

Speech Therapy Utensils for Marathi Speech Disorders A Proposed System

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Abstract- Speech and language disorders can have a negative impact on a child's ability to communicate with families and peers, as well as make progress academically. Speech disorder is not a disease but a habit of speaking in a wrong way which is not by birth. Schools and parents in India are facing problems to meet the needs of children with disability in speech disorder. In this paper we are focusing on providing solution to speech disorder disability with Marathi language. Here we are proposing online tool which will act as "Virtual Speech Consulting Center" to those disordered children and will also provide an easy platform for parents and practitioners.

Keywords:- Speech Disorders, Speech Disability, Virtual Speech Consulting Center

I. INTRODUCTION

Many times we see adults and children with speech-sound disorders, language delay, articulation disorders, phonological disorders and Voice disorders. Some parents consult to pathologist regarding speech and language delay, autism spectrum disorders, Pervasive Development Disorders (PDD), accent modification services, stuttering/stammering, Oral-motor issues and feeding/swallowing issues[2]. And also online tools are available on internet which provides you the facility of reducing severity in speech disorder, but these solutions are available in English language.

| Type | Male | Female | Total |
|---|---------------|--------------|---------------|
| Total Disabled | 118786 | 98575 | 217361 |
| In Speech | 10299 | 8694 | 18993 |
| In Hearing | 19346 | 17059 | 36405 |
| In seeing | 25444 | 21943 | 47387 |
| Distribution of disabled in the age-group 0-6 by type of disability, sex | | | |

As per India Census 2011[1], the statistics for peoples in Maharashtra

| Disability | Age Group | Male | Female | Total |
|---|-----------|--------|--------|--------|
| In-Speech | Total | 260792 | 212818 | 473610 |
| | 0-14 | 42655 | 35299 | 77954 |
| | 15-59 | 183873 | 148761 | 332634 |
| | 60+ | 31582 | 26545 | 58127 |
| Speech Disabled Population By Type Of Disability, Marital Status, Age And Sex In Maharashtra | | | | |

The above statistics as per India census 2011 shows that there are large number of patients present in Maharashtra severing from this disease ranging from various age groups. Our proposed tool will surely help these people to cure there disorder.

Our focus will be on providing online tools in Marathi language which will act as “Virtual Speech Consulting Center” to Marathi language speaking patients in the form of online internet based portal, mobile app, Development of assistive/enabling devices such as tabs.

II. METHODOLOGY

We are living in an age where children use technology on a daily basis to learn, play and communicate with others. Online speech therapy appeals to that inclination. Students are able to get onto the computer, which is very motivating, and engage with a professional speech -language pathologist to work towards improving his or her communication.

The technology used in online speech therapy enables the child and therapist to see and hear each other, as well as participate in interactive activities.

Students are more motivated to attend “speech therapy” and therapists have the technology literally at their fingertips to plan and deliver high - quality and innovative services.

Internationally in many countries US, UK, Germany and other countries the online services for disordered peoples are available. It is used in prominently in schools to increase self-confidence, enjoyment of communication, reducing negative emotional reposes etc.

In India also online tools are available, but those are available in English language. But majority are seeking problems using these services because these are not available in regional languages as majorly while speaking the mother tongue languages are used. So in this project we have planned to develop the tools in regional language as Marathi.

The methodology used for development of this service will be divided in following steps

a. Requirement analysis and Data collection- In this process the requirement and data related to speech therapy for Marathi language will be studied. Based on the need and suggestions given by good and renowned medical pathologist the data will be collected in the digital form.

b. Design – A small prototype will be developed in which its design will be finalized based on recent development in technology.

c. Development – A web based model capable of executing on internet, mobile and platform independent software will be developed.

d. Implementation and testing - The developed module will be launched in the form of portal as well as mobile app and will be tested on different criteria for validation.

e. Maintenance - For maintenance of online tool for long use a policy will be designed where it will be live for long duration.

III. NOVELTY OF THE SYSTEM

The novelty of the project will be in the terms of availability of services in the regional languages. The project can be extended to other languages in Devanagari scripts also.

The recent development in the dynamic web programming will be used while development of this tool. The tool will be available in android base also for mobile users so that they can use the software at home with easy access.

IV. ADVANTAGES OF SYSTEM

- a. Improvement of clear language growth in the child as it is related to the construction of sound and vocalizations;
- b. Reducing the regularity and severity of disfluencies in speech disorder;
- c. Reducing nervousness in communication during fluent and disfluent talking;
- d. Reducing negative emotional responses (e.g., anxiety, shame, frustration, fear, and apprehension) to stuttering or cluttering and to communication in general; increasing self-confidence about, participation in, and enjoyment of communication

V. CONCLUSION

The impact of use of this tool can be utilized by all Marathi speaking parents whose children are having speech disorder problem covering all 32 district places in Maharashtra. Globally also this tool can be used as this is an online service available.

REFERENCES

- [1] <http://censusindia.gov.in/>
- [2] Online Speech Therapy—An Effective Solution For Student Speech Therapy Needs, Connections Learning,880,440-22890