

1 About Author



Rutuja is an Interaction designer with interests in design research and tangible and intangible interaction design.

Learning Aid for the Differently Able was her thesis project for Masters in Design in Interaction Design from IDC, Mumbai. Prior to her masters, Rutuja holds a bachelors degree in engineering (Information Technology) from Mumbai University.

She is currently working as a User Researcher at Capgemini Pune.

2 Keywords

Differently able, learning, play, audio visual feedback, tangible interaction

Learning Aid for Differently Able

3 Design approach

- Primary & secondary research
- Data analysis
- Ideation
- Evaluation
- Concept generation
- Prototyping

4 Design brief

learning aid

differently able child

mental age of 1-4 yrs

assist the teacher

basic concepts

alphabets and colors

through play


keep the children busy

Learning Aid for Differently Able

5 Insights from user studies

- Learning aid should involve physical as well as mental activity
- Cater to different levels of difficulty
- Learning aid shouldn't be flashy as it distracts the child
- Aid should focus only on the primary goal of learning

Table 5.1: Every child is special

|  | functional ability I need help | | | | |
|---|--------------------------------|--------|---------|---------|---------|
| | mobility | eating | talking | reading | writing |
| riddhi | ✓ | ✗ | ✗ | ✓ | ✓ |
| ojas | ✓ | ✓ | ✗ | ✗ | ✓ |
| sarthak | ✗ | ✗ | ✓ | ✓ | ✓ |
| viraj | ✗ | ✓ | ✗ | ✗ | ✓ |

Learning Aid for Differently Able

6 Concept 1: 3D alphabets

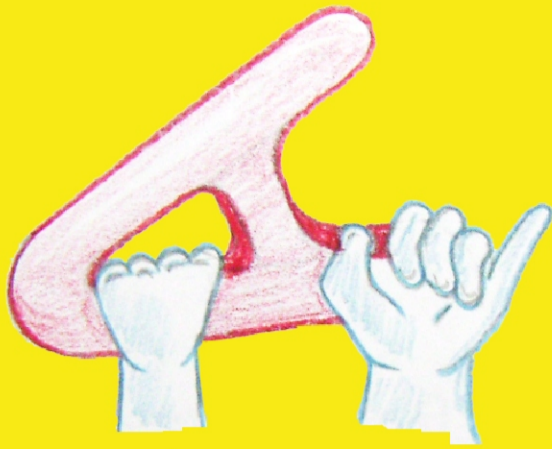


Fig. 6.1: Concept sketches

Improvement in motor skills

Audio visual feedback is triggered only when the letter is oriented correctly

Spatial orientation and formal learning can go “hand in hand”



Fig.6.2: Photograph of the final prototype

6.1 Concept 2: Colourprint



Fig.6.1.1:Concept sketches

Physical activity of holding, lifting and matching the color and the slot on the board

Audio visual feedback is triggered only when positive and negatives are matched

Improves the cognitive and perceptive skills of the child



Fig.6.1.2:Photograph of the final prototype

7 Acknowledgments

Dr. Hema Dhoot at VD Indian Society of mentally retarded

Ajay Shukla at Hi-tech Foundations

Ms. Jasmine & Ms. Sangeeta Jagtiani at Spastic Society of India

All the children whom I met during user studies.....😊

Prof. Ravi Poovaiah

Prof. G.G Ray

Prof. Aniruddha Joshi

All the studio technicians at IDC

My classmates at IDC

8 References

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Learning Aid for Differently Able

9 Extending the concepts

Customizing the aid for specific physical disability

Word generation through letter proximity

Teaching the basics of color wheel

"You can teach a child a lesson for a day; but if you can teach him by creating curiosity, he will continue this learning process as long as he lives."...Clay Bedford