➢ ***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

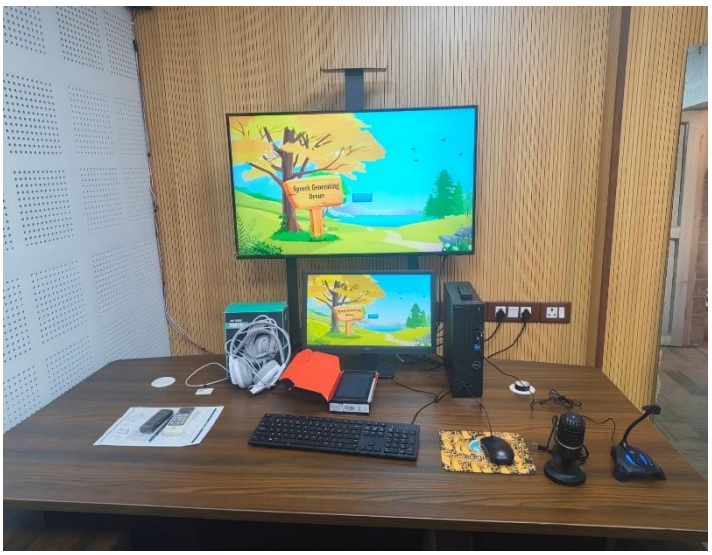
HOME TRAINING PARENTAL EDITION

(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**

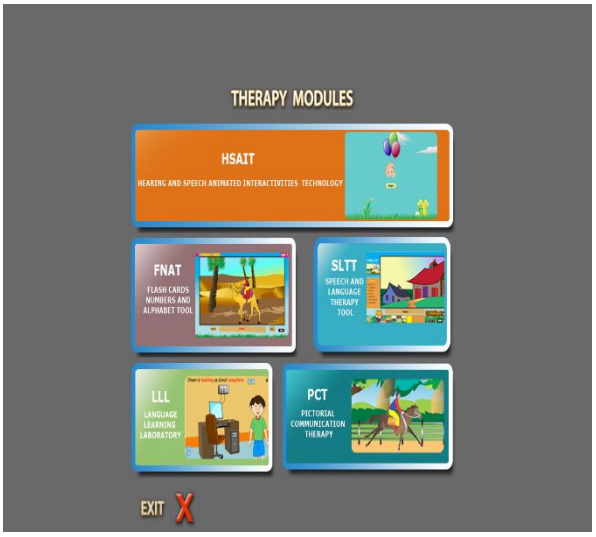
c)**Geriatric Population**

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

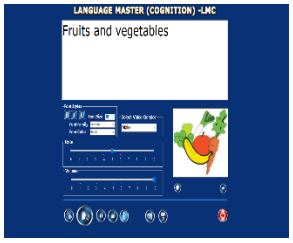
- **Voice Activated Module** - **23 Parameters of Comphrensive Voice Laboratory**

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



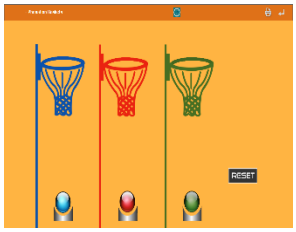






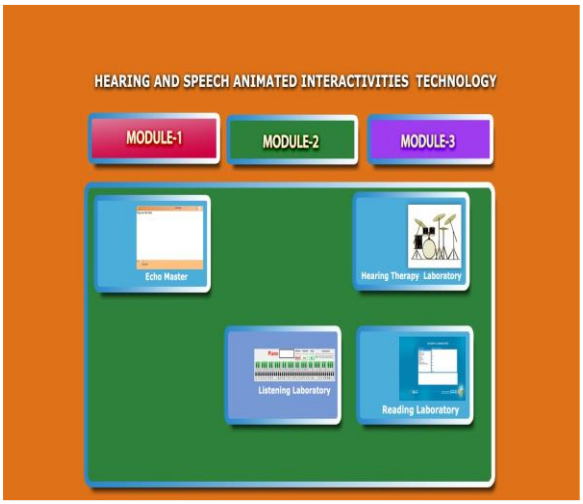


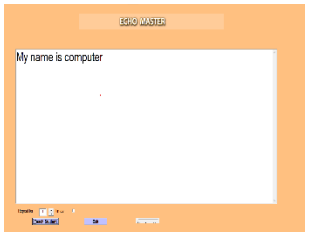




- **Listening skills Module**

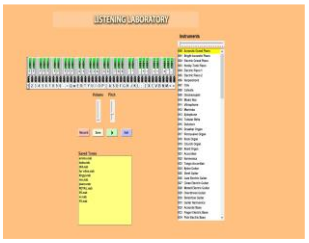
➢ **Improves**: - *Listening cognition-attention-hearing-Reading skills*



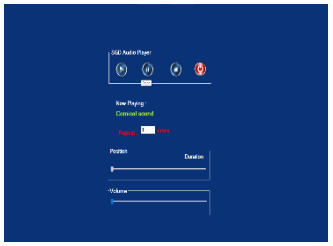












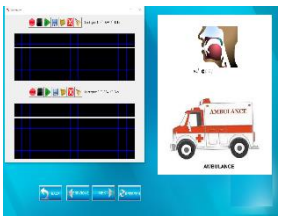
- **Speech Intelligibility Module**

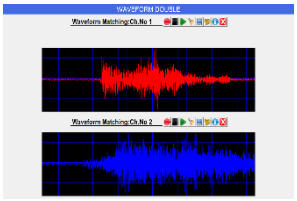
➢ **Improves**: - *Speech, organs-Articulatory Function*

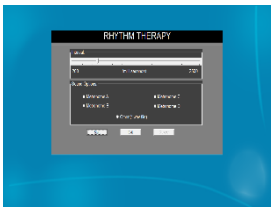












- **FNAT – Pictoristive documentation**

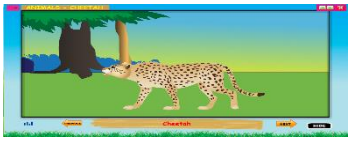
➢ **Improves**: - *Speech and language*











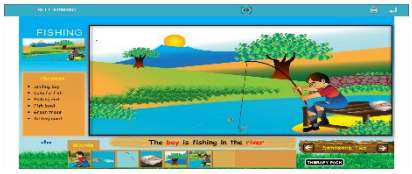
SLTT - Word communication skills

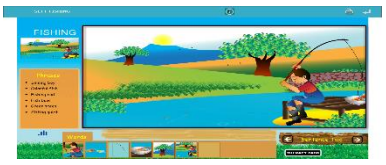
Improves: - *Grammatical ideation language*











LLL- Story reader

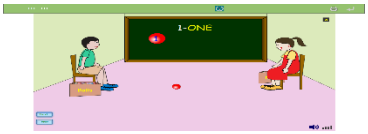
Improves: - *Cognition-expression-reception*







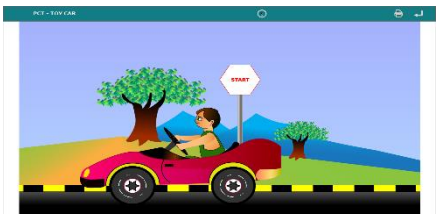




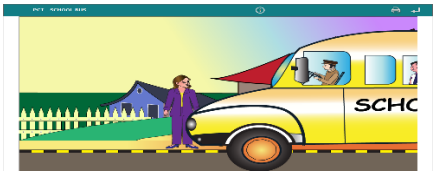
PCT - Communication lab

Improves: - *Rhetoric's skills*



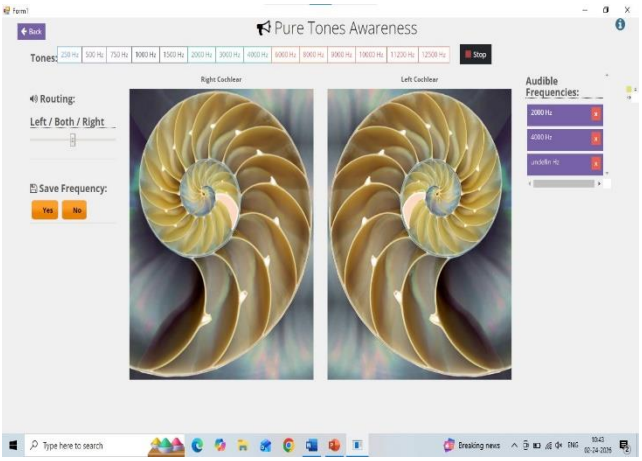








- **Cochlear Habilitator Module**
- **Improves:-** *Listening Skills Enhancement & Statistics Analyzer.*







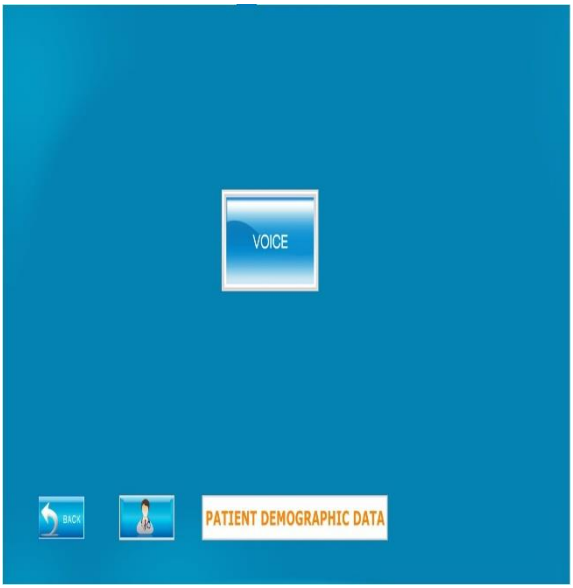




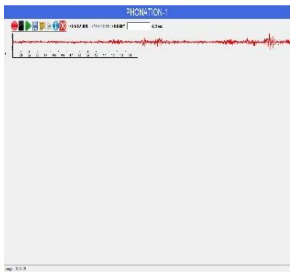




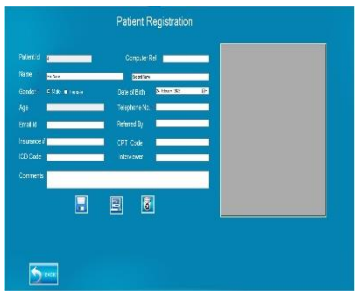
- **Voice Assessment**
- **Uses: -** *Record 5 Seconds Voice Generate 23 Modules of Report. Maintain Reports, Exports Digitally.*

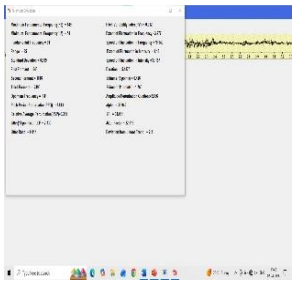


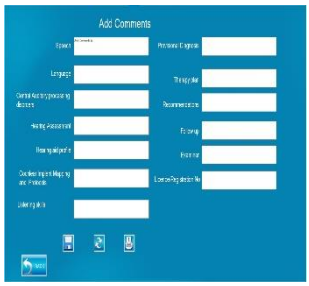




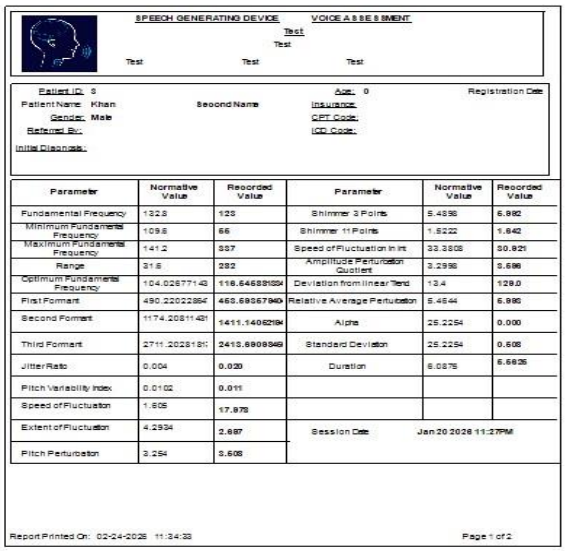








System generated Report



SPEECH GENERATING DEVICE VOICE ASSESSMENT

Test

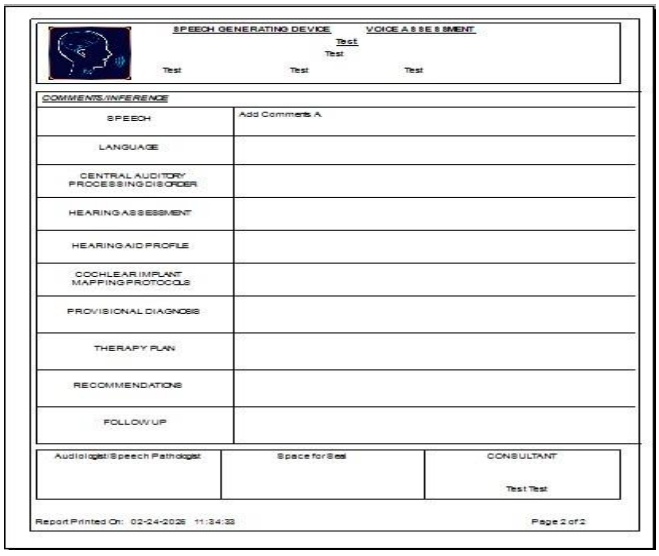
Test Test Test

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

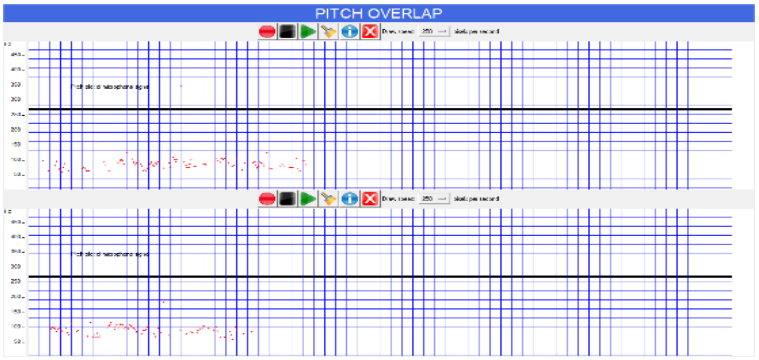
Report Printed On: 02-24-2026 11:34:38 Page 2 of 2

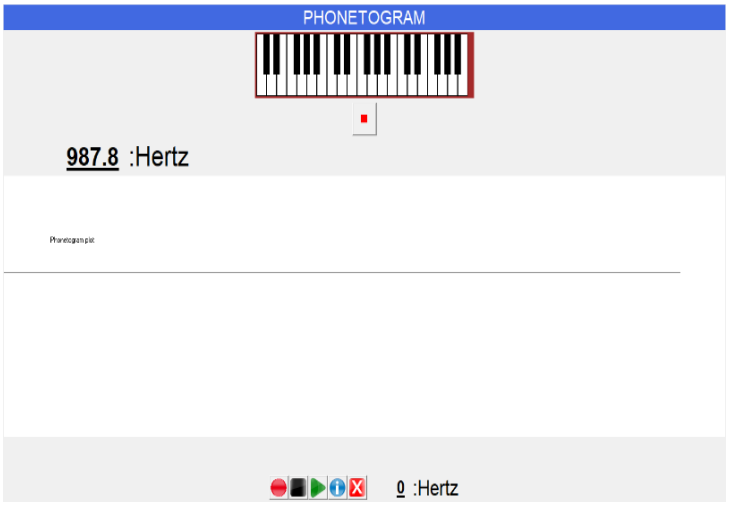
- **Speech Station Professional**
- **Uses: -** *'Voice Assessments software features what you speak and shows how to speak'.*
  Voice Simulations, Reading Laboratory and Comphrensive Fluency Training with Research Spectrography.

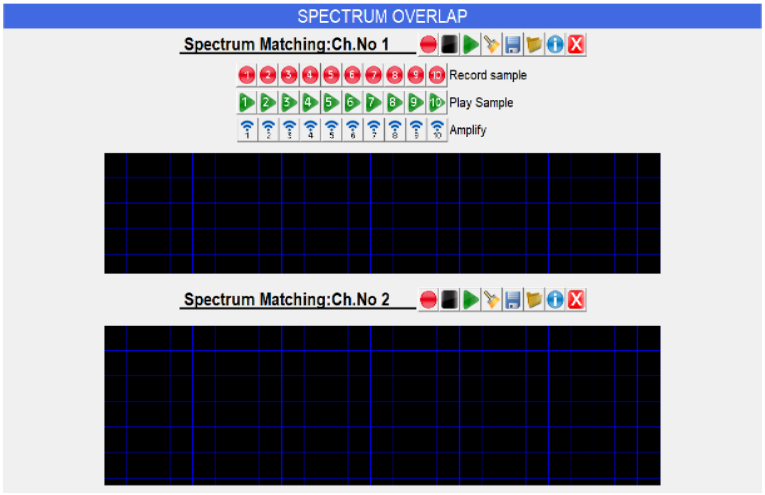


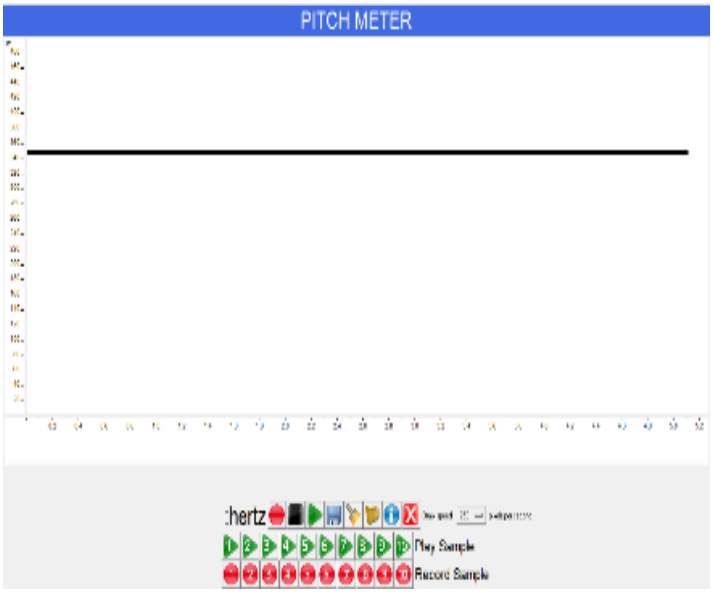


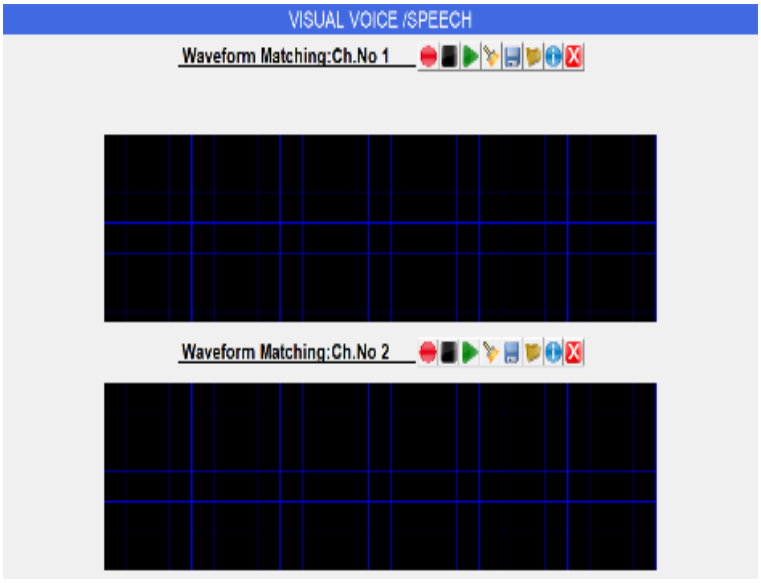


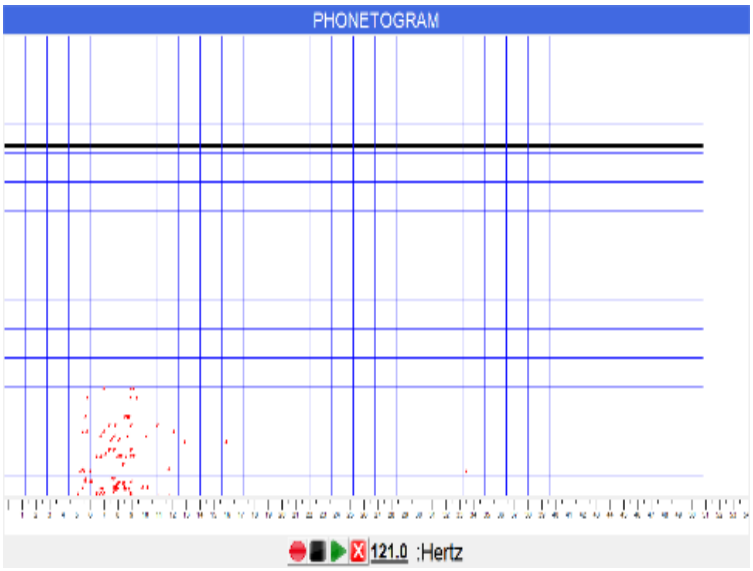


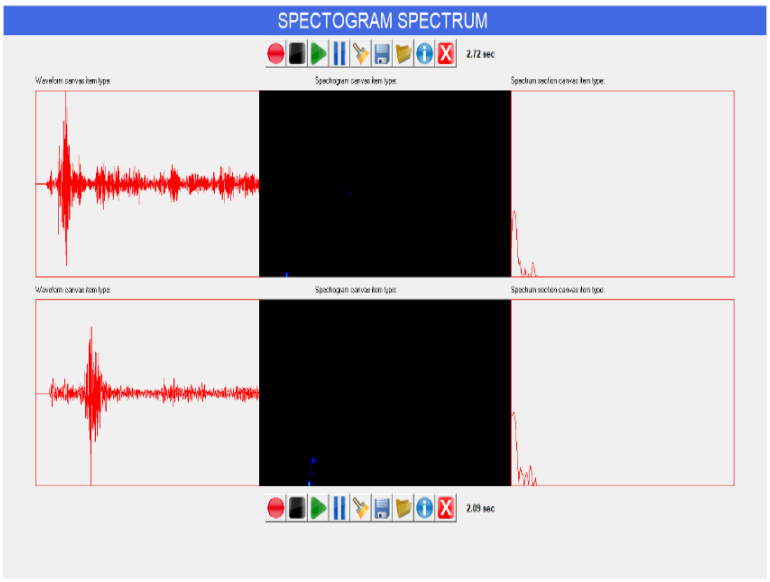




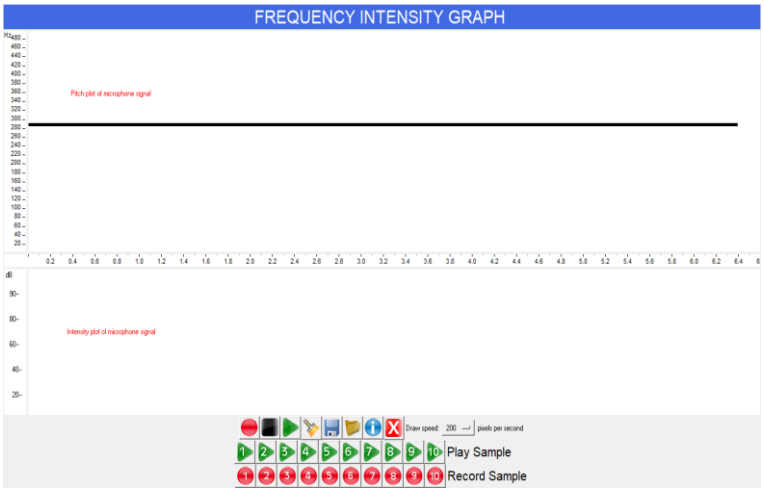


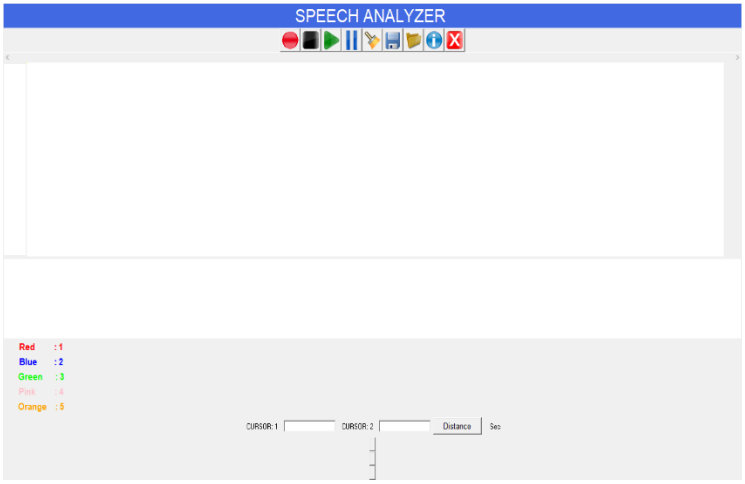


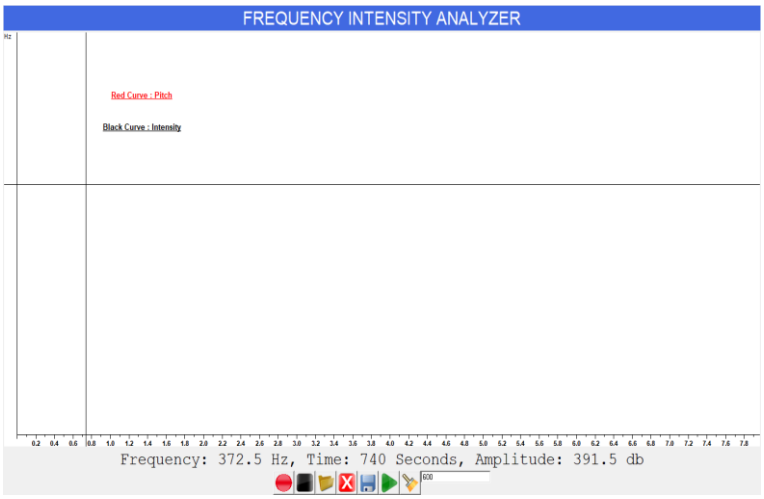

PHONETOGRAM
121.0 :Hertz


SPECTOGRAM SPECTRUM
2.72 sec
2.09 sec

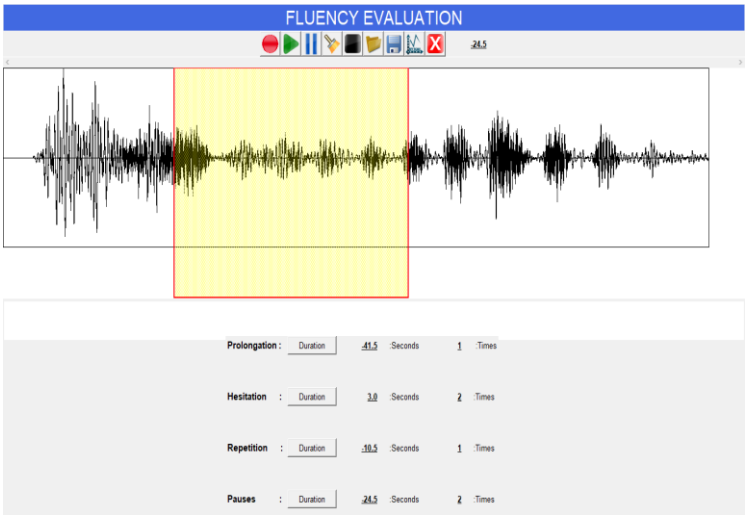

VOICE THERAPY
PROSODY
FREQ / INT GRAPH
SPEECH ANALYZER
FREQ / INT ANALYZER
BACK


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

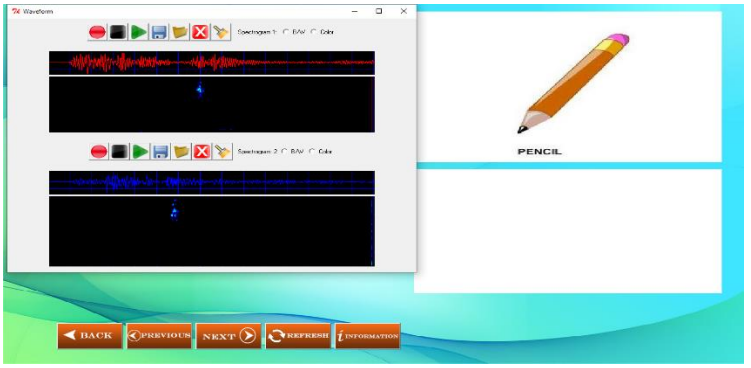

FLUENCY EVALUATION
Prolongation : Duration 41.5 Seconds 1 Times
Hesitation : Duration 3.0 Seconds 2 Times
Repetition : Duration 10.5 Seconds 1 Times
Pauses : Duration 24.5 Seconds 2 Times



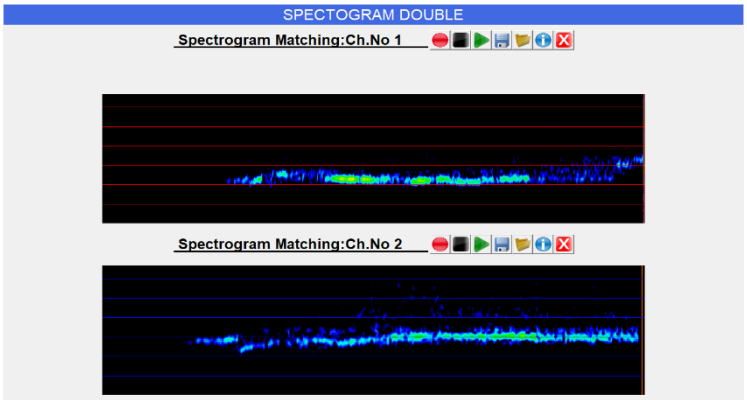


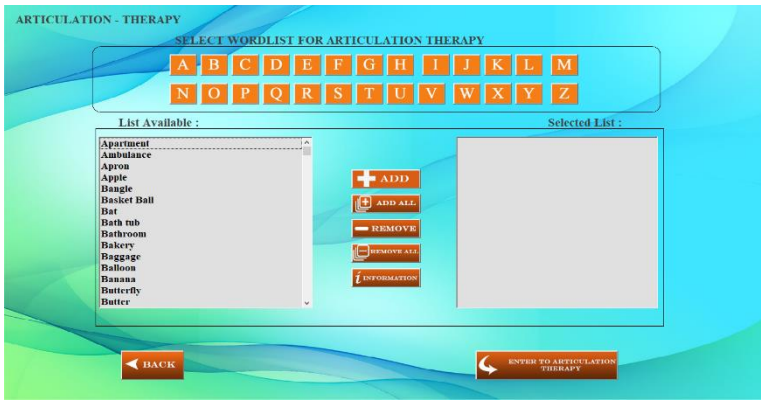


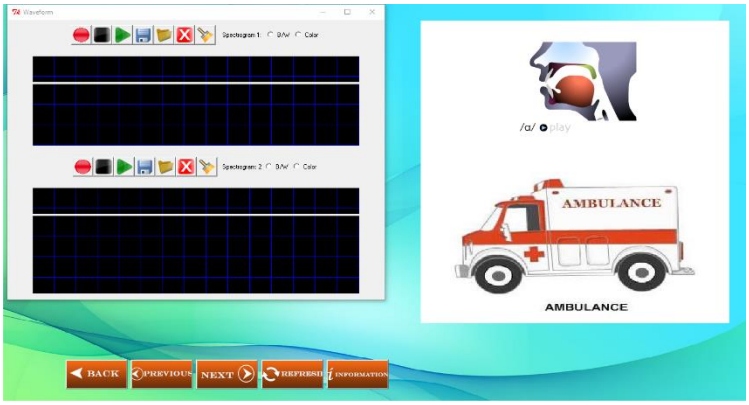






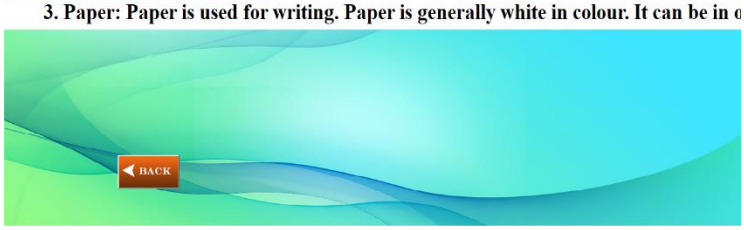


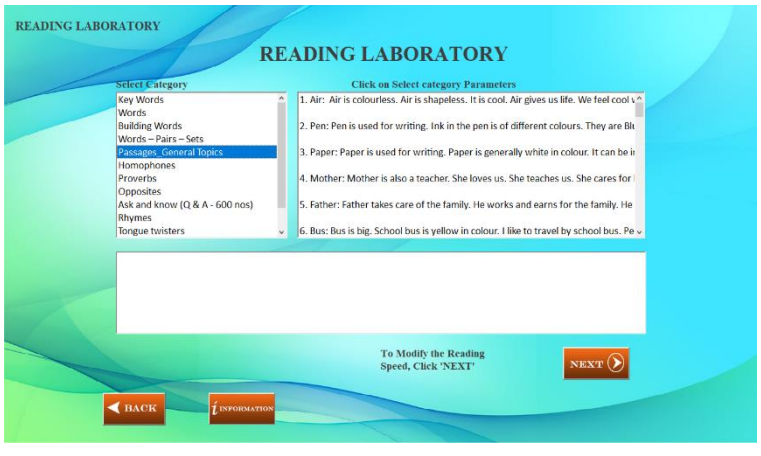




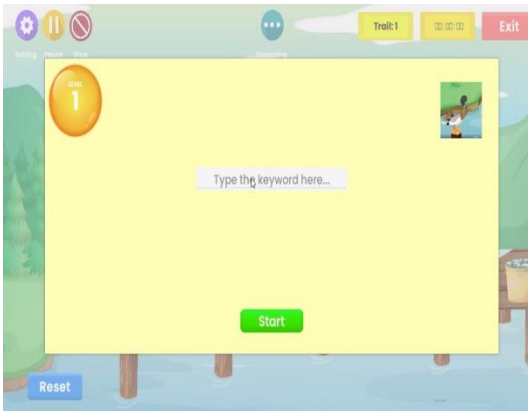


3. Paper: Paper is used for writing. Paper is generally white in colour. It can be in c

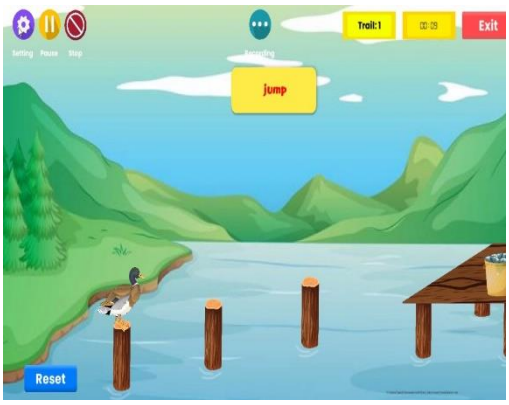




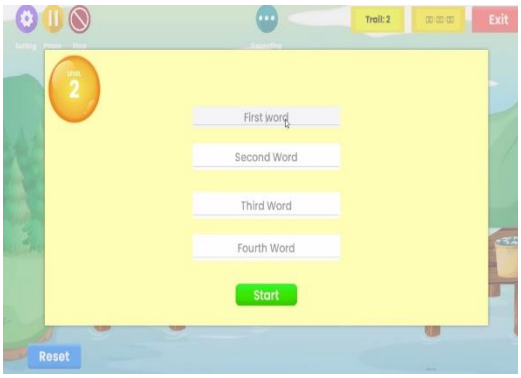
- **Articulatory-Resonatory-Phonatory-Cognitive Platform**
  - **Improves: -** *Phonation, prosody, concentration.*



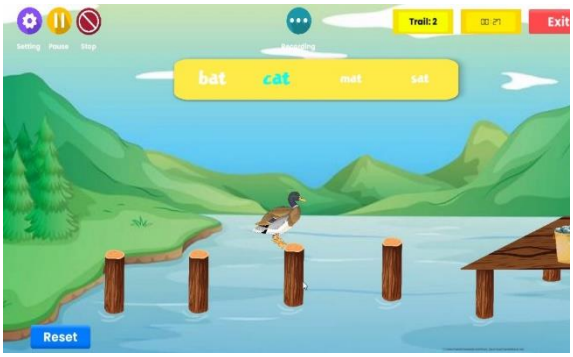








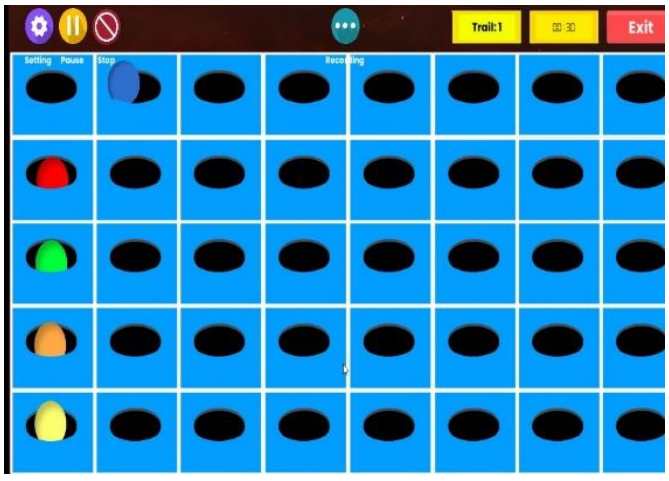






- **Concept: - Ball Colours**





- **Concept: - Fruits Names**









- **Concept: - Words,**

