

Category: **Student Work**

Project: **Introducing the Deaf and Mute to the World of Road Signs**



### **What was the challenge?**

Considering the lack of an easy interface between the deaf & mute children and their parents/teachers, a learning aid was needed that could make the information transfer easy and effective. This project aims at designing information related to road signs for age group 6 - 8 years, when these challenged children are at an early stage of being road users. Creating a language to educate was another challenge as they cannot express easily and can hardly hear. Meaning of road signs, their location and usage is the first hand information essentially required to enhance their safety. A complete knowledge makes them independent and teaches them road etiquettes which helps avoid accidents.

### **What was the solution?**

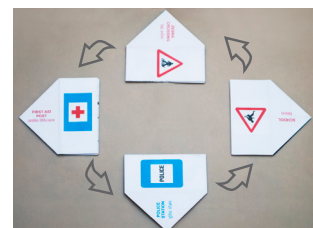
An informative aid containing 15 main road signs cards was designed. Each card contained all information that could be used as a single learning unit, or else, could be combined with other cards to be played like a game.

Users could fold and expand a card, hide a part of it, organize and arrange to play on their own or in a group. No assistance is needed. Different folding methods (inspired from origami) create multiple ways of playing cards, which creates enormous amount of interest due to its playful character.

Cards can be played by a single user or a group by using multiple ways.

### **1.**

Each player has a card. The first player opens and sees the information on his own card. After thoroughly seeing it, the first player passes his card to the second player. The second player then asks the first player to identify the road sign on the card, which he had just seen and passed. This is because these children are slow learners and hence it is required to make sure that they remember the road sign information correctly. This activity proceeds turn by turn.



**2.**

In the scenario explained below, Priya and Rohit have seen and exchanged their cards. Rohit shows the exchanged road sign card and asks Priya to identify. With the advantage of folds, he hides information and shows just a partial part of the upper leaf as shown in the picture below. Each card contains information hidden in between the folds, which is used in displaying partial or semi partial information when the opposite player has to recognize the sign.



**3.**

Priya recalls the answer and spells the word in their standard sign language. For example: Here, 'SCHOOL' is being explained using gestures for each alphabet.



Back of the card has letters of the word explained in sign language. This part is designed such that only the player asking the question can see and check the spelling. Rohit can read and match the letters explained by Priya in gestures. If correct, Priya gets the chance to question the next player.

**4.**

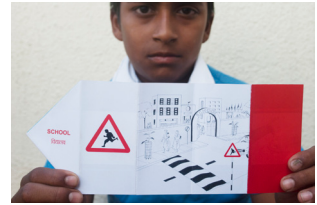
If she spells incorrectly, Rohit can open up the next leaf to show her the correct spelling of the visual as shown in the picture below. Name of the road sign is displayed on a triangular shaped fold which metaphorically represents direction. Name of the road sign is also written in hindi to augment familiarity.



**5.**

At the next level, Rohit unfolds the second level of information about the location - where is the road sign found, and what purpose does it serve. This unfolding reveals an illustration with the 'SCHOOL' road sign which explains where it is found and how it is positioned on the road.

Pictures work as effective learning tools for these challenged ones. Visual clues help them to relate and remember quickly.



Probably, the kids might have seen the road sign board outside their school, but they might not be knowing what it meant. As a single unit, each card contains all road sign information folded into levels on a single paper sheet.

**What was the effect?**

This method of playful learning solves the project objective. It benefits the users in various ways:

- Easy interface: Effective transfer of information
- Complete first hand information on road signs
- Enhances road safety and helps in emergency situations
- While playing, users practice their standard language of alphabets and composing words
- No dependency on teachers/parent to conduct the activity (more playfulness)
- Group interaction improves confidence

*This informative aid has been distributed to a couple of NGOs working for the welfare of deaf and mute children. Also, it is being used in Jyoti Badhir Vidhalaya- special school for deaf and mute children in India.*

The project went through the understanding of basic needs of deaf and mute users through user studies, concept generation and testing mockups.