➢ ***A Contractual frame work of Conventional and Advanced Technologies Comparative Study.***

➢ *Conventional Therapeutics.*

- Conventional Therapy is play and Social Interaction.
- Conventional Therapy uses printed pictures drawings and other charts for Eliciting response.
- Conventional Therapy is subjective with the **design and decision** of the organization it practices.
- Conventional Therapy can help the child to a significant level but not all Diagnostic and **therapeutic parameter** are **covered** in an organized ***Objective manner.***
- Conventional Therapy is done by specialist who are highly qualified but are trained also to handle **advanced technology**. they may have limitations to the Extent of procuring and practicing the technologies in spite of their high qualification.

➢ *Software Technologies*

- ***Computer-based speech training*** has capabilities of offering the **children using** and meaningful **visual feedback** and might make it easier for the **therapist** to instruct and explain what is wrong and what is correct and through motivational and frequent training establish an intelligible production. In most **special schools** and **Early Intervention centres**, **computer-based visual speech training** has become a standard and valuable complement to the regular **speech-training activities**.
- The reason that **Children's** may not be able to produce speech is because of the lack of **auditory feedback**, i.e., inability to hear what they have **spoken** and hence unable to correct what is **spoken if it is incorrect**.
- Picture-Word-**Articulation** test may be used for an evaluation of the pronunciation errors. Exercises may be given to correct the **pronunciation errors.**
- Their dependency on **lip reading** sometimes leads to **mis-pronunciation** of speech sounds. For example, '**p'**, '**b'** and '**m'**. Nasal indicator may be used to make them aware of the production of nasals.
- Further **Children try** to speak at **a very loud voice or shrill voice** since for the child Itself they **sound normal**. In course of time this leads to voice abuse and possible damage of the vocal folds (**the voice box**). This can be prevented by a proper voice control Through **Software Technology**.
- Some hard of hearing children speak with a **mono-tone pitch or dull voice.** They lack proper intonation and their voice will not be lively and upto the expected configuration.

- **Computer-based speech therapy/training**. The goal of **CBST** systems is not to **replace the human speech therapist, but to be a complement, by giving the user additional training. In order to be successful.**
- The length of the session ranges from **twenty minutes to one hour using Software Technology.**
- The **therapist tries** to relate to the child's daily life and reality in all the training exercises, and to further develop the language that the **child already possesses**. If possible, **the child is trained in discriminating speech sounds and to listen to its own utterances**. Many of the respondents talked about awareness, to enhance the awareness of the world of **sounds**, awareness of **breathing**, awareness of the language etc. The therapist often begins with the speech sounds that the child already masters and from these makes the **child aware** of the ***deviant speech sounds***.
- The techniques that the therapist uses are **Multimodal**; enhancing the learning process with the help of **vision, touch and hearing if possible**. When the child becomes more mature, **the therapist and child** together analyze in a more theoretical way what happens with the articulators during **speech production**.
- It uses voice-activated game-like tool to provide **real-time reinforcement of a client's attempts to produce changes in pitch, loudness, voiced/unvoiced phonation, voicing onset, maximum phonation time, sound and vowel tracking**. **Children, in particular, enjoy therapy with this colourful, interactive, video game because they receive immediate feedback on their performance.**
- Clinicians will enjoy the versatility and unique features of this technique. For example, while a child is playing a game, **you can quickly review the graphical display or statistical data of the children's performance.**
- This technique is divided into two groups: **1) Awareness teaches children about the attributes of their voice,** and **(2) Skill Builder gives the user goals to achieve for a given range and time.** The examples of comprehensive user logs and tracking client's progress are provided. Best of all, **real-time recording and playback gives you the tools you need to maximum your client's therapy**.
  - **ALL MEASURES ARE STATISTICALLY ANALYSED.**
  - **ALL MEASURES CAN BE PRINTED.**
  - **ALL MEASURES AND THERAPY CAN BE EXPORTED DIGITALLY AROUND THE WORLD.**
- Innovative computer technologies are not only **helping the needs of persons** with **speech disorders**, but also serving the **laryngologists and speech pathologists** to perform a more accurate and professional service. With a **PC desktop or laptop computer, microphone and speakers,** the clinician can hook with a big size monitor or a **Tv display screen** has met the simple requirements for starting and operating a **Speech laboratory in the clinical practice**.



SPEECH GENERATINGDEVICE
SPEECH STATION
COCHLEAR HABILITATOR
{Software Technologies}

Ours is a world that is ruled by sound whether we Hear or Speak. A person deficient in Speech and Hearing is considered as an outsider.

It is hopefully the job of Speech Generating Device (Software Technologies) to bridge the Gap between the outsider and the world of sounds.

Scientist and speech therapists need tools to visualize voice and speech, in order to correlate personal Auditory Analysis and Compliment data.

Speech Generating Device software is based on a set of Phoniatric data and Sophisticated real-time signal analysis.

One of the key tools of Speech Generating Device is the real-time spectrum for visualizing, differentiating and comparing articulatory movements and speech interactivities.

Animations are proposed for illustrating most speech sounds. Real colorful animations in a multi modality format for language development in several group of speech and language disorders in clinical and school practices.

Speech Generating Device hallmarks "Real-Time Visual Feedback"

Voice is one of the most powerful avenues of human expression. Every person's voice is unique; Speech Generating Device Technology provides the 'Voice Map'

Clinical management functions automatically collect data and allow therapists to document progress and see and hear results

Technical training and teaching can be imparted to professionals; Research on different modules can be initiated

PROFESSIONAL

SPEECH DIAGNOSTICS & REHABILITATION

TREATMENT STATION

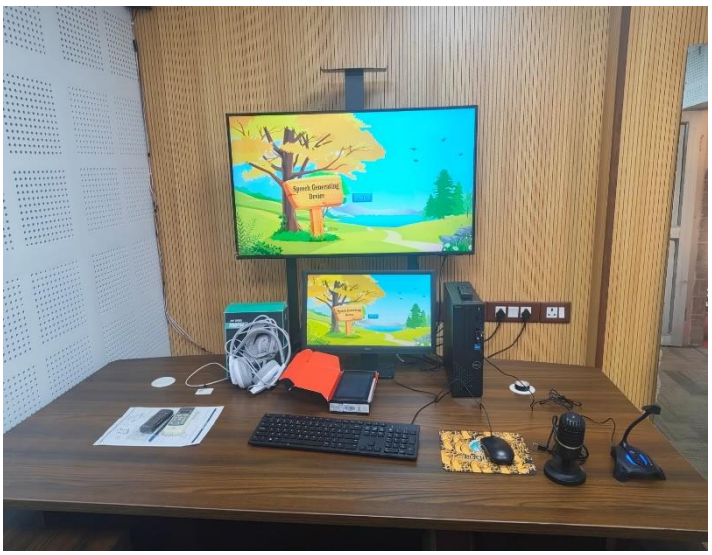
HOME TRAINING PARENTAL EDITION

(SPEECH GENERATING DEVICE)

COCHLEAR TREATMENT HABILITATION

A View of Laboratory





SOFTWARE TECHNOLOGIES





An Amazing Technology of Software for Diagnostics and Therapy for Clinics and Home Training Programs.

Areas of Speciality

Areas of Specialist for Diagnosis & Therapy

♣ Articulation and Motor speech disorders including Apraxia/Dyspraxia, Dysarthria- alone or secondary to other diagnosis

♣ Hearing impaired, Hearing aid users and Cochlear implantees

♣ Auditory processing disorders

♣ Dysphasic disorders, Receptive and expressive language disorders/delays and Specific language impairment

♣ Delayed speech and language disorders

♣ Language disorders related to Syntax Semantics Pragmatics

♣ Autism spectrum disorders (ASD)

♣ Slow learners ♣ Reading difficulties

♣ Craniofacial anomalies – Cleft lip and palate

♣ Neurological disorders e.g., Cerebral palsy, Traumatic brain injury, Unspecified neurological dysfunction, RHD, Dementia, Seizures disorders

♣ Genetic syndromes (e.g., Down syndrome, Williams syndrome, Turner syndrome, Angelman syndrome)

♣ Fluency disorders (e.g., Stuttering and Cluttering)

♣ Multisensory impairment

♣ Feeding or swallowing issues myofunctional/tongue thrust

♣ Augmentative and Alternative Communication

♣ Literacy and Pre-literacy issues

♣ English as a foreign language ♣ Corporate speaking trainees.

Used with:

a) **Children of all age groups**

b) **Adults**

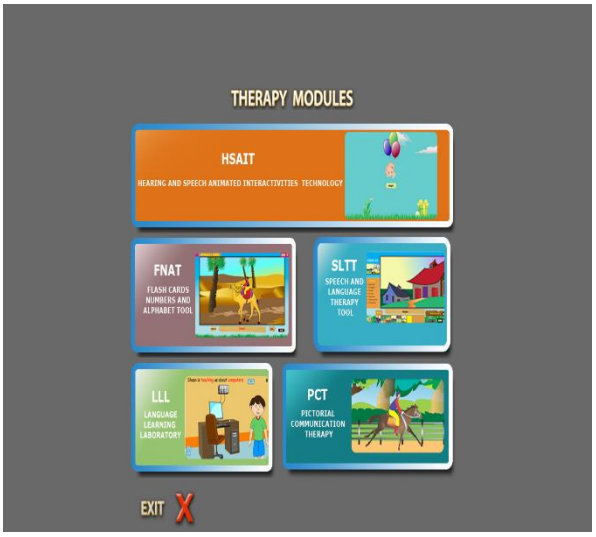
c)**Geriatric Population**

End users:

- Universities
- Hospitals
- Researchers
- Speech pathologists
- Audiologists
- Linguists
- Occupation therapists
- Phoniatric clinics
- Speech therapy clinics
- Special schools
- Rehabilitation centers
- Language schools
- Parents
- Patients
- Voice coach centers
- Professional voice
- Singers and music centers
- Forensic medicine
- Announcers and commentators for media
- English practitioners

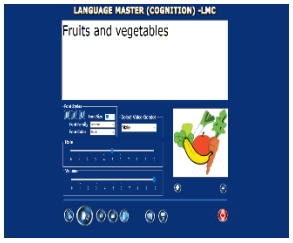
- **Voice Activated Module** - **23 Parameters of Comphrensive Voice Laboratory**

➢ **Improves**: - *Phonation, prosody, concentration.*



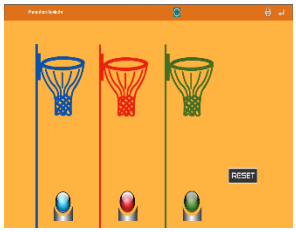






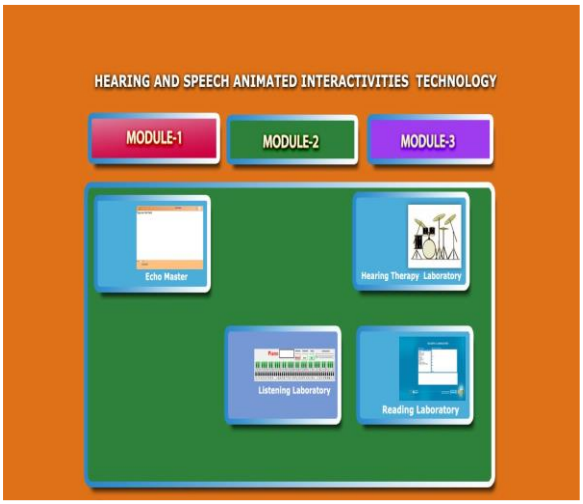


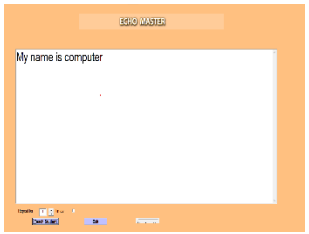




- **Listening skills Module**

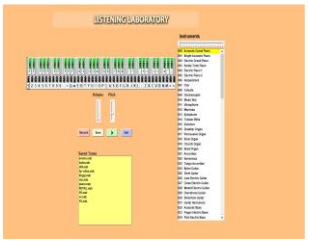
➢ **Improves**: - *Listening cognition-attention-hearing-Reading skills*



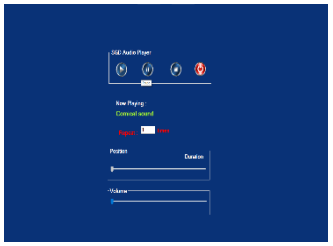












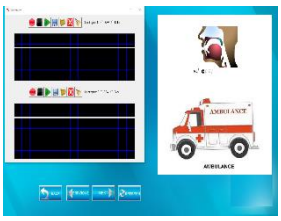
- **Speech Intelligibility Module**

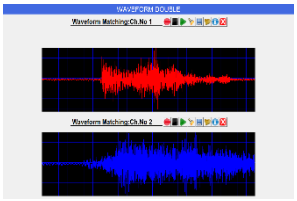
➢ **Improves**: - *Speech, organs-Articulatory Function*

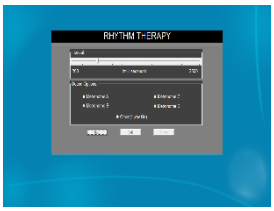












- **FNAT – Pictoristive documentation**

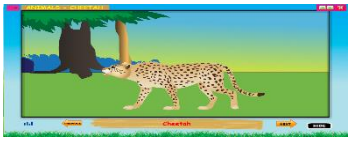
➢ **Improves**: - *Speech and language*











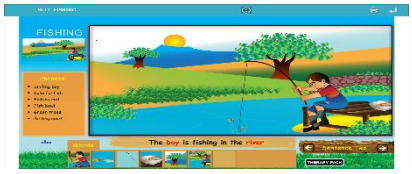
SLTT - Word communication skills

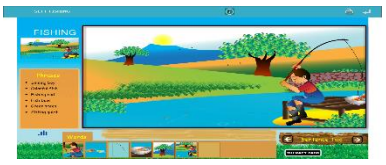
Improves: - *Grammatical ideation language*











LLL- Story reader

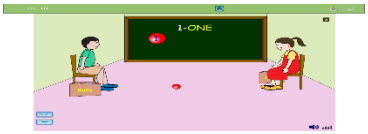
Improves: - *Cognition-expression-reception*







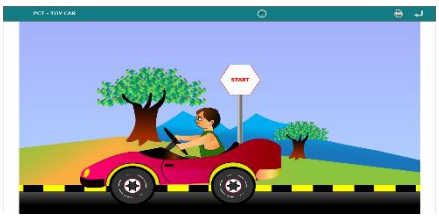




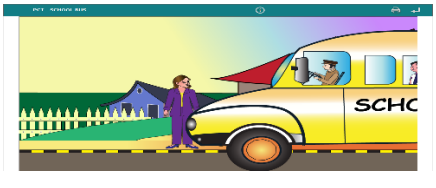
PCT - Communication lab

Improves: - *Rhetoric's skills*



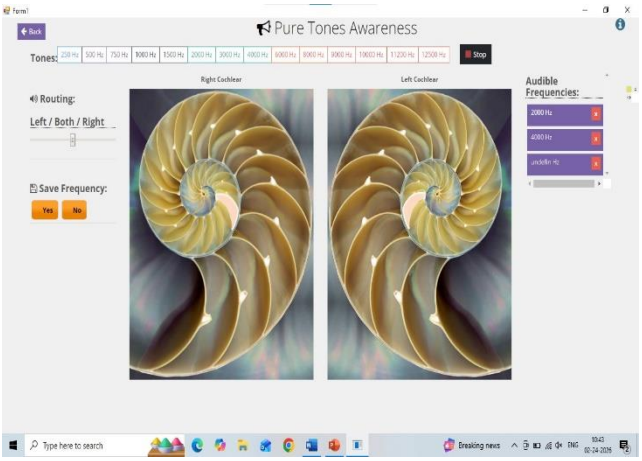








- **Cochlear Habilitator Module**
- **Improves:-** *Listening Skills Enhancement & Statistics Analyzer.*







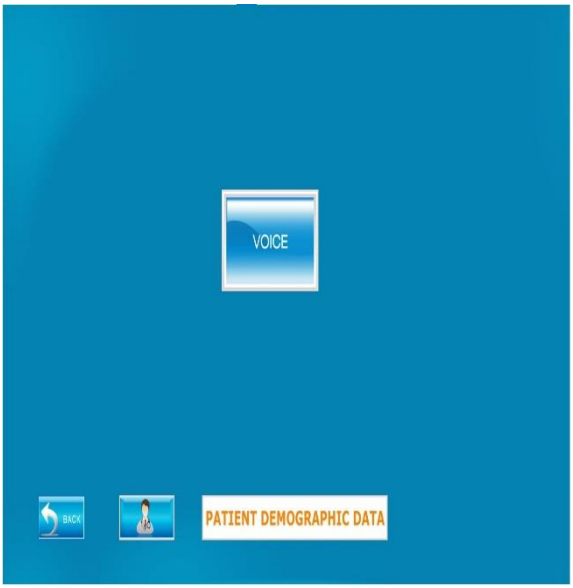




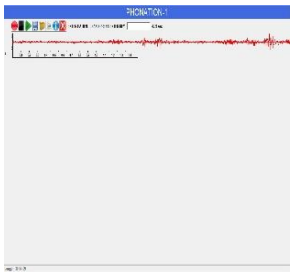




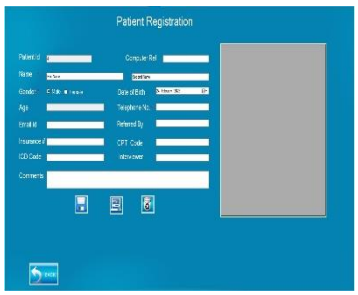
- **Voice Assessment**
- **Uses: -** *Record 5 Seconds Voice Generate 23 Modules of Report. Maintain Reports, Exports Digitally.*

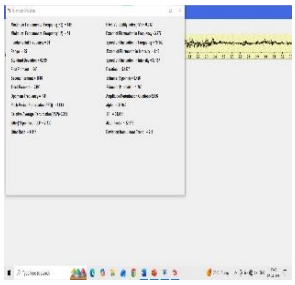


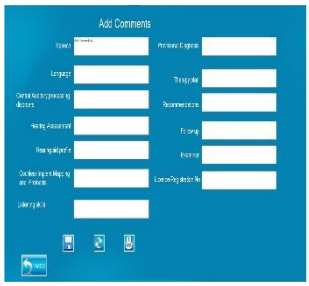




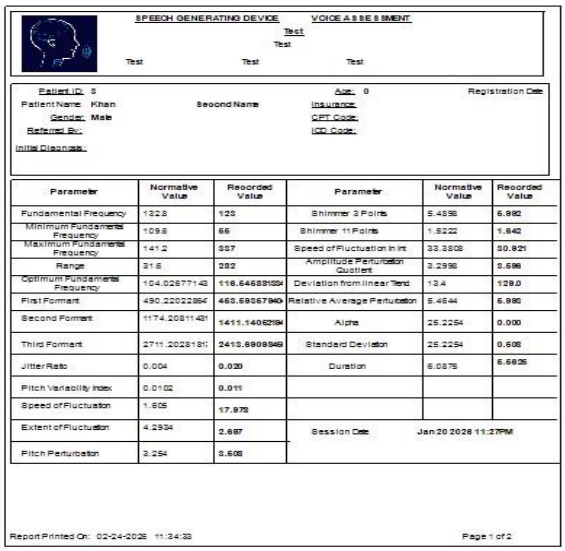








System generated Report



SPEECH GENERATING DEVICE VOICE ASSESSMENT

Test

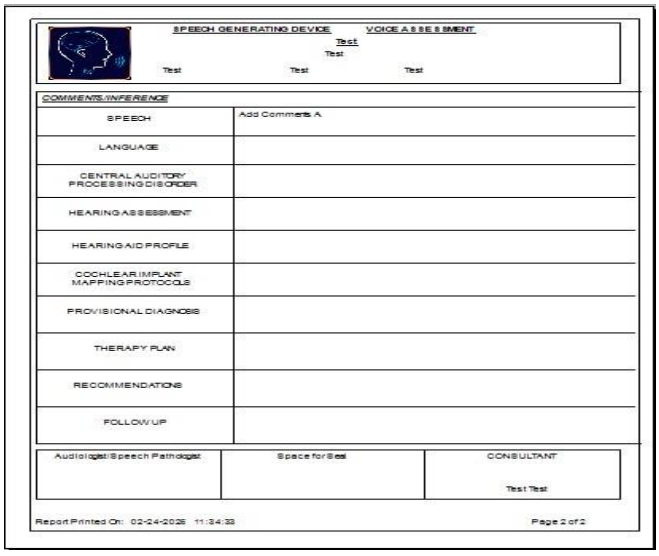
Test Test Test

Patient ID: 9 Age: 0 Registration Date:
Patient Name: Khan Second Name Insurance:
Gender: Male CPT Code:
Referred By: ICD Code:
Initial Diagnosis:

Parameter	Normative Value	Recorded Value	Parameter	Normative Value	Recorded Value
Fundamental Frequency	132.8	123	Shimmer 3 Points	5.4836	6.982
Minimum Fundamental Frequency	109.6	66	Shimmer 11 Points	1.5222	1.642
Maximum Fundamental Frequency	141.2	337	Speed of Fluctuation in Int	33.3605	30.921
Range	31.6	282	Amplitude Perturbation Quotient	3.2996	5.696
Optimum Fundamental Frequency	104.026771143	116.646831334	Deviation from linear Tend	13.4	129.0
First Formant	490.22022864	463.69367840	Relative Average Perturbation	5.4644	5.986
Second Formant	1174.20811421	1411.14062184	Alpha	25.2254	0.000
Third Formant	2711.20281181	2413.6808349	Standard Deviation	25.2254	0.608
Jitter Ratio	0.004	0.020	Duration	6.0875	6.6835
Pitch Variability Index	0.0102	0.011			
Speed of Fluctuation	1.605	17.879			
Extent of Fluctuation	4.2934	2.687	Session Date	Jan 20 2026 11:27PM	
Pitch Perturbation	3.254	3.608			

Report Printed On: 02-24-2026 11:34:38 Page 1 of 2

Comments Reports



SPEECH GENERATING DEVICE VOICE ASSESSMENT

Test

Test Test Test

COMMENTS/INFERENCE

SPEECH	Add Comments A
LANGUAGE	
CENTRAL AUDITORY PROCESSING DISORDER	
HEARING ASSESSMENT	
HEARING AID PROFILE	
COCHLEAR IMPLANT MAPPING PROTOCOLS	
PROVISIONAL DIAGNOSIS	
THERAPY PLAN	
RECOMMENDATIONS	
FOLLOW UP	

Audiologist/Speech Pathologist	Space for Seal	CONSULTANT
		Test Test

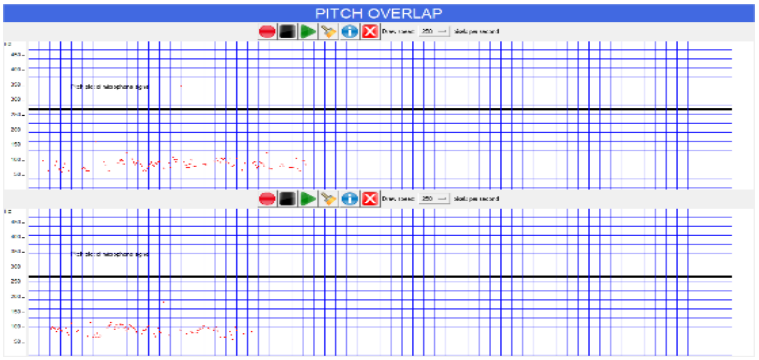
Report Printed On: 02-24-2026 11:34:38 Page 2 of 2

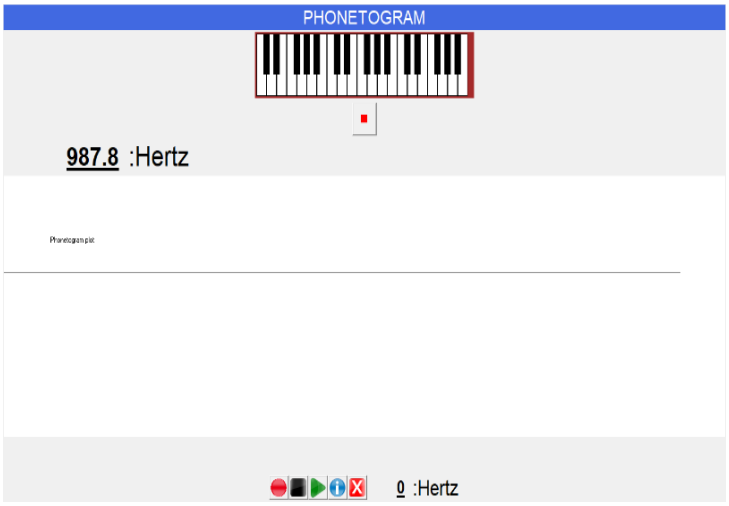
- **Speech Station Professional**
- **Uses: -** *'Voice Assessments software features what you speak and shows how to speak'.*
  Voice Simulations, Reading Laboratory and Comphrensive Fluency Training with Research Spectrography.

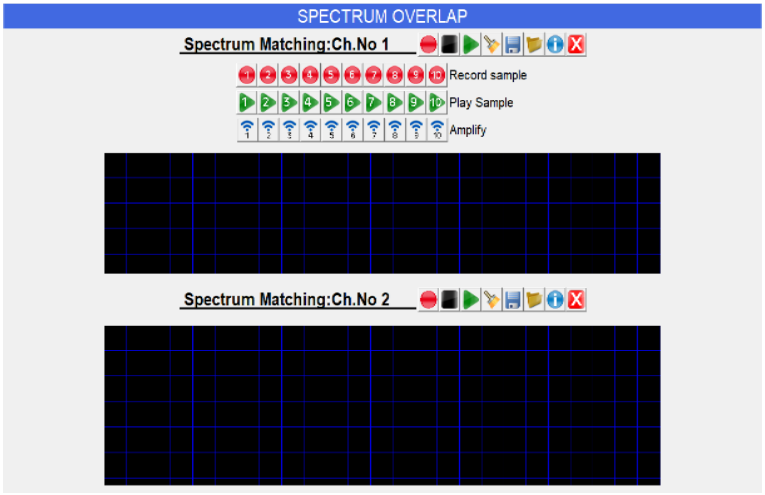


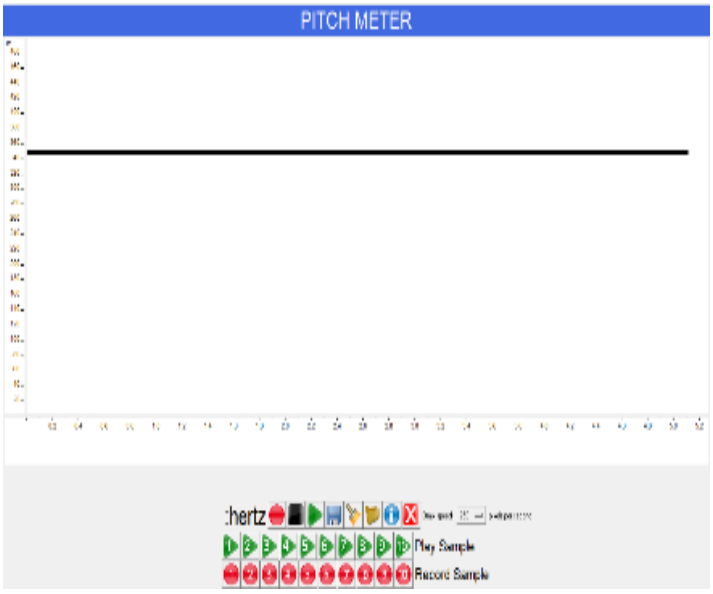


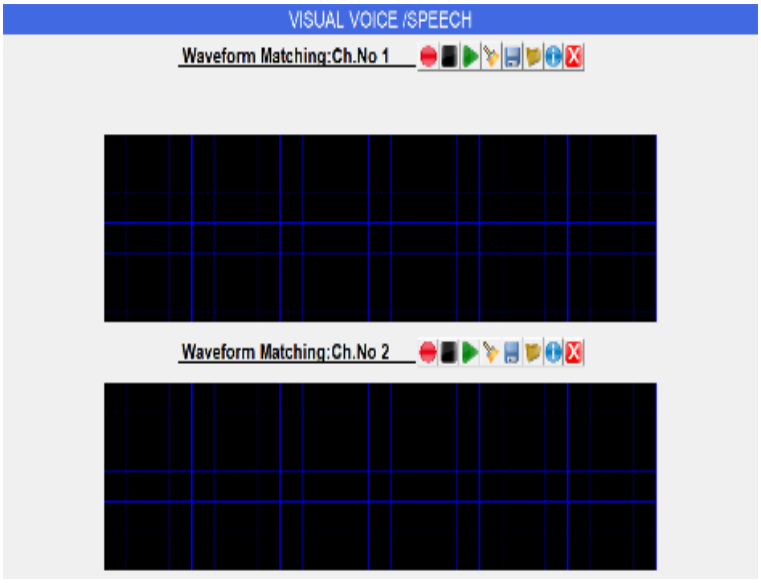


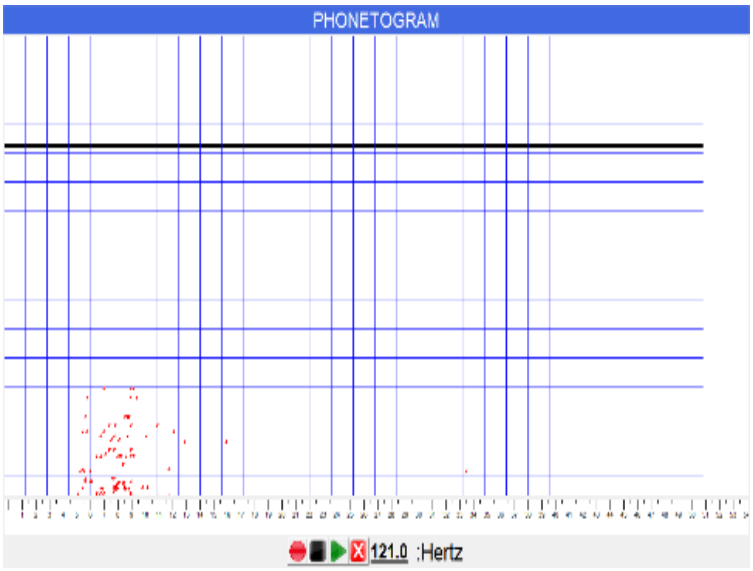


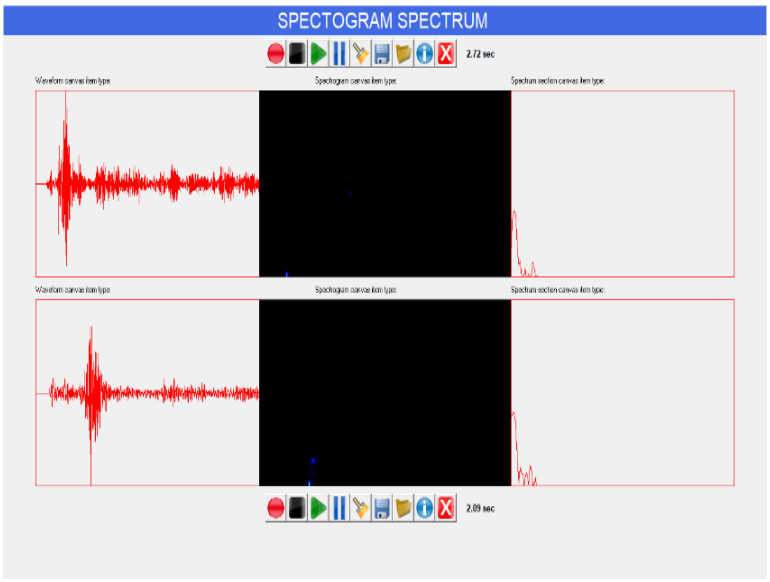




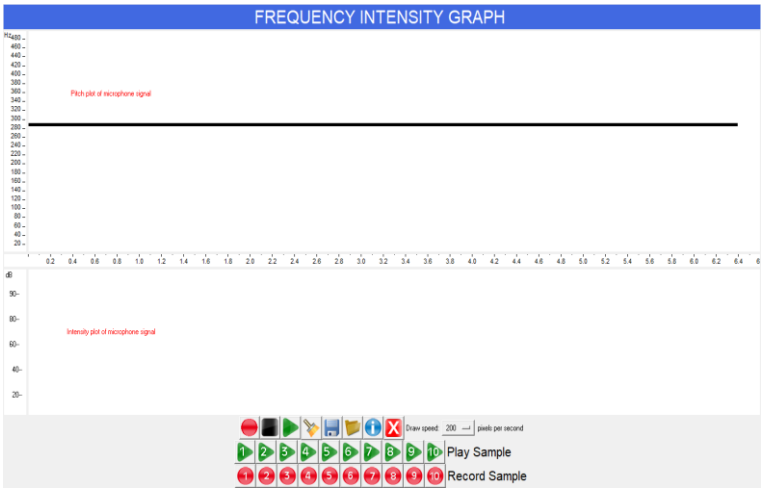


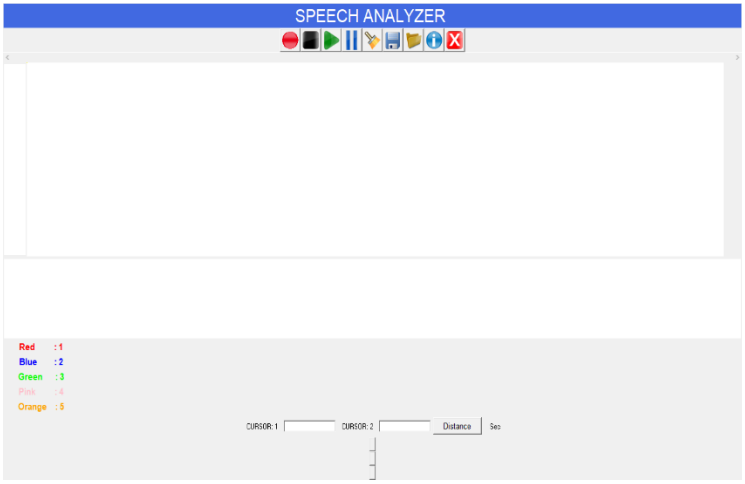


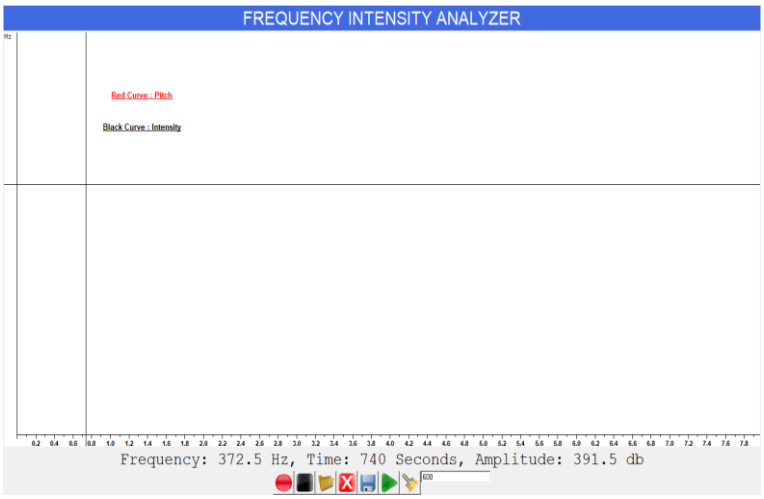

PHONETOGRAM
121.0 :Hertz


SPECTOGRAM SPECTRUM
2.72 sec
2.09 sec

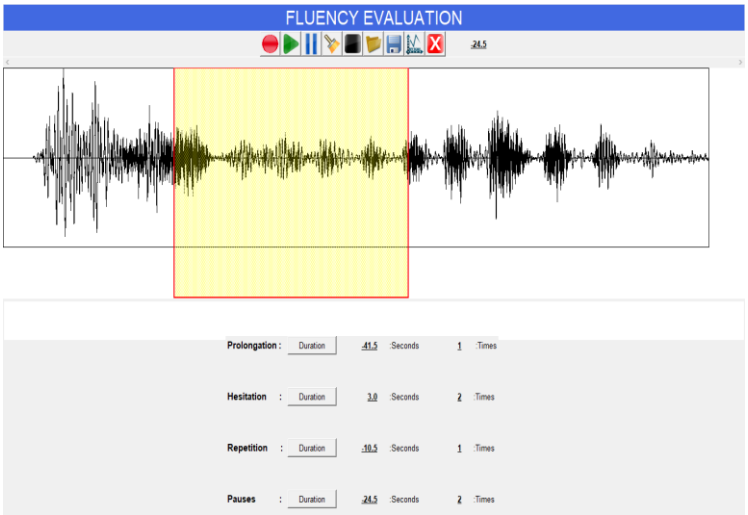

VOICE THERAPY
PROSODY
FREQ / INT GRAPH
SPEECH ANALYZER
FREQ / INT ANALYZER
BACK


FREQUENCY INTENSITY GRAPH
Pitch plot of microphone signal
Intensity plot of microphone signal
Play Sample
Record Sample


SPEECH ANALYZER
Red : 1
Blue : 2
Green : 3
Pink : 4
Orange : 5
CURSOR: 1
CURSOR: 2
Distance
Sec


FREQUENCY INTENSITY ANALYZER
Red Curve : Pitch
Black Curve : Intensity
Frequency: 372.5 Hz, Time: 740 Seconds, Amplitude: 391.5 db


FLUENCY MODULE
FLUENCY MODULE
EVALUATION AND DIAGNOSTICS
THERAPY
BACK

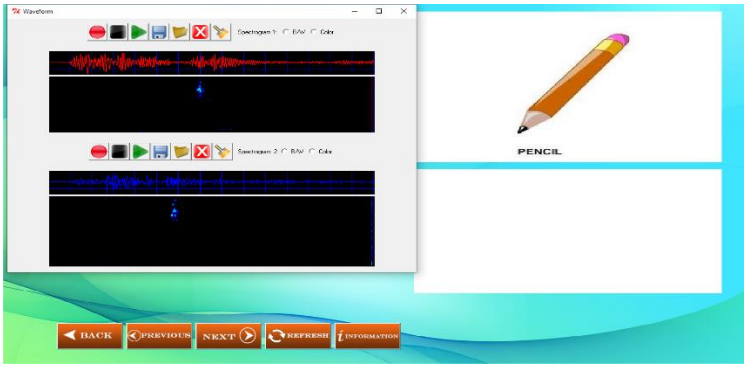

FLUENCY EVALUATION
Prolongation : Duration 41.5 Seconds 1 Times
Hesitation : Duration 3.0 Seconds 2 Times
Repetition : Duration 10.5 Seconds 1 Times
Pauses : Duration 24.5 Seconds 2 Times



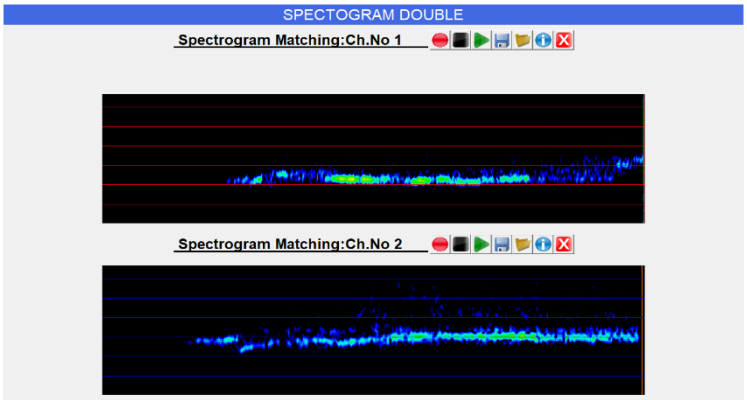


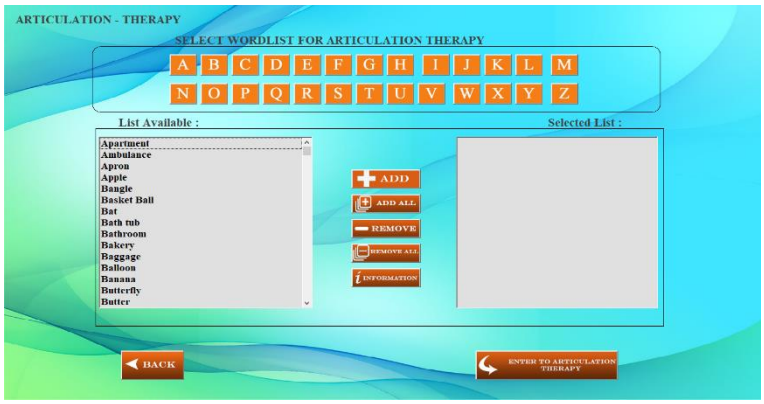


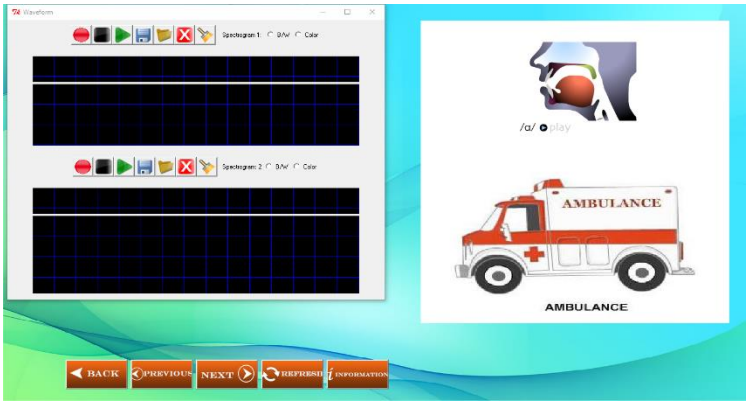






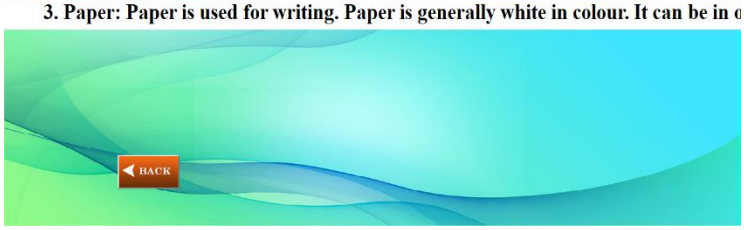


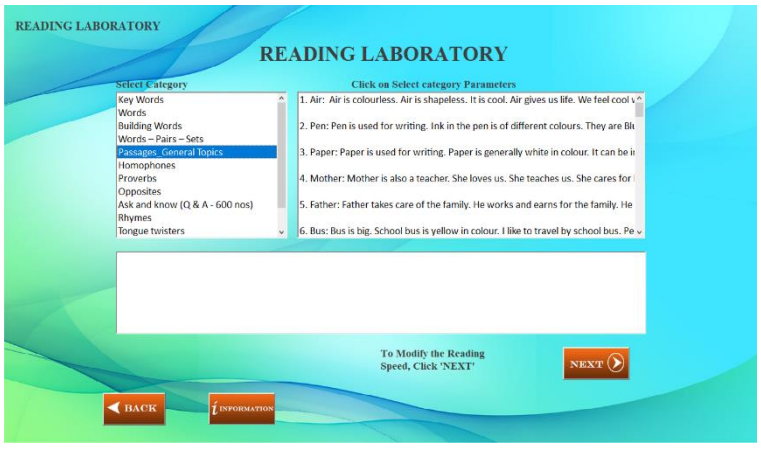




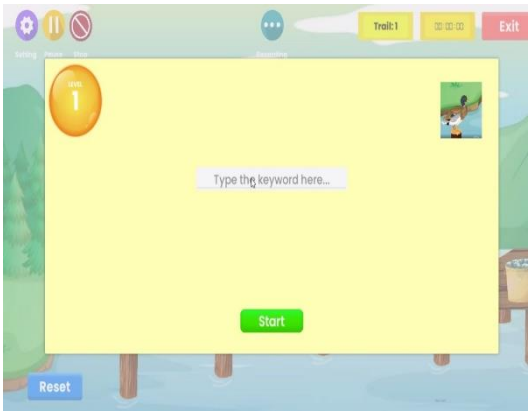


3. Paper: Paper is used for writing. Paper is generally white in colour. It can be in c

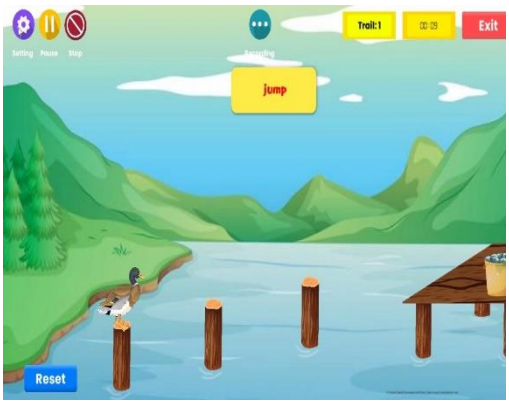




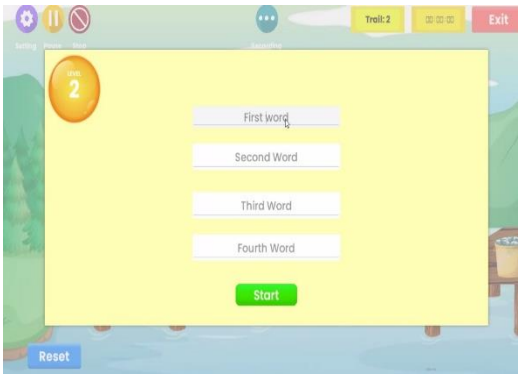
- **Articulatory-Resonatory-Phonatory-Cognitive Platform**
  - **Improves: -** *Phonation, prosody, concentration.*



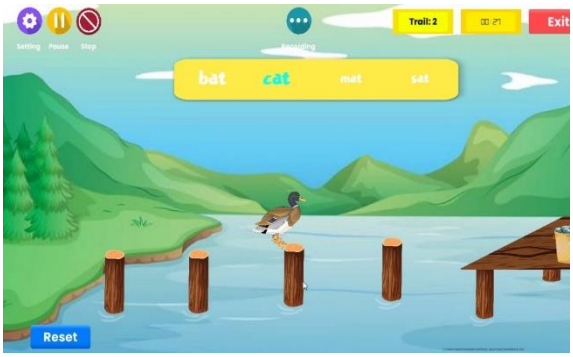








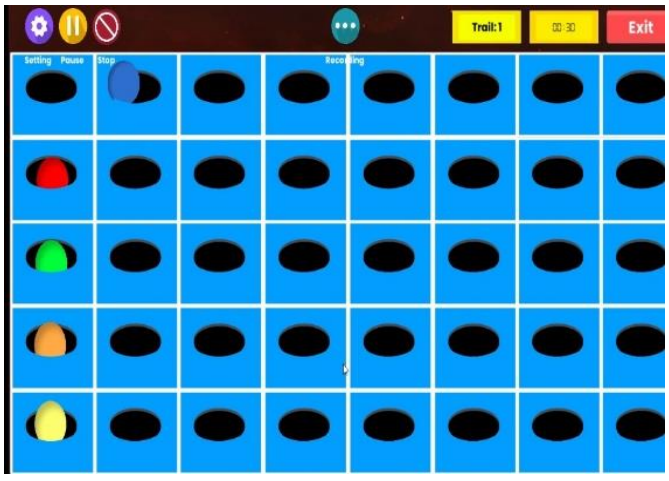






- **Concept: - Ball Colours**





- **Concept: - Fruits Names**

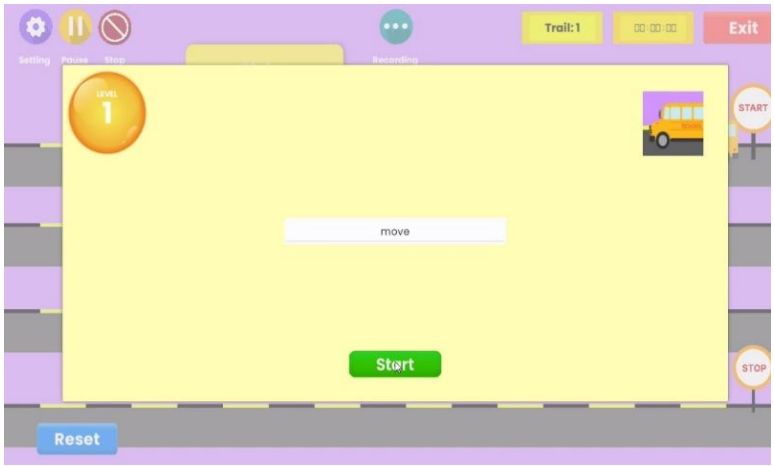


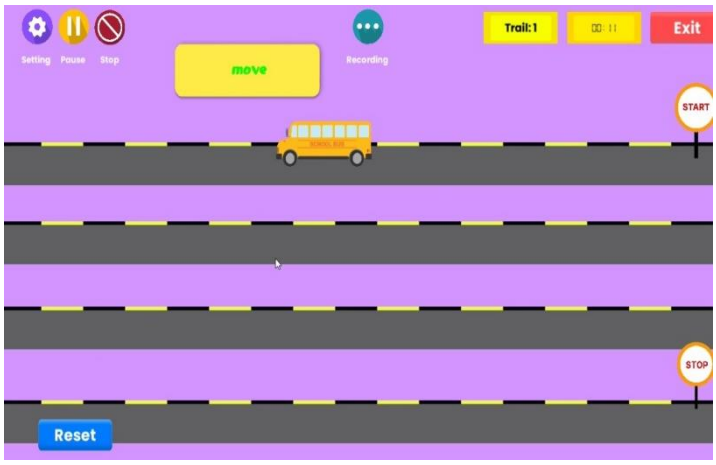






- **Concept: - Words,**





Software Speech Therapy

A New Technology Trendsetter in Speech Science

Advantages, Advances & Modern World Scenario



AI & Machine Learning



Mobile & Telehealth



Gamification & VR



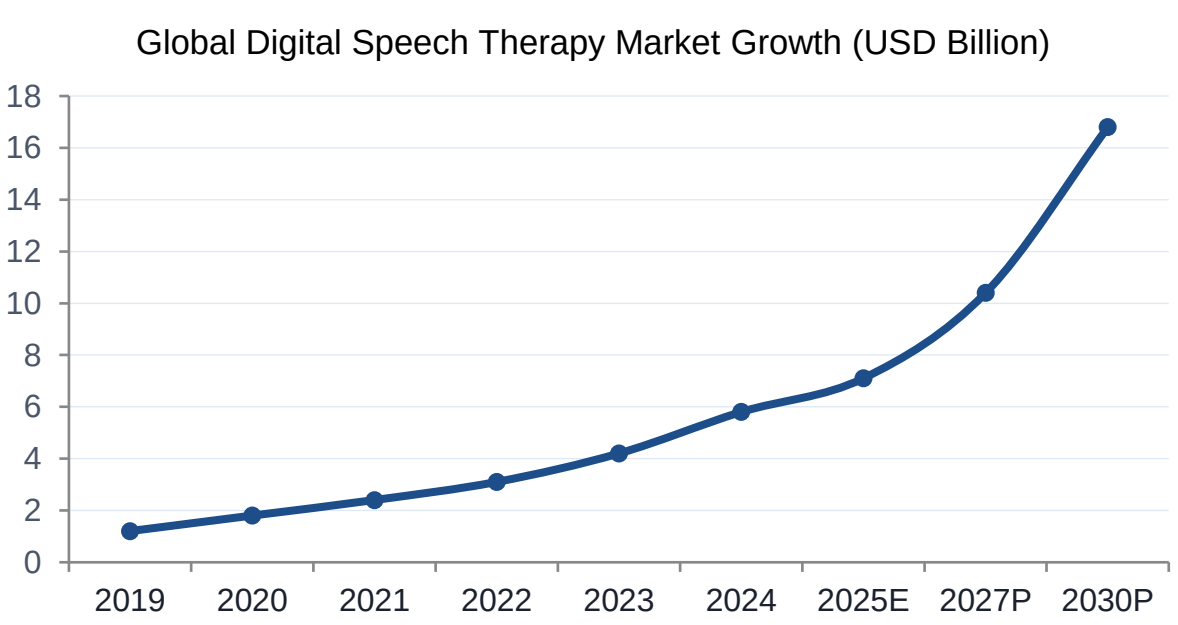
Global Access & Equity

Dr Mahboob Shanawaz

Senior Consultant — Hearing & Speech Pathologist | 2026

Speech Therapy — The Global Burden & Why Technology Had to Step In

1.5 Bn	75%	$5.8 Bn	1 : 9,000	90%
People with speech or language disorders	**Have No Access to Therapy**	**Digital Speech Therapy Market**	**SLP to Patient Ratio (India)**	**Improvement with Early Software Therapy**
Globally — largest unmet therapy need	Especially in low/middle income countries	Global market 2024 — 19.2% CAGR to 2030	WHO recommends 1 per 10,000 — still critical	Children with articulation disorders — studies



Why Traditional Therapy Alone Cannot Scale

Cost	₹800–₹2,500 per session in India. 40+ sessions needed for most disorders. Unaffordable for 80% of patients.
Geography	80% of SLPs are in 8 metro cities. Rural patients travel 200+ km for one session — most simply give up.
Workforce Gap	India has <5,000 registered SLPs for 25 million+ people needing therapy. 1 SLP can see max 6–8 patients per day.
Time	Clinic-based therapy is 1 hour/week. Children need 20–30 minutes of practice DAILY for optimal results.
Stigma	Many adults and children avoid clinic-based therapy due to social stigma around speech disorders — especially in India.

Software Speech Therapy — Definition, Types & How It Works

Software Speech Therapy is the use of technology-driven platforms — including AI, mobile apps, games, VR and telehealth tools — to deliver, supplement or replace traditional in-person speech and language therapy, making it accessible, affordable and continuous.

Mobile App-Based Therapy

Apps like Articulation Station, Speech Blubs, Lingraphica deliver structured therapy exercises via smartphone. Child-friendly interface, progress tracking, parent reporting. Available 24/7 at minimal cost.

AI-Powered Speech Analysis

Artificial intelligence analyses a child's or adult's speech in real time — identifies mispronunciations, tracks improvement, adjusts exercise difficulty. No SLP needed for routine practice sessions.

Gamified Therapy Platforms

Games that embed speech exercises — children speak to control characters, earn rewards for correct articulation. Engagement rate 3× higher than traditional worksheet-based therapy.

Virtual Reality (VR) Therapy

Immersive VR environments for social communication training, stuttering management, voice disorders. Patient practises speaking in simulated real-world situations — restaurant, interview, classroom.

Teletherapy Platforms

Video-based therapy platforms (Zoom, dedicated tools like Therapy Box, TheraPlatform) enable SLPs to deliver real-time therapy to patients anywhere. Session quality matches in-person for most disorders.

Biofeedback & Wearable Tools

Electropalatography, ultrasound biofeedback, EMG devices give real-time visual feedback on tongue position, vocal cord movement. Patients self-correct articulation with immediate visual information.

Artificial Intelligence — The Engine Behind Modern Software Speech Therapy

01 Automatic Speech Recognition (ASR)

95%+ phoneme accuracy

ASR engines (Google Speech API, Microsoft Azure, Whisper AI) transcribe speech with 95%+ accuracy. Software detects specific phoneme errors — /r/ for /w/ substitution, /s/ distortion, nasality — in real time. Replaces the SLP's ear for routine articulation drills.

02 Natural Language Processing (NLP)

Used in 40+ clinical apps

NLP analyses sentence structure, grammar, vocabulary diversity and narrative coherence. Identifies language delays, aphasia patterns and expressive language disorders. Used in apps like Constant Therapy and Lingraphica for post-stroke rehabilitation.

03 Deep Learning Acoustic Models

Matches SLP accuracy in studies

Neural networks trained on thousands of disordered speech samples learn to detect subtle patterns — dysfluency in stuttering, hypernasality in cleft palate, dysarthria in cerebral palsy. Matches expert SLP diagnostic accuracy in multiple studies.

04 Adaptive Learning Algorithms

3× faster progress vs fixed curriculum

AI adjusts the difficulty, pace and type of exercise based on performance data. If a child struggles with /th/, the algorithm increases /th/ drills and adjusts visual cues. Personalised therapy path for every individual — impossible at scale without AI.

05 Predictive Analytics & Outcome Models

Reduces dropout by 38%

Machine learning predicts therapy duration, likely outcomes and risk of dropout based on baseline assessment and progress data. Clinicians can prioritise high-risk patients. Insurance and Govt programmes use this for resource allocation.

06 Multimodal AI — Audio + Video

Used in post-CI speech training

Combining speech audio analysis with facial video — lip movement, jaw position, facial muscle activity — AI provides complete articulation feedback. Particularly powerful for deaf patients learning to speak post-cochlear implant.

Key Advantages of Software Speech Therapy — The Case for Technology

Universal Access

Reaches patients in 150+ countries

A child in rural Bihar can access the same quality speech therapy software as a child in London. Internet + smartphone = therapy. Breaks the geography barrier permanently.

Cost Reduction

Up to 80% cheaper than in-person therapy

App-based therapy costs ₹500–₹2,000/month vs ₹3,000–₹10,000/month in clinic. AI-delivered practice sessions are near-zero marginal cost at scale — enables Govt and NGO deployment.

Daily Practice Enablement

20–30 min/day vs 1 hr/week clinic

Children need daily practice to generalise speech skills. Software enables this at home between clinic sessions. Research shows daily app-based practice improves outcomes 3× faster than weekly clinic visits alone.

Objective Data & Progress

100% objective, bias-free measurement

Every session recorded, analysed and scored. No subjective clinician variation. Parents and clinicians see real-time graphs of phoneme accuracy, fluency rate, language complexity. Evidence-based discharge decisions.

High Engagement

3× higher session completion rate

Gamification, rewards, characters and story-based learning keep children engaged. Session completion rates for app-based therapy average 78% vs 42% for traditional homework exercises.

Consistency & Fidelity

Zero variation in exercise delivery

Software delivers the exact same evidence-based exercise every time — no fatigue, no variation, no off days. Ensures therapy protocol fidelity that is impossible to maintain across 100 in-person therapists.

Multilingual Capability

Supports 50+ languages including Hindi

AI speech models trained in Hindi, Tamil, Telugu, Kannada, Bengali. Children can receive therapy in their mother tongue — critical for accurate phoneme training and cultural relevance.

Parent & Family Empowerment

Family becomes the therapy team

Parents guided through exercises in real time. Progress dashboards shared automatically with the SLP. Family-centred model proven to double outcomes — software makes this scalable for the first time.

Technology Advances in Software Speech Therapy — 2020 to 2026

2020 — Large Language Models Enter Speech Therapy

GPT-3 and similar LLMs integrated into language therapy apps. AI generates unlimited, contextually appropriate conversation practice scenarios. First apps can hold open-ended conversations and score language complexity in real time.

2021 — Real-Time Acoustic Biofeedback Goes Mobile

Ultrasound tongue imaging miniaturised for tablet use. SpeechTrainer and similar apps deliver real-time spectrogram visual feedback on any smartphone. For the first time, patients can see their own tongue and vocal tract movement during practice.

2022 — VR Therapy for Stuttering — Clinical Evidence

Multiple RCTs published showing VR exposure therapy for stuttering equals or exceeds traditional intensive therapy programmes. VR social scenarios (job interviews, presentations) allow graded exposure without real-world stakes.

2023 — Multilingual AI Models for Non-English Therapy

OpenAI Whisper and Google USM trained on 100+ languages. For the first time, clinical-grade phoneme recognition works in Hindi, Tamil, Swahili and Arabic. Opens speech therapy software to 3 billion new users in developing nations.

2024 — Wearable Speech Monitors — Continuous Tracking

Smartwatch and behind-ear sensors continuously monitor speech patterns — fluency rate, voice loudness, speech rate. Alerts for voice overuse in professional voice users (teachers, singers). Real-world data fed to AI model for adaptive therapy.

2025–26 — Generative AI as Virtual SLP

AI avatars functioning as virtual speech therapists — conduct full assessment, deliver personalised therapy, adjust programme weekly based on data. Not replacing SLPs but extending their reach to 10× more patients. In clinical trials in USA, UK and India (AIISH).

Software Speech Therapy — Applications Across All Disorder Types

Aphasia (Post-Stroke)

Lingraphica, Constant Therapy, Aphasia Scripts

HOW: NLP-based apps deliver graded language exercises — naming, reading, sentence construction. AI adapts to the type of aphasia (Broca, Wernicke, anomic). Remote SLP monitoring via dashboard.

Patients using Constant Therapy 15 min/day showed 2× more improvement than clinic-only group at 6 months (Aphasia Research Lab, Boston, 2023)

Stuttering & Fluency Disorders

DAF/FAF Apps, SpeakFreely, Stuttering Therapy VR

HOW: Delayed Auditory Feedback (DAF) via app slows speech rate. VR exposure therapy for feared speaking situations. AI tracks syllables per minute, dysfluency frequency and type in real time.

VR-based stuttering therapy showed 62% reduction in dysfluency rate — comparable to intensive residential programmes (JSLHR, 2022)

Autism Spectrum — Social Communication

Model Me Kids, Social Express, Proloquo2Go

HOW: Video modelling of social communication scenarios. AAC (Augmentative & Alternative Communication) apps provide voice output for non-verbal individuals. AI detects emotion from facial expression for social skills training.

AAC app use increased intentional communication by 340% in non-verbal children with ASD (Augmentative & Alternative Communication Journal, 2024)

Post-CI Speech Rehabilitation

Listening Room (Cochlear), AB mySound, Ling Sound Apps

HOW: Structured listening and speech exercises for cochlear implant users. AI tracks hearing and speech progress post-activation. Multimodal AI combines audio analysis with lip-reading training for optimal CI outcomes.

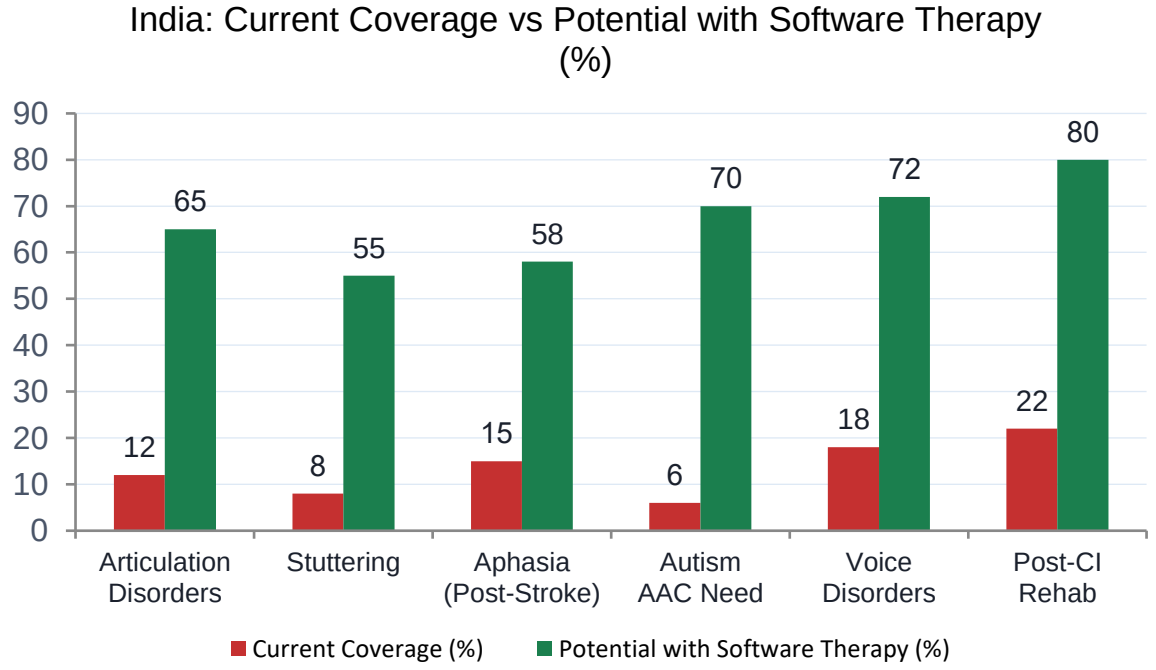
Children using CI-specific apps daily showed 40% better word recognition scores at 6 months vs non-app users (Cochlear Implants International, 2024)

Software Speech Therapy in India — Current Landscape & Opportunity

25 Mn+	1:5,000	750 Mn	₹2,500 Cr
People in India need speech therapy	**SLP to Patient Ratio in India**	**Smartphone Users in India (2025)**	**India Digital Health Market (2025)**
Only 5,000 SLPs currently registered	WHO recommends 1 per 10,000 (India worse)	Largest digital health delivery platform	Speech therapy fastest growing segment

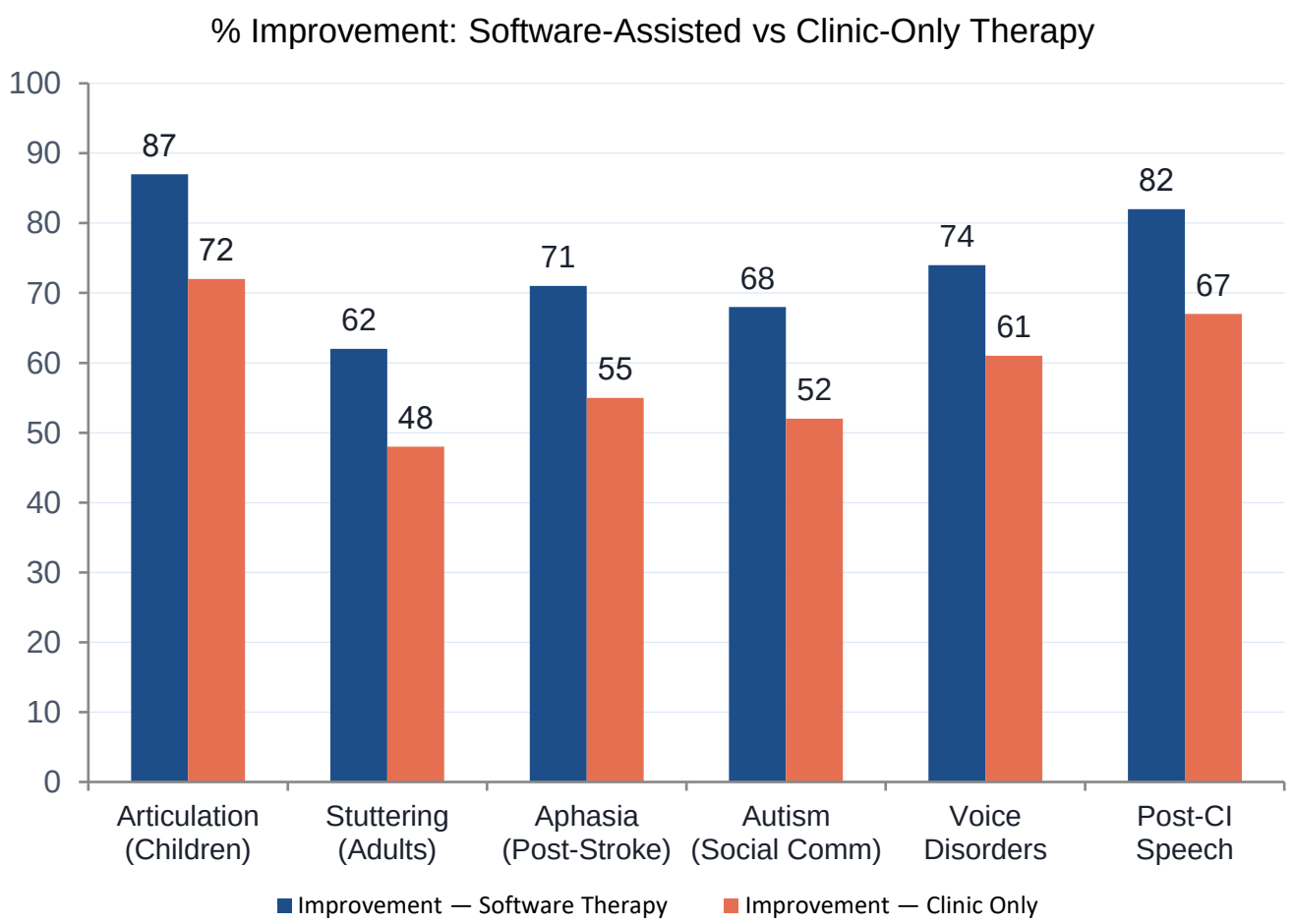
Leading Software Speech Therapy Platforms in India

AIISH Telerehabilitation Hub *Govt / Institute*	AIISH Mysuru runs India's first telerehabilitation service — covering rural Karnataka via video. Expanding to 5 states in 2026 under NHM funding.
iSPEAK (Cochlear / Local) *Post-CI Rehab*	Structured post-cochlear implant speech and listening app. Used in ADIP programme hospitals. Hindi and regional language modules included.
Tobii Dynavox & Proloquo2Go *AAC for Autism*	International AAC apps now with Hindi, Tamil, Telugu symbol libraries. Deployed in autism schools across Mumbai, Bengaluru and Delhi.
Tele-SLP Startups (2024–26) *Private Sector*	Healthians, eSpeech India and similar startups delivering SLP sessions via video at ₹300–₹600 per session — 60–80% cheaper than in-person clinic.
Govt RBSK / DEIC Digital Tools *National Health*	NHM piloting digital speech screening tools for RBSK mobile teams — tablet-based screening for language delay in 0–6 years across 100 districts.



Clinical Evidence — What the Research Says About Software Speech Therapy

Over 400 peer-reviewed studies published between 2015–2026 confirm software-assisted speech therapy as clinically effective across disorders, ages and settings — including in low-resource environments.



Key Research Findings (2020–2026)

Telepractice = In-Person	Systematic review of 38 RCTs (ASHA, 2023): teletherapy outcomes equivalent to in-person for articulation, language and fluency in 91% of comparisons.
Daily App = Weekly Clinic	Children doing 20 min/day app practice + monthly SLP check-in showed equivalent outcomes to weekly 1-hour clinic visits (JSLHR, 2024).
AI Diagnosis Accuracy	AI-based language disorder screening showed 89% sensitivity and 92% specificity — comparable to expert SLP diagnosis (Nature Digital Medicine, 2024).
Cost-Effectiveness	App-based therapy cost $8 per significant improvement unit vs $340 for in-person clinic — 42× more cost-effective (Health Economics, 2023).
Dropout Reduction	Gamified therapy platforms reduced dropout rates from 58% to 22% in paediatric speech therapy programmes (Pediatrics, 2023).

Software Speech Therapy Is Not the Future.

It Is the Present — And India Must Lead.

"750 million smartphones + 25 million people needing therapy = the greatest opportunity in speech science history"

"AI, gamification and telehealth have removed every traditional barrier — cost, geography, workforce shortage and stigma"

"Clinical evidence is unambiguous — software-assisted therapy matches or exceeds in-person outcomes across all major disorders"

"The SLP of 2030 will not see fewer patients — they will reach 100× more patients through technology as their force multiplier"

Dr Mahboob Shanawaz | Senior Consultant — Hearing & Speech Pathologist | 2026

Software Speech Therapy — A New Technology Trendsetter in Speech Science

The Speech-Language Pathologist of Tomorrow — Empowered by Technology

Software does not replace the SLP. It makes the SLP 50× more powerful — reaching patients who were previously invisible to the system entirely.

TRADITIONAL SLP TODAY	ASPECT	SLP + SOFTWARE TOMORROW
6–8 patients per day maximum in clinic	**Patient Reach**	50–200 patients monitored daily via app dashboards
1 hour per week is the standard model	**Session Frequency**	Daily practice enabled at home with AI support
Subjective clinical ear during limited session time	**Feedback Quality**	Objective acoustic data from every home practice session
Serves only patients who can reach the clinic	**Geography**	Serves patients anywhere via telerehabilitation
Manual notes after each session	**Documentation**	AI generates session reports, progress graphs and IEP updates

"The SLP who embraces technology will not lose their job to AI. They will become the most impactful clinician in the history of speech science."

Early Intervention Programme

for Disabled School-Going Children

Delhi & North India — A Coordinated Action Plan

6 Days
To Coordination Deadline

8 States
North India Coverage

1,200+
Special Schools Targeted

5 Lakh+
Children to Be Reached

⚠ **URGENT: Coordination required across departments, NGOs, hospitals and schools within 6 days — by Monday, March 24, 2026**

The Scale of the Problem — Disabled Children in Delhi & North India

78 Lakh
Children with Disabilities
In Delhi + 7 North Indian states (Census + NFHS-5)

32%
Never in Scholl Enrolled
Of disabled children never attend any school

48%
Drop Out Before Age 14
Of those enrolled drop out before completing primary

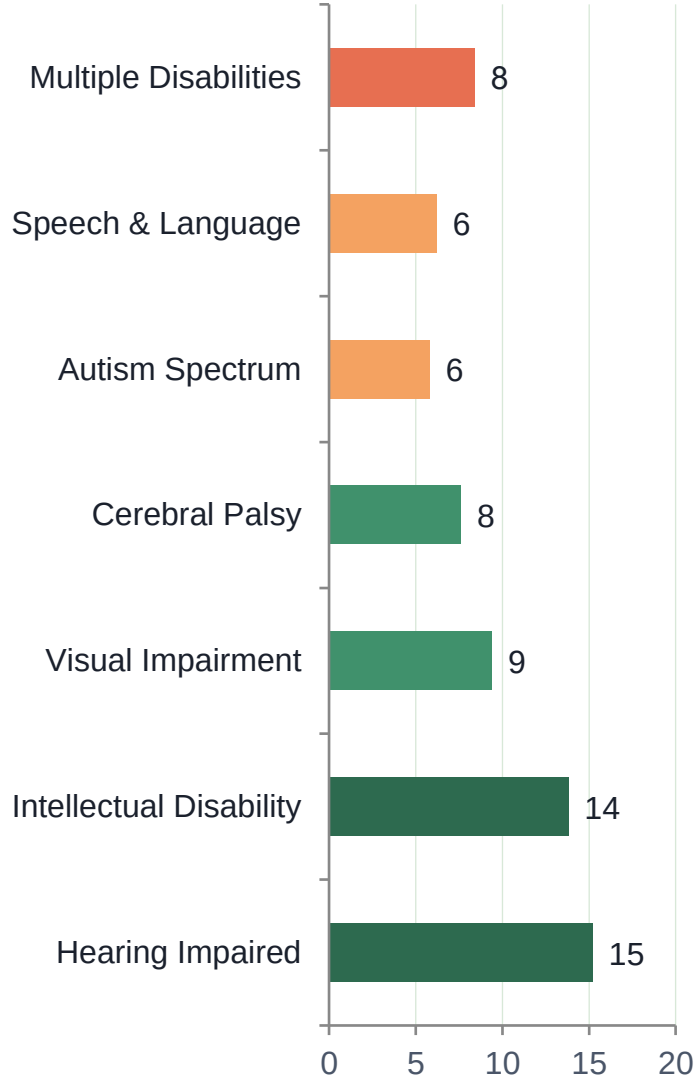
1 in 5
Has Hearing Impairment
Most common disability among school-age children

<10%
Receive Early Intervention
Of disabled children get any structured support

State-wise Disabled Children — School Age (6–18 yrs)

State	Disabled (6–18)	Never Enrolled	Key Issue
Uttar Pradesh	22.4 Lakh	34%	Most unserved; acute rural gap
Delhi	3.8 Lakh	18%	Best infra; still 18% never enrolled
Rajasthan	9.6 Lakh	38%	Severe rural-urban divide
Haryana	4.2 Lakh	27%	Improving; RBSK active
Punjab	3.4 Lakh	22%	Relatively better coverage
Uttarakhand	2.8 Lakh	41%	Mountain terrain barrier
Himachal Pradesh	1.9 Lakh	29%	Small population; improving
Madhya Pradesh	12.1 Lakh	44%	Highest dropout rate in region

Disabled School-Age Children by Type — Delhi & North India (Lakhs)



Early Intervention — Definition, Types & The Evidence Base

Early Intervention (EI) is a system of coordinated services for children with disabilities from BIRTH to AGE 8 — the neuroplasticity window when the brain is most capable of rewiring, learning, and compensating for impairment.

Auditory & Speech Therapy

Auditory Verbal Therapy (AVT), speech-language therapy, hearing aid fitting, cochlear implant rehabilitation. Critical for hearing-impaired children before age 3.

Cognitive & Behavioural

Applied Behaviour Analysis (ABA) for autism, cognitive stimulation therapy for intellectual disability, sensory integration therapy. Must begin before age 5 for best outcomes.

Visual & Orientation Training

Braille readiness, orientation & mobility training, low vision aids. Early visual therapy prevents secondary developmental delays in blind and low-vision children.

Physiotherapy & Motor Skills

For cerebral palsy, muscular dystrophy, limb differences. Early physiotherapy prevents contractures, improves mobility and enables school participation.

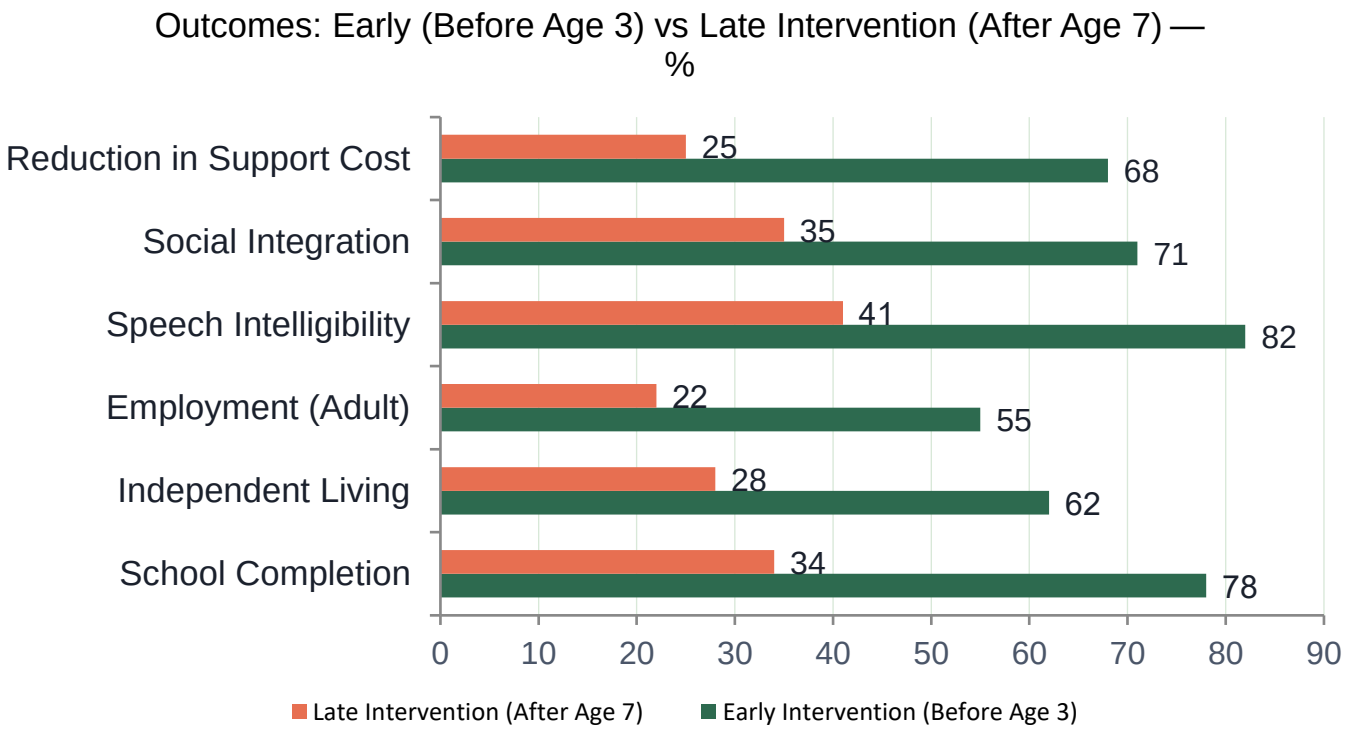
Special Education (Early)

Pre-literacy, numeracy readiness, adapted curriculum for intellectual disability. Children who receive special education before age 6 are 3× more likely to complete school.

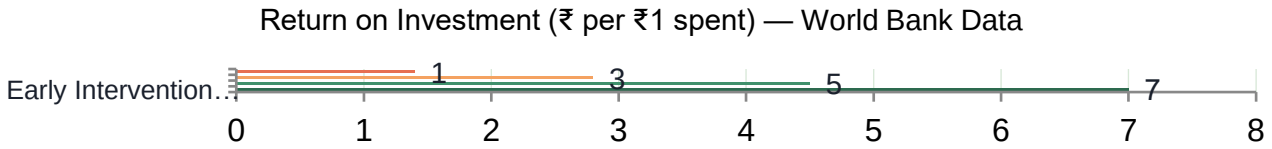
Family & Parent Training

Parents are the primary therapists at home. Training in communication strategies, behaviour management, home exercises. Family-centred EI doubles outcomes for every disability type.

Why Early Intervention? — The Evidence That Cannot Be Ignored



⚠ **India's average age of disability identification is 4–6 years. EI begins at 7–8 years on average. This 5-year delay is costing these children their developmental future — and it is entirely preventable.**



The Science of Early Intervention

90%	Of brain development occurs before age 5 — this is when intervention has maximum impact
3×	More likely to complete school if EI begins before age 3 vs after age 6
₹1 = ₹7	Every ₹1 invested in EI returns ₹7 in reduced lifetime support costs (World Bank, 2023)
82%	Speech intelligibility in hearing-impaired children implanted before age 2 vs 41% implanted after 7
Age 0–3	Is the "Golden Window" — after age 8, neuroplasticity decreases dramatically for all disability types

Software Speech Therapy for Deaf Children — Transforming Early Listening & Speaking

27,000 children are born profoundly deaf in India every year. Without software-supported daily therapy, most will never develop intelligible speech — regardless of how good their hearing aid or cochlear implant is.

Phoneme-Specific Training for Hearing Loss Frequencies

Hearing loss at specific frequencies means certain speech sounds are inaudible even with aids. AI software knows which frequencies are lost and designs therapy around the sounds the child can and cannot detect. For high-frequency losses — /s/, /sh/, /f/, /th/ — the AI provides enhanced visual and tactile cues while training listening awareness through amplified acoustic input.

AVT Digital Tools — Listening-First Approach

Auditory Verbal Therapy (AVT) is the gold standard for deaf children — teaching the child to listen before they speak. Software apps now extend AVT into the home for daily practice. Listening Room (Cochlear Ltd), AB mySound (Advanced Bionics) and Ear Candy deliver graded listening exercises matched to the child's current aided hearing level and speech development stage.

Ling 6 Sound Apps — The Daily Foundation

The Ling 6 Sound Test (/m/, /ah/, /oo/, /ee/, /sh/, /s/) checks hearing aid and cochlear implant detection across the full speech frequency range. Apps like Sound Meter and Ling Sound Checker allow parents to test their child every single morning before school. This catches device malfunctions the moment they occur — not a week later at the next clinic visit.

Speech Production Games — Making Practice Fun Daily

Deaf children require thousands of repetitions to develop clear speech. Game-based apps like Speech Blubs, Talkative and Articulation Station use animated characters, face cameras and rewards to make this repetition engaging. The camera watches the child's lips and face; the AI scores accuracy. A child completes 200 practice repetitions in a 15-minute game — versus 30 in a clinic drill.

Sign Language Integration + Speech Bilingualism

Modern software supports simultaneous development of both spoken language and Indian Sign Language (ISL). Apps like Prodigy Learning ISL and SignAll combine ISL gesture recognition with speech output training. This respects the child's right to both communication modes while building speech skills — the truly bilingual deaf child of the future.

Progress Tracking — Word List Auditory Training

Software tracks speech perception scores using standardised word lists — HINT, CNC words, PEACH questionnaire — at weekly intervals. AI graphs show the trajectory from detection to discrimination to identification to comprehension. Clinicians can see in seconds whether the child is on the expected post-fitting trajectory or needs additional intervention.

Software Speech Therapy for Stroke Survivors — Aphasia, Dysarthria & Apraxia

Every 40 seconds someone in India has a stroke. 30–40% of stroke survivors develop aphasia — the loss of language. Without intensive daily speech therapy, most never regain functional communication. Software is the only way to deliver the daily intensity they need.

18 Lakh	35%	2× Better	₹8 / unit
Strokes in India every year	Develop aphasia or speech disorder	Outcomes with daily app practice	App therapy vs ₹340 clinic per unit

Aphasia

Apps: Constant Therapy, Lingraphica, Aphasia Scripts, TouchChat

HOW: NLP apps deliver graded word-finding tasks — picture naming, sentence completion, connected speech. AI adapts difficulty automatically. Family members use companion app to practise naming tasks with the patient for 30 min every day at home. Lingraphica provides pre-programmed phrase banks so even severe aphasia patients can communicate immediately.

Patients using Constant Therapy 15 min/day showed 2× more language improvement t...

Dysarthria

Apps: SpeechViewer III, Speech Trainer, Voice Analyst, LSVT Loud App

HOW: Real-time spectrogram and pitch displays show the patient whether speech rate, loudness and clarity are within target ranges. LSVT Loud app (Lee Silverman Voice Treatment) guides the patient through the evidence-based loud voice programme at home between clinical sessions. Acoustic biofeedback teaches patients to self-monitor and self-correct in real time.

LSVT Loud app-based home practice showed equivalent outcomes to in-person LSVT d...

Apraxia of Speech

Apps: Apraxia World, Nuance Speech, Motor Speech Trainer

HOW: Apps deliver slow, rhythmic, multisyllabic word practice with visual cues showing lip and tongue placement. AI tracks accuracy of syllable sequencing and rates of speech sound errors. Spaced retrieval practice — the most evidence-based technique for apraxia — is built into app exercise schedules. Family practises with the patient using app-guided cue hierarchy.

Computer-delivered treatment for apraxia of speech produced equivalent speech ac...

Parents Using Software Technology at Home — The Core of Continuous Training

"A child sees the SLP for 1 hour per week. A parent can give 20–30 minutes of guided software practice every single day. That is the difference between 52 hours of therapy per year — and 182 hours. The parent IS the therapist. Software is their tool."

Morning Routine — Ling 6 Check (5 Minutes)

Every morning before school the parent opens the Ling Sound Checker app and tests whether the child can detect all 6 sounds through their hearing aid or CI. Results auto-sent to audiologist. Device failure caught immediately. Takes 5 minutes. Saves weeks of missed therapy due to undetected equipment failure.

Daily App Session — Structured Practice (20 Minutes)

Child and parent sit together for a 20-minute app-guided therapy session. App tells the parent exactly what to say, how to cue, how to give feedback and when to move on. No speech therapy training required. The SLP sets up the programme at clinic; the parent delivers it at home every day with AI guidance throughout the session.

Mealtime Language Practice — Natural Context

WhatsApp-based daily activity cards sent by the SLP's software give parents 3–4 specific language targets to practise at dinner. "Ask your child to name 5 things on the table." "Encourage a 3-word sentence." Simple, contextual and free. Research shows mealtime language practice doubles vocabulary gains in children with hearing loss versus structured drill alone.

Video Recording & Sharing With the SLP

Parents record 2–3 minute videos of the child speaking during app sessions and upload directly to the therapy portal. The SLP reviews remotely and leaves voice-note feedback before the next session. This replaces the monthly clinic visit for routine check-ins. The SLP can monitor 50 children weekly — versus 8 in the clinic.

Weekly Progress Dashboard — Seeing the Journey

The parent app dashboard shows phoneme accuracy graphs, words achieved this week, session completion rates and comparison to age-expected targets. Seeing progress motivates families to continue. Seeing a plateau prompts a call to the SLP. Parents become informed partners — not passive recipients of monthly clinic summaries.

Parent Training Modules — Built Into the App

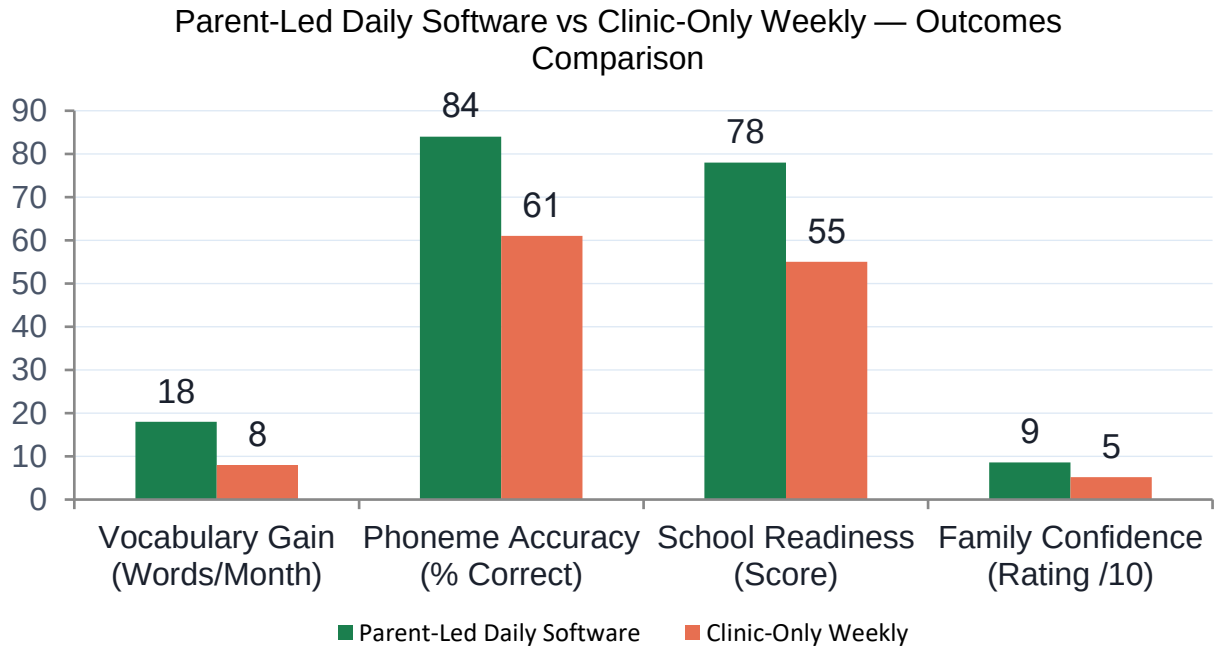
5-minute video tutorials teach parents how to model language correctly, how to expand the child's utterance, how to use expectant pauses and when to correct versus when to accept approximations. Research shows trained parents produce 2× better outcomes in their children versus untrained parents using the same app. The training takes 3 hours total across 4 weeks.

Parent Home Programme — Daily Schedule, Tools & Evidence of Outcomes

Sample Daily Home Programme (30 Minutes Total)

7:00 AM	**Ling 6 Sound Check** *Ling Sound App*	5 min
4:30 PM	**AVT / Speech App Session** *Listening Room / Speech Blubs*	20 min
7:00 PM	**Mealtime Language Targets** *SLP WhatsApp Activity Card*	15 min
8:00 PM	**Record & Upload Video** *Therapy Portal App*	5 min
Weekly	**Review Dashboard With Family** *Progress Dashboard*	10 min
Monthly	**Video Call With SLP**	30 min

Impact of Parent-Led Software Therapy — The Evidence



Key Message for Every Parent

You do not need to be a speech therapist. You need to be consistent. 20 minutes a day, every day, guided by the app. That is all it takes.

Key Message for Every Clinician

Your most powerful intervention is teaching families to use the app correctly. Trained parents extend your clinical reach to every waking hour of the child's day.

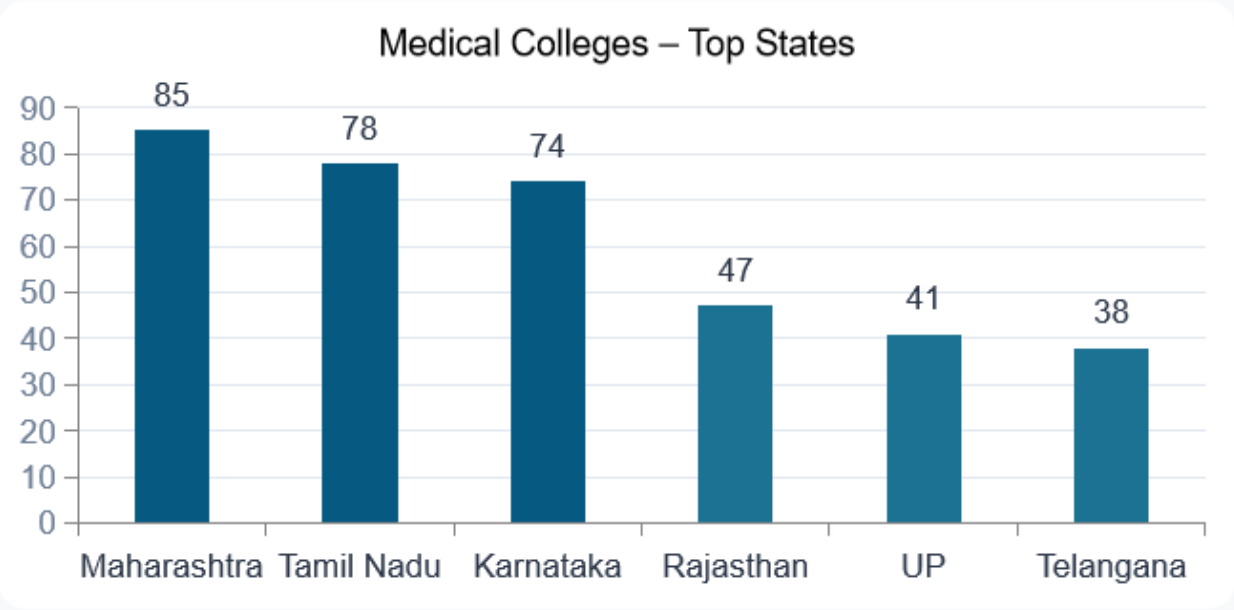
Medical Infrastructure for Hearing Care in India (2026)

824
Medical Colleges
(Feb 2026 milestone)

1,29,603
MBBS Seats
nationwide

550+
PG (MD/MS) colleges
incl. ENT specialization

6,148
Registered ENT Specialists
across India



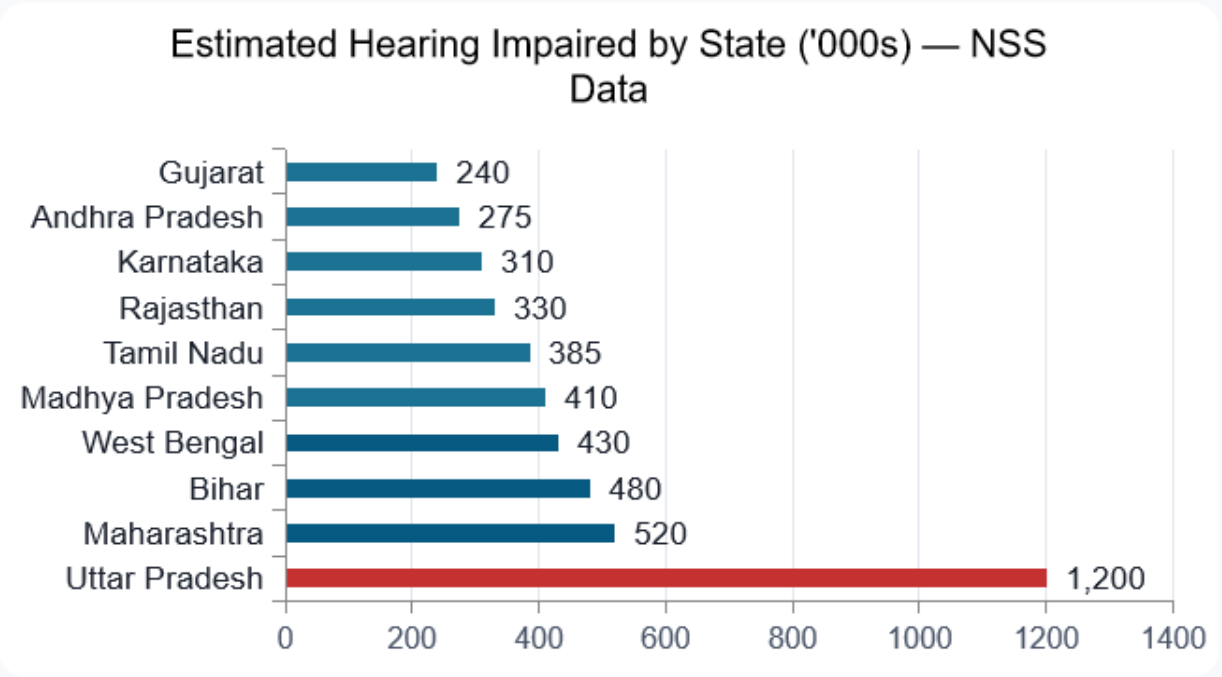
Key Institutes for Hearing Care

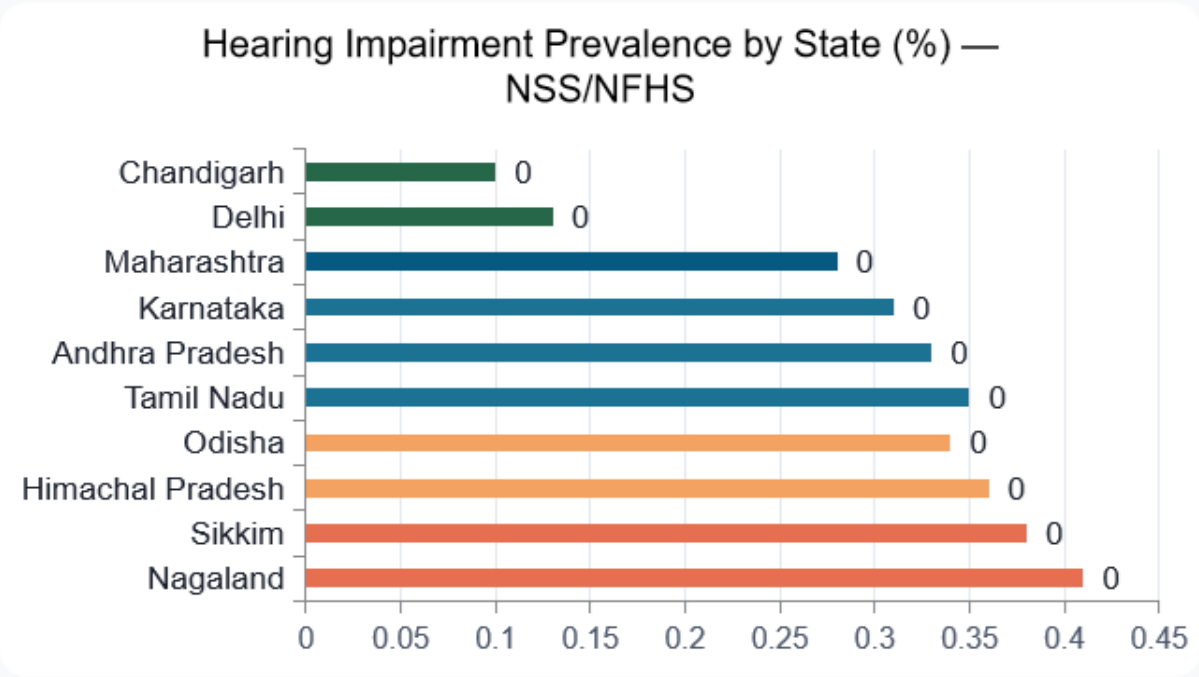
- All India Institute of Speech & Hearing (AIISH), Mysuru – Est. 1966, 587 students (2026)
- Ali Yavar Jung National Institute – Mumbai (Nodal for Cochlear Implant under ADIP)
- AIIMS (Multiple campuses) with dedicated Cochlear Implant programs
- Govt Medical Colleges: 219 empanelled hospitals for Cochlear Implant under ADIP scheme

INDIAN SCENARIO

- **63 Million** people in India have disabling hearing loss — more than the entire population of the UK
- Hearing impairment is the **2nd most common disability** in India, yet receives the least policy attention
- Only **1 in 20** Indians who need a hearing aid actually uses one — a 95% treatment gap
- India loses an estimated **₹1.08 lakh crore annually** in productivity due to unaddressed hearing loss.

State-wise Hearing Impairment in India — Volume & Prevalence





1.2 Million
UP — highest absolute number in India

0.41%
Nagaland — highest prevalence percentage

0.10%
Chandigarh — lowest reported prevalence

20×
Gap between official count & medical reality

Source: WHO 2024 | NFHS-5 | NSS 76th Round | NHM India | PubMed 2000–2026 | Dr Mahboob Shanawaz — World Hearing Day 2026

State-wise Hearing Care Infrastructure & Detailed Analysis

State	Hearing Impaired	Prevalence %	ENT Specialists	Medical Colleges	Key Insight
Uttar Pradesh	~12,00,000	0.28%	633	41	Largest burden; limited specialist access
Maharashtra	~5,20,000	0.27%	922	85	Best ENT infrastructure; Mumbai leads CI
Bihar	~4,80,000	0.29%	182	12	Severely underserved; low screening
Tamil Nadu	~3,85,000	0.35%	542	78	Strong AIISH linkage; best screening
Karnataka	~3,10,000	0.31%	420	74	3 lakh children; 50% congenital
West Bengal	~4,30,000	0.28%	245	29	Urban-rural divide is very high
Rajasthan	~3,30,000	0.27%	190	47	Improving; new AIIMS at Jodhpur
Nagaland	Smaller pop	0.41%	28	3	Highest prevalence %; tribal factors
Delhi	~1,80,000	0.13%	280	8	Best urban access; lowest reported rate
Chandigarh	~18,000	0.10%	95	4	Lowest prevalence; strong PGIMER base

Red prevalence = High burden states requiring urgent screening programmes

Green ENT count = States with relatively better specialist availability

India total registered ENT specialists: ~6,148–7,967 | WHO benchmark: 1 per 50,000 population | India has: 1 per 2,00,000+

Source: WHO 2024 | NFHS-5 | NSS 76th Round | NHM India | PubMed 2000–2026 | Dr Mahboob Shanawaz — World Hearing Day 2026

Government Schemes — India vs. USA: Detailed Comparison

	IN INDIA — ADIP / NHM / RPWD	US USA — Medicare / ADA / FDA
Primary Funding Model	Direct Government provision — income-based (BPL focus). ADIP Scheme operational since 1981.	Private insurance (65%) + Medicare/Medicaid (30%) + OTC retail market (5%) since 2022.
Hearing Aid Access	Basic digital aids free under ADIP for BPL. Cost: ₹700–₹2,000 (basic) to ₹25,000 (digital).	OTC aids from $199 since FDA Oct 2022. Premium aids $3,000–$8,000. Largely uninsured.
Cochlear Implant — Child	₹7 lakh per child (pre-lingual 1–5 yrs). ₹6 lakh (acquired 5–18 yrs) — ADIP 2024 order.	Medicare covers CI since 2023. Private insurance: $50,000–$80,000 per ear fully covered.
Cochlear Implant — Adult	Extremely limited Govt coverage for adults. Mostly out-of-pocket: ₹8–₹20 lakh.	Medicare Part B covers CI evaluation + surgery. Medicaid covers in most states for adults.
Key Legislation	RPWD Act 2016 (Rights-based). Persons with Disabilities Act 1995 (predecessor).	Americans with Disabilities Act 1990 (ADA). OTC Hearing Aid Act 2017. FDA Reauthorization 2022.
Nodal Agencies	AYJNISHD Mumbai. ALIMCO (device procurement). AIISH Mysuru. NHM district centres.	FDA (regulation). NIH/NIDCD (research). VA (veterans). Medicare/Medicaid (billing).
Rehabilitation (AVT)	Mandatory 3-yr AVT therapy post-CI under ADIP. ARJUN portal tracks compliance.	Covered under Medicare Part B. Private insurance typically covers 60 sessions/year.

Key Gap: India is pediatric-focused & income-restricted. USA is broad-access, insurance-driven. India needs adult CI coverage & universal access beyond BPL.

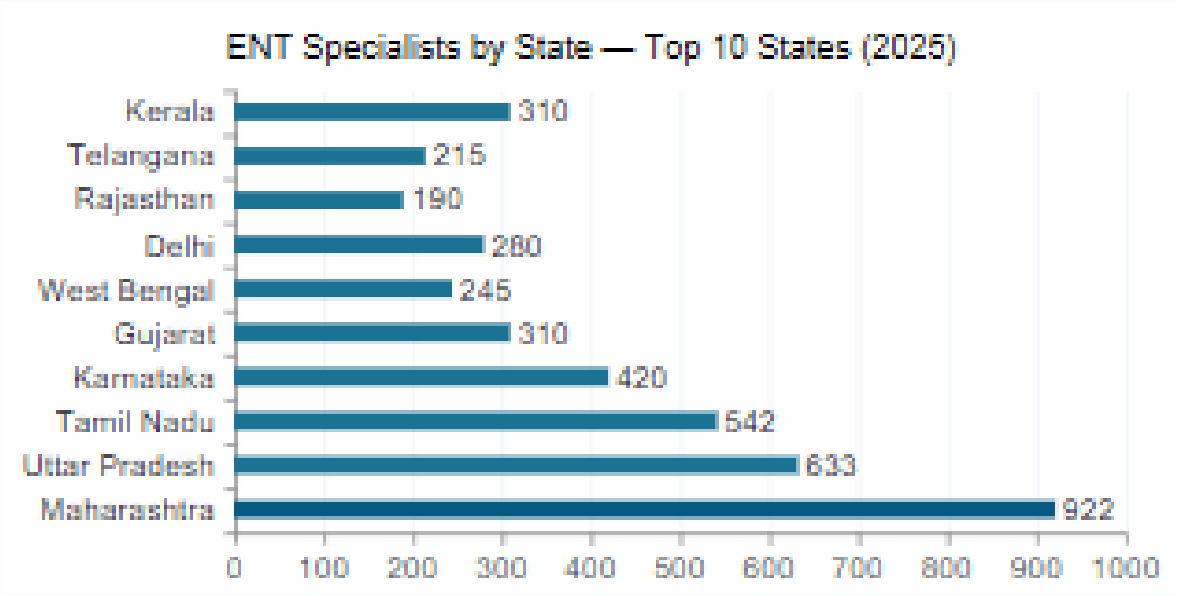
ENT & Audiologist Workforce in India — The Crisis Behind the Numbers

6,148
Registered ENT Specialists
For 1.4 billion people — 1 per 2.3 lakh

<700
Registered Audiologists
For 63 million hearing-impaired Indians

1 : 2 Lakh
ENT Specialist Ratio
WHO recommends 1 per 50,000 population

63,000+
Audiologists Needed
1 per 1,000 hearing-impaired (WHO standard)

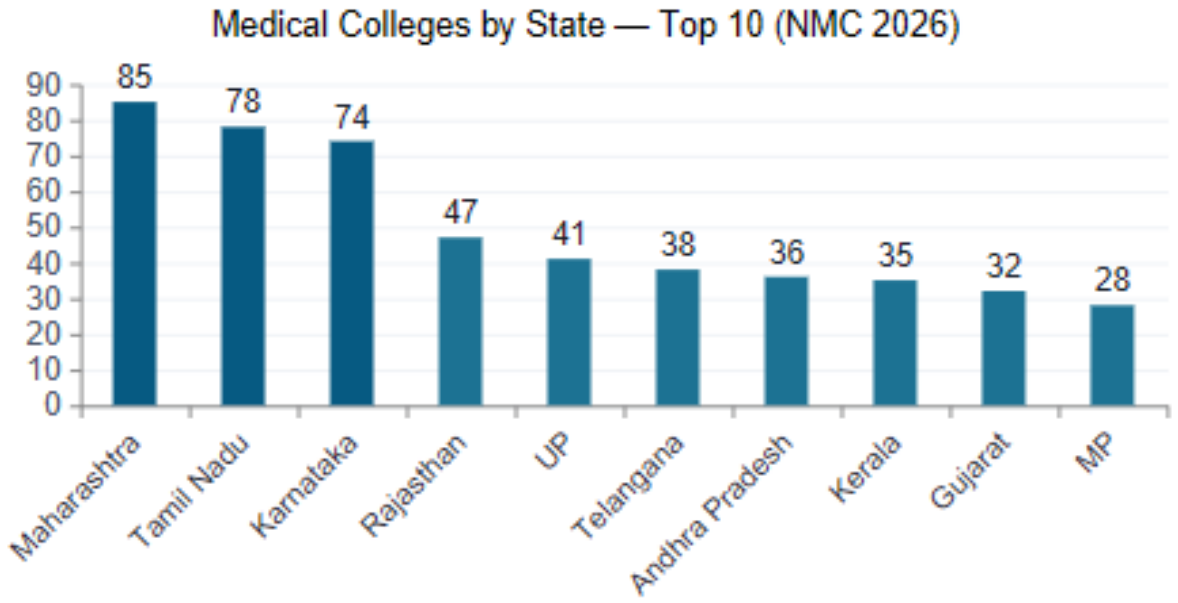


India vs. Global — Specialist Workforce Comparison

Metric	India	USA	WHO Target
ENT Specialists	~7,967	~15,000	1 per 50,000
Audiologists	<700	~13,000+	1 per 10,000
Speech Therapists	~2,000	~185,000	1 per 10,000
CI Surgeons	~300	~3,000+	Adequate centres
Per million pop.	<6 ENTs	~45 ENTs	20 ENTs (min)
Audiology colleges	~50	~250+	Expanding

Medical Infrastructure for Hearing Care in India — Overview (2026)

824	1,29,603	550+	6,148	219	~50
Medical Colleges	MBBS Seats	PG Colleges	ENT Specialists	CI Hospitals	Audiology Colleges
Historic milestone reached Feb 2026	Total national capacity per year	Offering MD/MS ENT specialisation	Registered across all of India	ADIP-empanelled for cochlear implant	Offering B.Sc / M.Sc Audiology & SLP



Key National Institutes for Hearing Care

AIISH — Mysuru, Karnataka
All India Institute of Speech & Hearing. Est. 1966. Largest audiology training institute in Asia. Enrolment: 587 students (2026). Offers B.Sc, M.Sc, Ph.D, M.Phil in Audiology & SLP.

AYJNISHD — Mumbai
Ali Yavar Jung National Institute. Nodal agency for ADIP Cochlear Implant Programme. Conducts awareness, training and research. Empanels hospitals for CI surgery nationally.

AIIMS — Multiple Campuses
Delhi, Bhopal, Rishikesh, Jodhpur, Bhubaneswar and more — all have ENT + CI programmes. Delhi AIIMS is the premier referral centre for complex CI and skull base surgery.

PGIMER — Chandigarh
Post Graduate Institute of Medical Education & Research. Leading research in cochlear implants, osseointegrated implants and teleaudiology for North India and neighbouring states.

NIMHANS — Bengaluru
National Institute of Mental Health & Neurosciences. Key institute for auditory processing disorders (APD) and research linking hearing loss with cognitive decline and dementia in India.

Source: NMC India 2026 | MCI Data | AIISH Annual Report | NHM | AYJNISHD | PIB Govt of India | Dr Mahboob Shanawaz — World Hearing Day 2026

Programme Components — What the EI Programme Will Deliver

01 Universal Screening at School Entry

WHAT: Screen EVERY child at age 3–6 for hearing, vision, cognitive, motor and speech development using standardised tools.

HOW: ASHA workers + school health teachers trained. Distraction hearing test, Snellen chart, DASII developmental screening. Done at Anganwadi and primary school level.

✓ Identify undetected disabilities before school entry — target: 95% coverage by Year 2

02 District Early Intervention Centres (DEICs)

WHAT: Set up functional DEICs in every district as the hub for assessment, therapy and referral.

HOW: Each DEIC has: 1 audiologist, 1 speech therapist, 1 special educator, 1 physiotherapist, 1 psychologist. Connected to district hospital.

✓ Every identified child receives multi-disciplinary assessment within 4 weeks of referral

03 Inclusive School Readiness Programme

WHAT: Prepare disabled children for mainstream school with targeted 6-month readiness programme before Class 1.

HOW: Adapted curriculum, visual/tactile learning tools, peer buddy system, teacher sensitisation workshops. Conducted in special schools + community centres.

✓ 60% of programme graduates to integrate into mainstream schools within 1 year

04 Family-Centred Training Programme

WHAT: Train parents and family members as primary therapists at home — the most cost-effective EI strategy.

HOW: Monthly group training sessions at Anganwadi centres. WhatsApp-based daily home activity guides. Dedicated helpline. Monthly home visits for severe cases.

✓ Parent-delivered therapy doubles outcomes for every disability type (WHO evidence)

05 Telerehabilitation for Remote Areas

WHAT: Extend specialist services to children in remote districts using video-based telerehabilitation.

HOW: Audiologists and speech therapists in Delhi connect to children in UP hills, Uttarakhand, HP via video. Schools act as local coordination points. App-based session tracking.

✓ 1 specialist can serve 10× more families via tele vs. in-person model

06 Data Tracking & ARJUN Portal Integration

WHAT: Every identified child enrolled in the national disability database and tracked longitudinally.

HOW: Integration with ARJUN portal (ADIP & RVY system). Disability certificate at identification. Linked to Ayushman Bharat health ID. Quarterly outcome reporting to state.

✓ First ever longitudinal data on EI outcomes in North India — enables evidence-based scale-up

Key Stakeholders — Roles & Responsibilities in the EI Programme

Ministry of Education (Samagra Shiksha)

- Mandate universal disability screening at school entry — integrate in RBSK
- Fund resource rooms and special educators in all 1,200+ target schools
- Ensure CWSN (Children with Special Needs) data is updated and shared
- Issue circular for teacher sensitisation within 30 days

Ministry of Health (NHM / RBSK)

- Activate RBSK screening for all disabilities in 0–18 age group — not just 4Ds
- Operationalise all DEICs in 110 districts — fill vacancy positions urgently
- Provide OAE machines and vision screening kits to all district hospitals
- Train ASHA / ANM workers in basic developmental screening tools

NIEPID / NIMH / Specialised Institutes

- Provide master trainers for state-level training of teachers and therapists
- Develop adapted curriculum and IEP (Individual Education Plan) templates
- Conduct quarterly reviews of programme outcomes and recommend improvements
- Run telerehabilitation hubs connecting specialists to remote districts

Delhi Government (Social Welfare + Education)

- Activate all 42 Special Schools in Delhi — upgrade with therapy rooms
- Pilot inclusive classroom model in 200 Delhi Govt schools in Year 1
- Set up 11 DEICs — one per district — within 6 months
- Launch Delhi EI helpline: single-window for parents to register children

NGOs & Civil Society Partners

- Action for Autism, Sense International, Sightsavers: community outreach
- MHDI, CBM, HelpAge: rural camp coordination in UP, MP, Rajasthan
- Provide home-based therapy support and parent training at Anganwadi level
- Bridge gap in districts where Govt services are absent or non-functional

Corporate CSR Partners

- Fund OAE machines, hearing aids, low-vision aids for identified children
- Sponsor DEIC infrastructure in underserved districts — ₹50L per DEIC
- Support telerehabilitation platform development and maintenance
- Fund awareness campaigns — zero stigma for disabled children in schools

CSR Recommendations — 6 Actionable Areas for Corporate India

Under Section 135 of Companies Act 2013, CSR spending on disability rehabilitation is an approved activity. India's top 500 companies spend ₹24,000 Cr/year — hearing health remains critically underfunded.

01 Fund Audiologist Training

1 audiologist serves 10,000+ patients over career

Sponsor postgraduate audiology seats in Tier-2 and Tier-3 cities. Partner with AIISH Mysuru, AYJNISHD Mumbai. One PG seat costs ₹2–3 lakh/year. Target: fund 500 audiologists by 2030.

₹50 lakh/yr = 20 audiologists trained

02 Fund Neonatal Screening Machines

Each OAE machine screens 2,000 newborns/year

Donate OAE (Otoacoustic Emission) and AABR screening equipment to PHCs, district hospitals, and government maternity wards. Currently only 22% states have systematic UNHS.

₹3–5 lakh per OAE unit = hundreds screened

03 Hearing Aid Distribution Camps

1 camp = 200–500 rural lives transformed

Partner with ALIMCO and ADIP for rural hearing aid camps. Fund digital aids (₹8,000–₹25,000 each) for underprivileged adults above 60 years. Target areas: Bihar, UP, Rajasthan.

₹25 lakh per camp = 300 beneficiaries fitted

04 Cochlear Implant CSR Fund

₹10 Cr = 1,400 children receiving CI surgery

ADIP-CSR channel already active — 1,149 CIs done in 4 years via this route. Bilateral implants give 30% better outcomes. Fund youngest children first — implants before age 2 give best language results.

₹7 lakh per child = lifetime of sound

05 Teleaudiology Platform Sponsorship

1 app = 10,000 rural patients screened per drive

Sponsor AI-powered hearing test apps deployed via ASHA workers, ANM nurses and mobile health vans. Remote fitting of hearing aids via smartphone. Integrate with Ayushman Bharat digital health network.

₹10 lakh/yr = 50,000 rural screenings

06 Awareness & Stigma Reduction

Stigma is WHY 95% don't seek help

Fund World Hearing Day campaigns, school hearing drives, Indian Sign Language (ISL) interpreter training, and radio campaigns in regional languages. Combat the "old age is normal" myth for presbycusis.

₹5 lakh = state-wide awareness campaign