative of his work since they don't have to buy expensive notebooks time and again. These laminated worksheets have been found to be extremely useful to teach basic English and math to kindergarten children and students of classes 1 and 2.

For example, there is a work sheet to practise small letters writing. This activity helped the children to differentiate between letters *b* and *d*, and correctly write letters such as *f* and *p*, *q*, *y* and *z*. The worksheet helped them to write letters such as:

- Middle-case letters: *a*, *c*, *e*, *i*, *m*, *n*, *o*, *r*, *s*, *u*, *v*, *w*, *x*;
- Lower-case letters: *g*, *j*, *p*, *q*, *y*, *z*;
- Upper-case letters: *b*, *d*, *h*, *k*, *l*, *t*;
- Lower-case and upper-case letter: *f*.

There was also a worksheet to teach writing numbers using the number pattern.

First Shri Mingma came up with the idea to create plastic sheets and then later plastic boards

also. These boards were easy to carry and could serve as white boards. These boards are relatively inexpensive and have proved highly useful during the COVID-19-induced lockdown and the consequent adoption of online teaching.

These sheets are also environment-friendly, as they are reusable and they have helped to solve the problem of paper wastage.

Children are now comfortable using these sheets and have shown improvement in their handwriting and even academic performance.

As per the information received from Mr. Provesh Bhowmik Lecturer DIET, Gangtok, Shri Mingma's innovation was adopted by the Pre-Teacher Trainees (DIET Gangtok).

Shri Mingma has implemented plastic worksheets in kindergarten schools to develop hand writing skills and encourage drawing activity amidst the children. He is now developing different types of Mathematic worksheets from KGS class to V in order to reduce paper use.



#### QUESTIONS FOR TEACHERS

1. How to get funds for white board for every child?
2. What activities can be organized to sensitize the children to prevent pollution from waste?
3. How do you manage to minimize pollution and proper disposal of school waste?

#### QUESTIONS FOR TRAINEES

1. What activities can be done to improve children's writing?
2. Plastic is used here, what should be done for its proper disposal?
3. How can parents be involved in a children's handwriting improvement program?