System Development

Indian Scholarly Publications and Presentations on Communication Disorders

The quantitative details of Indian scholarly publications and presentations on communication disorders collected in different ways, are presented below.

The official websites of the Rehabilitation Council of India listed 64 higher education institutions offering academic programmes on communication disorders at the undergraduate level and above.

1. A visit to the official websites of the Indian higher education and research organizations in the field of communication disorders and the official website of the identified seven scholarly serial publications from these organizations as listed in table 1. The bibliographic details of all the articles published in the entire issues of these journals were collected for indexing in ILCD.

Table 1: Indian Scholarly Journals on Communication Disorders

S.N.	Journal	Publisher
1	The Journal of All India Institute of Speech and Hearing	All India Institute of Speech and Hearing, Mysuru
2	AYJINHH- Journal of Communication Disorders	Ali Yavar Jung National Institute of Speech and Hearing Disabilities, Mumbai
3	Journal of Cochlear Implant	Ali Yavar Jung National Institute of Speech and Hearing Disabilities, Mumbai
4	Student Research at AIISH: Audiology	All India Institute of Speech and Hearing, Mysuru
5	Student Research at AIISH: Speech-Language Pathology	All India Institute of Speech and Hearing, Mysuru
6	The Journal of Indian Speech and Hearing Association	Indian Speech and Hearing Association, Mysuru

Besides, annual reports and newsletters published by these organizations and made available online were checked for the details of published works and presentations by the academic community members in these organizations.

2. The Directory of Open Access Journals (DOAJ), J-Gate, the hybrid database whch indexes more than 49, 000 journals, and the Online Catalogue of the National Library of Medicine (NLM), the USA, used for Medline indexing were searched for the health science journals published from India. Of these, the journals related to communication disorders and related areas were listed out (table 2). All the available published issues were further checked and noted down the bibliographic details of the articles' on communication disorders.

Sl.No.	Database	Indexed Indian Journals on Communications disorders & allied areas
1	DOAJ	1. Journal of Cleft Lip Palate and Craniofacial Anomalies 2. Bengal Journal of Otolaryngology and Head Neck Surgery 3. Noise and Health 4. Online Journal of Health & Allied Sciences
2	NLM Catalogue	1. Journal of neurology, neurosurgery & psychiatry research 2. Acta scientific neurology 3. The neurologist 4. Edorium Journal of Disability and Rehabilitation 5. Journal of Cleft Lip Palate and Craniofacial Anomalies 6. Journal of psychosocial rehabilitation and mental health 7. Online Journal of Health & Allied Sciences 8. Noise & Health 9. Indian journal of otolaryngology and head and neck surgery 10. Neurology India
3	J-Gate	1. ARC Journal of Neuroscience 2. Asian Journal of Oral Health and Allied Sciences

		3. Bengal Journal of Otolaryngology and Head Neck Surgery
		4. Edorium Journal of Otolaryngology
		5. Indian Journal of Anatomy and Surgery of Head, Neck, and Brain
		6. Indian Journal of Cerebral Palsy
		7. Indian Journal of Clinical Psychology
		8. Journal of Cleft Lip Palate and Craniofacial Anomalies
		9. Indian Journal of Otolaryngology and Head and Neck Surgery
		10. Indian Journal of Otology
		11. International Journal of Advanced Otolaryngology
		12. International Journal of Advanced Speech and Hearing Research
		13. International Journal of Allied Medical Sciences and Clinical Research
		14. International Journal of Head and Neck Surgery
		15. International Journal of Health and Allied Sciences
		16. International Journal of Health and Rehabilitation Sciences
		17. International Journal of Neuro and Psychological Disorders
		18. IP Journal of Otorhinolaryngology and Allied Science
		19. Journal of Head and Neck Physicians and Surgeons
		20. Journal of Indian Speech-Language and Hearing Association
		21. Noise and Health
		22. Online Journal of Health and Allied Sciences

		23. Otolaryngology Online Journal

3. Though a similar search was conducted on the Directory of Open Access Books, no relevant titles were retrieved on books on communication disorders and allied areas.

4. An attempt was made to contact the individual speech and hearing professionals working in different settings in the country directly and collect their scholarly publication and presentation details by developing an online questionnaire. However, the initial response to the online questionnaire was feeble, and also, the project team could not get the complete email ids of the professionals in the country. Hence, the data collected in this way was not processed further.

The details of the various types of Indian publications on communication disorders collected in different ways are given in table ,

Table 1: Indian Publications on Communication Disorders

S/N	Resource Type	Numbers
1	Journal Articles	2174
2	Conference Papers	1141
3	Book Chapters	142
4	Books	61
Total		**3518**

The details of the Indian publications on communication disorders, published from 1962 to till 31st March 2018, coming under the above four categories were collected. The bibliographic details of the collected resources were entered in a spreadsheet sofware for bulk uploading onto the database.

Software Installation

DSpace, the open-source software selected for developing ILCD was jointly built by Hewlett Packard labs, and the Massachusetts Institute of Technology, USA in 2002 and it is widely used for managing published content focusing on long-term storage, access, and

preservation. The latest version of the DSpace and the supporting applications and tools were installed for customizing and developing ILCD.

Creation of Database Users

Three user roles were created for the database as per the workflow discussed under the Chapter System Design. They were: Administrator, Author, and Viewer. The database administrator is the person responsible for the overall management of the database. Author is the person submitting the resource to the database and viewer is the person who access the database for viewing the content.

Login name and password-based access settings were made for the Administrator and Authors (Figure 1). However, unrestricted access is provided for ordinary user or viewer to make the maximum use of the system.
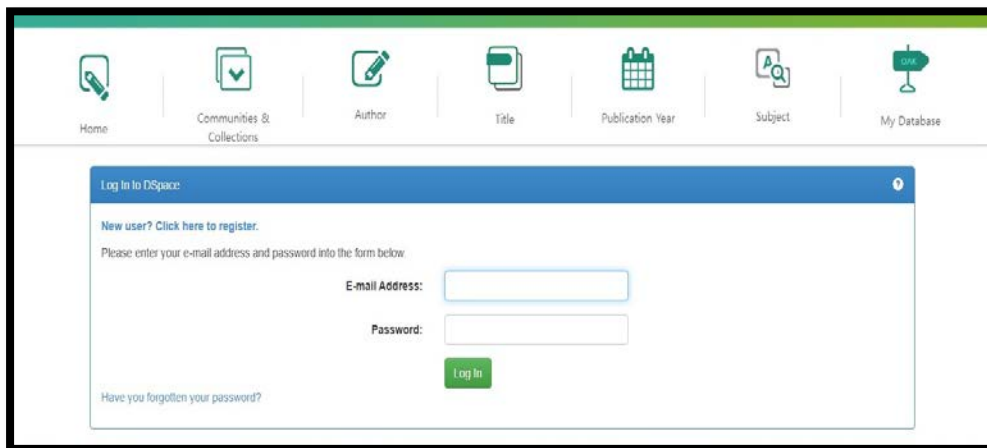
Figure 1: Admin/Author login interface

Content Organization

The Dspace facilitates the organization of digital content into a hierarchy. It consists of a top-level community and hierarchical sub-communities. The communities in turn, can have collections. Inside the collection, items are stored in the form of files and metadata. The basic content hierarchy of the DSpace was customized to accommodate various types of resources. The domain *Communication Disorders* was designated as the *Top-Level Community* and Speech-Language Pathology and Audiology as the *sub-level communities*. Under each of the sub-communities, the resources in the form of Journal Articles, Books, Book Chapters and Conference Papers were organized as *collections*.

Wherever available, the abstract or the full-text of each *item* in the collection is decided to store as a file and the item metadata separately. A screenshot of the content organization of the ILCD is given in figure 2.
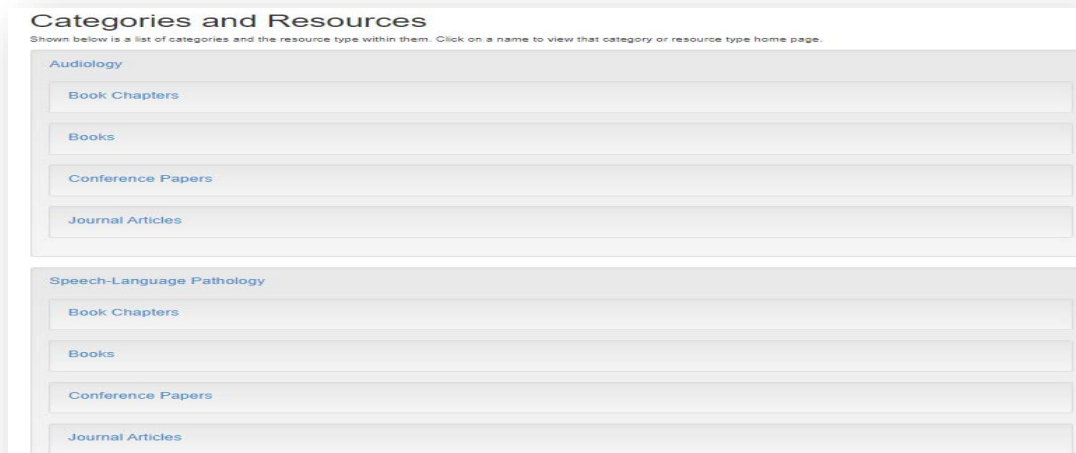

Figure 2: Content organization

Content Uploading

The bibliographic records created in the spreadsheet were uploaded in bulk on to the database using the Admin login. However, a provision was made to submit the individual publication records by the Author and then approve and upload to the database by the Administrator. Also, for direct uploading of individual records by the Administrator..

Searching System

A browsing functionality was created for the users to browse the database content. It facilitates browsing the records by Author(Figure 3), Title (Figure 4), Year (Figure 5), and Subject (Figure 6).
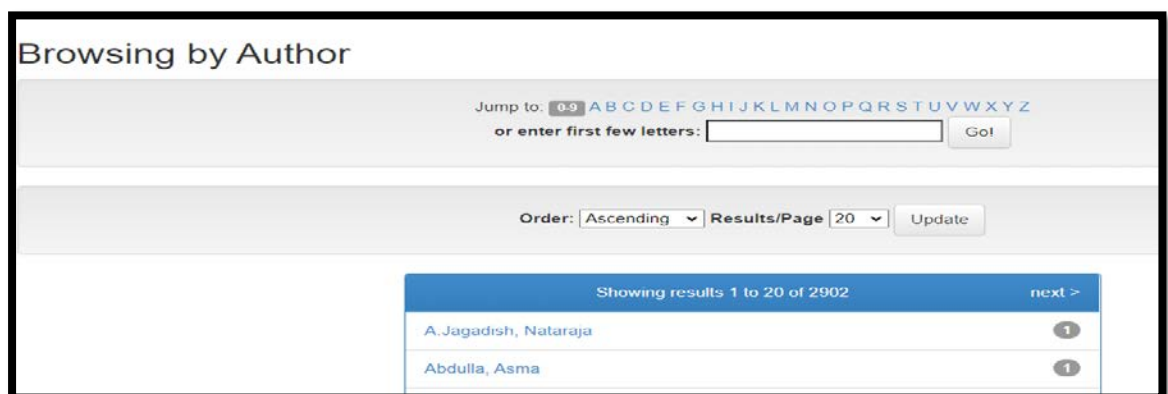
Figure 3: Browse by Author

Figure 4: Browse by Title

Figure 5: Browse by Year

Figure 6: Browse by Subject

Both basic and advanced search facilities were incorporated into the database. The basic search with a simple search box (Figure 7) facilitates free-text or keyword searching

across the Author, Title, and Subject fields. The advanced search facility (Figure 8) enables to restrict the search to specific fields.
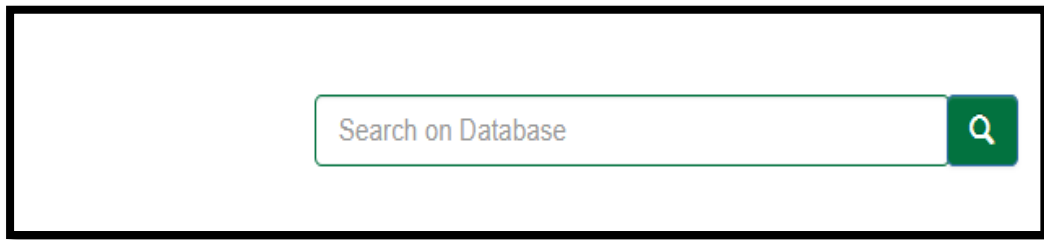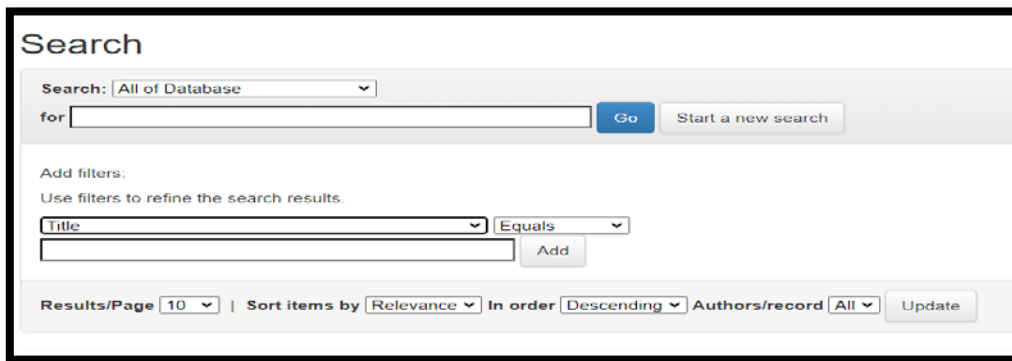

Figure 7: Basic search

Figure 8: Advanced search

User Interface

The user interface is a crucial factor that affects the usability of an online system. Hence, the user interface of the ILCD was carefully developed by referring to similar literature databases available online and the technical feasibility of the selected open-source software application. A common interface was created for all the users as given in figure 9.
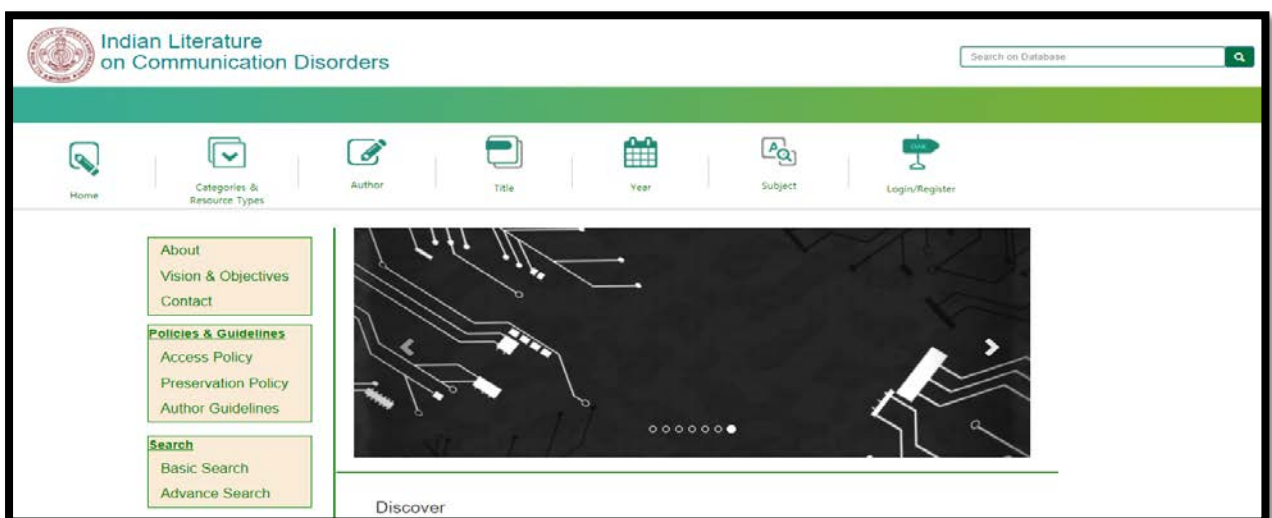

Figure 9

Personal Support

The registered users were provided with e-mail notification of new additions to the database collection of their choice.

System Testing

The system developed was tested multiple times. The cross-browser compatibility of the interface was verified on three different web browsers: Google Chrome, Mozilla Firefox and Microsoft Edge and ensured compatibility.

The system has been integrated to the official web site of Library and Information Centre of the All India Institute of Speech and Hearing at http://203.129.241.91:8080/