

## CRITERIA VII: INNOVATIONS AND BEST PRACTICES

### 7.1 Environment Consciousness

#### 7.1.1. Does the Institute conduct a Green Audit of its campus and facilities?

Green audit of the campus is conducted for the year 2011-12 and report of the same is enclosed as **Appendix 43**. The institute has a Horticulture Section headed by an Assistant Horticulture Officer, appointed on permanent basis. This section is under the administrative control of the Director. There are 9 permanent posts of gardeners (Maali's) and 10 gardeners are recruited on contract basis to carry out the horticulture work in the two campus of the institute. During the Dasara Festival of Mysore conducted in the months of September-October every year, the institute has competed under various levels for horticultural show and has won prizes for the same. Table below shows the number of prizes won by the institute for the past 5 years.

Year	Garden Plot	Prize
2007-08	Administrative block garden	1 <sup>st</sup>
	Library block garden	2 <sup>nd</sup>
	Guest-house garden	2 <sup>nd</sup>
	Clinical garden	2 <sup>nd</sup>
2008-09	'E' type quarters garden	1 <sup>st</sup>
	Administrative block garden	1 <sup>st</sup>
	Guest-house garden	1 <sup>st</sup>
	Library block garden	1 <sup>st</sup>
	Clinical garden	3 <sup>rd</sup>
	Panchavati Campus garden	1 <sup>st</sup>
2009-10	Guest-house garden	1 <sup>st</sup>
	Administrative block garden	2 <sup>nd</sup>
	Library block garden	2 <sup>nd</sup>
	Rose garden	2 <sup>nd</sup>
	'E' type quarters garden	2 <sup>nd</sup>
2010-11	Administrative block garden	1 <sup>st</sup>
	Pathway area	1 <sup>st</sup>
	Library block garden	2 <sup>nd</sup>
	New men's hostel garden (Panchavati)	2 <sup>nd</sup>
	Rose garden	3 <sup>rd</sup>
2011-12	Administrative block garden	1 <sup>st</sup>
	Clinical garden	1 <sup>st</sup>
	Guest-house garden	1 <sup>st</sup>
	Library block garden	1 <sup>st</sup>
	'E' type quarters garden and lawn	2 <sup>nd</sup>

7.1.2. *What are the initiatives taken by the college to make the campus eco-friendly?*

a) *Energy conservation:*

Solar street lights are installed in the main campus and panchavati campus of the institute. Solar water heating system is installed to provide hot water in the hostels of the institute and few buildings of the institute.

b) *Use of renewable energy*

Not applicable as the waste products required to produce renewable energy is not a by-product of our activities.

c) *Water harvesting:*

The rain water harvesting is implemented in new buildings that are under construction. Rain water harvesting is under process for all existing buildings in the main campus and the panchavati campus.

d) *Check dam construction:*

The same is under consideration. Plan is on the way to store the storm water for the use of garden.

e) *Efforts for Carbon neutrality:*

Majority of the rooms are non AC except for few locations (Director's office, Audiology test rooms, Board Room and Seminar Hall). Hence the carbon by product produced by the air conditioners is minimal. The greenery around the institute helps to neutralize whatever carbon by products that are generated. In the rest of the campus too, there is no other source which generates carbon byproducts.

f) *Plantation:*

The Horticulture section of the institute has planted and maintained different varieties of flowering trees, ornamental trees and shrubs to keep the institute free from pollution and maintain aesthetics. Tree planting programmes are conducted frequently in a year. The previous year alone, the institute has planted 120 saplings in 5 acres and this was supported and carried out by staff and students of the institute. The section also has a nursery of its own where different saplings are developed and the same is used for planting.

*g) Hazardous waste management:*

The wastes generated from the campus are segregated as degradable and bio-degradable. The degradable wastes are used to prepare manure and bio-degradable wastes are disposed through an agency hired for the purpose.

*h) e-waste management:*

No major e-waste is generated. The minor ones are disposed through auction to competent agencies who handle such waste and the process is conducted two to three times in a year.

## **7.2 Innovations**

*7.2.1. Give details of innovations introduced during the last four years which have created a positive impact on the functioning of the college.*

### **2007-08:**

The Diploma in Hearing, Language and Speech programme through video-conferencing was conceived and implemented in 5 institutions in Puduchery, Imphal, New Delhi, Mumbai, and Mysore. Self-learning material for the 6 courses was developed by the faculty of the institute. M. S. Ed. (HI) programme commenced from the year 2007-08. A new department – Prevention of Communication Disorders- was initiated. The institute obtained international subscription index number ISSN 0973-662X by National Institute of Science, Communication and Information Resources, New Delhi for its Journal of All India Institute of Speech and Hearing (JAIISH). A high-Tech CCTV was installed for active monitoring of clients at the Department of Clinical Services. The institute started the scheme of dispensing hearing aids of all models and making it available at subsidized rates. The institute launched the Public Lecture Series programme.

### **2008-09:**

The institute submitted a proposal for the upgradation as a superspeciality centre of excellence to the Ministry of Health and Family Welfare. Consequent to Supreme Court judgment and as per the directions issued by the Ministry of Human Resource Development, Government of India, for implementation of 27% reservation to OBC candidates in the

admission to professional courses, action was taken to provide reservation to students belonging to OBC category. A proposal for Deemed-to-be University status to the institute was prepared and submitted to the Ministry of Health & Family Welfare for approval and recommendation which was forwarded to the Ministry of Human Resource Development. Junior Research Fellowships were enhanced in par with assistantships given to full time Ph. D. at IITs. Two PG Diploma courses in Forensic Speech Sciences & Technology and Clinical Linguistics for Speech-Language Pathology were initiated. The Diploma in Hearing, Language, and Speech Programme through videoconferencing was extended to 5 more study centers at Shimla, Lucknow, Ajmer, Cuttack, Ranchi, and Jabalpur. Diploma in Teaching the Young Hearing Impaired (DTYHI) was launched in the current year. The Center for Rehabilitation and Education through Distance Mode was launched. AIISH became a member of the International Society of Augmentative and Alternative Communication. B. Sc. Interns were posted in the districts all over India where NPPCD was implemented. Digitization of library commenced. Faculty and students received several awards. A Unit for Autism Spectrum Disorder was launched. A committee constituted by the Ministry of Health & Family Welfare visited AIISH to examine the feasibility of upgradation of AIISH.

#### **2009-10:**

The AIISH, jointly with Matru Vedike of Swadeshi Vijnana Andolana – Karnataka, organized 2<sup>nd</sup> National Women's Science Congress on 7-9 November, 2009. Two outreach service centers at Hullahalli Hobli in Nanjangud Taluk, Mysore district and Akkihebbal Hobli in K R Pete Taluk, Mandya District were launched on 3.3.2010. The 12<sup>th</sup> DHLS center at Bhagalpur, Bihar was launched. AIISH and SSA Karnataka joined hands to address academic problems in school children with sensitization programmes for Integrated Education Resource Trainers across Karnataka. The library portal of AIISH was launched. AIISH conducted a camp at Lakshdweep islands Aminai, Ambroth, and Kadmath on 16-20 February, 2010. The staff and students received several awards.

#### **2010-11:**

A Post-graduate Diploma in Neuro-audiology was launched. 43 and 163 regular and contract staff were recruited in the said year. Fluency unit and Audiology practical lab were launched. A new

resource center for children with special needs – LiBoToy - was initiated. A vertigo clinic for diagnosis and treatment of vertigo was launched. The re-designed web-site of AIISH was launched on the institute day. Gents hostel and the international guest house were inaugurated. The faculty and staff received several extramural and intramural research. The NSS unit of AIISH conducted a special camp at Myrada Kaveri Pradeshika Samsthe, H D Kote with the motto “Healthy Youth For Healthy India” from 26<sup>th</sup> February to 4<sup>th</sup> March 2011.

### **2011-12:**

The institute launched three specialized clinics for teaching M. Sc. (Speech-Language Pathology) students – USOFA, LD, and Neuromotor disorders. Further the civil works of the Knowledge Park and Quarters were started. The faculty and staff of the institute received extramural grants for research projects. The EFC memorandum of upgradation of the institute and the EFC memo for the XII five year plans were submitted to the Ministry. A software for faculty evaluation was developed. The NSS unit of AIISH conducted a special camp at Mandya was conducted.

## **7.3 Best Practices**

7.3.1 *Elaborate on any two best practices which have contributed to the achievement of the Institutional Objectives and/or contributed to the Quality improvement of the core activities of the college.*

Amongst other achievements, the institute would like to put on record the initiation and functioning of specialized clinics and specialized laboratories which are one of its kind in India and not established by any other institute in the nation which offers similar programmes. The salient feature of these Specialized clinics and Specialized laboratories is provided below:

### **Specialized clinics**

#### **1) *Augmentative and Alternative Communication Unit:***

This unit supports, enhances and provides augmentative and alternative strategies and methods of communication for individuals who are non-verbal or whose verbal skills are poor.

2) ***Autism Spectrum Disorders Unit:***

This unit provides assessment, treatment and consultation services for patients diagnosed to have Autism spectrum disorders.

3) ***Clinic for Adult and Elderly Persons with Language Disorders (CAEPLD):***

The objectives of this clinic are to provide specialized services to the increasing incidence of adult and elderly persons with neurologic language disorders. It also serves to enhance the awareness and preventive measures for adult neurogenic language disorders to improve the overall quality of life of the person and thereby improving their activity and participation in the society.

4) ***Caregivers Literacy Training Unit:***

Parents of Pre-school children with special needs are invariable partners in teaching-learning process. Therefore, parents need to be empowered on aspects like literacy skills, computer skills, preparation of teaching-learning material, by providing opportunities to learn, so that they can function as better partners with special educators. Literacy skills in parents play a very important role for the academic achievement of children with special needs. Considering these needs, the Department of Special Education has launched Caregivers Literacy Training Unit. Thrice in a week, classes for the parents who are non-literate are conducted in the unit.

5) ***Fluency Unit:***

This unit caters to the needs of persons with stuttering and other fluency disorders. The unit also enables the professionals to conduct research on neuroanatomical, neurophysiological and genetic aspects of fluency disorders.

6) ***Implantable Hearing Device Unit:***

Due to increasing number of patients with implantable devices, an independent unit to cater to needs of individuals with implantable devices was opened. This unit provides service to individuals with cochlear implant, bone anchored hearing aids, middle ear implants and auditory brainstem implants. Selection of candidates for cochlear implants and bone anchored hearing aids, switch-on and mapping of cochlear implant are the main objective of this unit. Trouble shooting of devices, post-implant rehabilitation for patients

with cochlear implants is also carried-out. The unit also imparts training to students on types of implantable devices, selection of candidates, mapping, cochlear implants, troubleshooting of implantable devices and monitoring progress of patients with implantable devices.

**7) *Learning Disability Clinic:***

This is the clinic meant for the early identification of students with learning disability and to suggest appropriate remedial measures. The clinic also serves as a nodal centre for issue of certificates for educational concessions and developing related literature for patients with learning disability and their caregivers.

**8) *Listening Training (LT) Unit:***

Patients who use hearing devices are provided with listening training at the unit. Training is also imparted to patients having tinnitus, hyperacusis as well as cochlear implantees.

**9) *Motor Speech Disorders Clinic:***

The primary aim of the clinic is to cater to the needs of persons with Motor Speech Disorders and to enable them to realize their potential and become useful members of the society. The team of specialists provides physiotherapy, occupational therapy, speech-language therapy and special education needs.

**10) *Professional Voice Care Unit:***

This unit is dedicated to provide specialized assessment and management services to professional voice users. The unit organizes various programmes as part of its activities to orient and sensitize different groups of professional voice users regarding the care and maintenance of efficient voice and conservation of voice. Budding professional voice users, such as, trainees training to become singers, teachers, etc., require particular knowledge of the speech and voice production mechanism, their functions, appropriate use and practice for efficient voice use. In this regard orientation programmes are being conducted to different groups of professional voice users which include lectures, awareness of the participants (regarding voice, speech mechanism and conservation of voice before and after the programme using questionnaires), demonstrations and screening of voice for disorders.

**11) Unit for Structural and Orofacial Anomalies:**

U-SOFA is a multi-disciplinary clinic committed to provide comprehensive diagnostic and rehabilitative services to patients with deformalities in the growth of head and facial bones including cleft of the lip and palate.

**12) Vertigo Unit:**

The clinic offers comprehensive care in evaluation and management of patients with vertigo. A multidisciplinary team comprising of ENT surgeon, neurologist and audiologist evaluate patients in the clinic for both peripheral and central vertigo during the reporting year and diagnostic tests like microscopic examination of ear, electronystagmography, vestibulo spinal tests, neurological evaluation, audiological tests and vestibular evoked myogenic potential (VEMP) test are being carried out for the needy ones.

**13) Voice Clinic:**

The voice clinic, provides professional service delivery in the area of voice and its disorders. Voice Clinic utilizes the most up-to-date and innovative technology, including video stroboscopy, high-speed vibration assessment, voice functional analysis, and high-definition imaging. The academic and research objectives include development of a uniform assessment protocol for effective documentation, develop a uniform treatment protocol to enable structured therapy, provide robust training to undergraduate, post graduate, doctoral and post doctoral students to manage this target population, promote evidence based practice through structured documentation and promote national and international project work in collaboration to this area.

**Specialized Laboratories**

**1) Acoustic Testing Lab:**

Acoustic testing lab is well equipped with major equipments like Head and torso simulator, Pulse system, Artificial mastoid, Artificial ear, microphones, professional amplifiers, sound level calibrators, portable noise and signal generators, charge coupled amplifiers ,type 1 integrated sound level meter etc.

**2) Articulograph Laboratory:**

The kinematic analysis of speech articulators are carried out using Articulograph AG500. This equipment uses



electromagnetic principles for tracing the movement of sensors placed on the articulators during the production of speech which further helps in understanding the normal and abnormal features of speech production.

**3) *Central Prosthetic Laboratory (CPL):***

The Central Prosthetic Laboratory provides suitable earmould to patients using hearing aid. The objective of the central prosthetic lab is to train personnel regarding the practical aspects of taking ear impression, precautions to be taken while mailing these impressions to distant ear mould labs. It also processes the ear impression sent from different places and returns impressions taken at different centers.

**4) *Electrical Laboratory:***

The Electrical Lab is well equipped with Major equipments for regular maintenance of electrical gadgets and also for installation and maintenance of high power Transformers, Diesel Generators, HT yards etc.

**5) *Electronics and Instrumentation Laboratory:***

The Electronics Lab is well equipped with Major equipments like Scientific CRO, Signal Generator, D.C Power supply, Trainer kits and Digital Multimeters in various ranges and basic components for conducting Electric Circuits and electrical and electronics engineering practice.

**6) *Electrophysiology Laboratory:***

The electrophysiology lab in the Department of Audiology intends to train the bachelors and masters students of speech and hearing in the electrophysiological tests. The lab has state-of- the- art technology equipment with facilities to record all auditory evoked responses. The students are given hands-on training in the recording, analysis and interpretation of different auditory evoked responses, prior to clinical testing. The process of practical learning takes place under the supervision of specialized audiologists, experienced in the field of electrophysiology. The lab is also used to conduct practical classes, in-house workshops and seminars in the area of electrophysiology.

**7) *Fluency Laboratory:***

The objective of the fluency lab are development of audio visual database on fluency development and disfluencies in children and adults in Indian languages, Development of

national model on fluency assessment using artificial neural networks. The fluency lab supports and compliments activities of specialized fluency unit through assessment and periodic progress after management of persons with disfluencies.

**8) *Forensic Speech Science and Technology Laboratory :***

The objective of the Forensic Speech Science and technology lab are to analyze the speech samples using semi-automatic and automatic methods for forensic purposes. The practical training to students of PGDFSST programme is also imparted in the lab.

**9) *Hearing Aid Laboratory:***

Precision Laboratories has been provided for high quality hearing aid repairs. Students are trained in the lab to repair all types of hearing aids.

**10) *Language Science Laboratory:***

The objectives of the language science lab are to study the relationship of Indian languages with cognitive, linguistic, culture and literacy dimensions in order to develop adequate assessment programmes. To carry out the above objectives with the set up of the Clinical Linguistic Unit, Language Cognition Unit, Language Literacy Unit, Culture Communication Unit, Language Processing Lab, Language Assessment Lab.

**11) *Neurophysiology Laboratory:***

Two Neuroscan laboratories are available, one each in the departments of Audiology and Speech-Language Sciences. The labs focus on understanding how certain key neural areas or circuits in the brain work towards perceiving and processing the speech language and auditory information. Each of these labs is equipped with a 64 channel NeuroScan EEG acquisition system. This system is capable of recording and storing continuous EEG files as the subject actively or passively receives the information through auditory/visual modality. To record EEG, the electrodes mounted on caps of different sizes which can fit a variety of head sizes across age groups are used. The lab also has facility to present auditory stimulus through two modes- via insert ear phones and sound field.

**12) Phonology Laboratory:**

The objectives of the phonology lab are to study the phonological development in various Indian languages and to investigate the articulatory and acoustic basis of babbling in different Indian languages. To develop tests and assessment tools for phonological evaluation in Indian languages for bi/multilingual speaker population from various socio economic status, rural/urban and different dialects.

**13) Practical Laboratory:**

Training manpower being one of the main objectives of the institute, the practical lab was set-up to ensure state-of-the-art facilities to provide hands on training to the students in Audiological evaluations. The lab is equipped with all the modern equipments to carry out the behavioural, physiological and electrophysiological evaluations. The lab also has state-of-the-art facilities required for aural rehabilitation. It has a capacity to seat 60 students at a time and enable practical demonstration through live projection of the tests on the wall mounted LCD monitor. Small groups of students, under the supervision of a staff, also practice clinical procedures introduced in the theory classes.

**14) Prosody Laboratory:**

Objectives of the prosody lab are development of database on stress/emphasis, intonation, rhythm, audio-visual database on dysprosodia in children and adults in Indian Languages. The prosody lab supports and compliments activities of specialized clinical units through assessment and periodic progress after management of persons with aprosodia.

**15) Psychoacoustic Laboratory:**

The lab is dedicated to study the auditory perceptual phenomena in individuals with normal hearing, individuals using hearing aids and cochlear implants. The newly established Psychoacoustics Lab houses a dedicated setup for scientific experiments of sound localization and, 21 workstations equipped with basic and advanced software for conducting auditory perceptual experiments. It also has necessary infrastructure for developing new software for sound generation and editing, conduct statistical analysis of the research data and develop new psycho-acoustical tests.

**16) Rehabilitation Engineering Laboratory:**

This lab is to develop aids and devices for rehabilitation of persons with communication disorders. This lab provides the basic infrastructure for BTech and MTech students from various technical institutes to take their UG and PG dissertation which leads to the development of custom built devices for persons with communication disorders

**17) Speech and Language Pathology Laboratory:**

The language pathology lab of Department of Speech and Language Pathology is equipped with state-of-the-art equipment and most reliable tests of communication disorders. The lab is used by undergraduate and post-graduate students of speech and language pathology for practical training and research related work. The research officers working in various projects undertaken by the department of speech language pathology use the lab for data recording and analysis.

**18) Speech Physiology Laboratory:**

The objective of the Speech Physiology lab are to develop the Database/normative for subsystems of speech (respiration, phonation, articulation and resonance). To conduct research on effect of age and gender on speech physiology / behaviors, physiology of different subsystems responsible for speech production

**19) Speech Science Lab :**

The objective of the speech science lab are to develop the database on acoustic cues of segmental and Suprasegmentals in Indian Languages in persons with communication disorders and to conduct research on Spoken and visual word recognition in Indian languages.

**20) Swallowing Laboratory:**

The lab will soon be equipped with the most recent technologies for swallowing evaluation. It presently houses the Digital Swallowing Workstation. The lab is used for research works related to normal and abnormal physiology of swallowing.

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