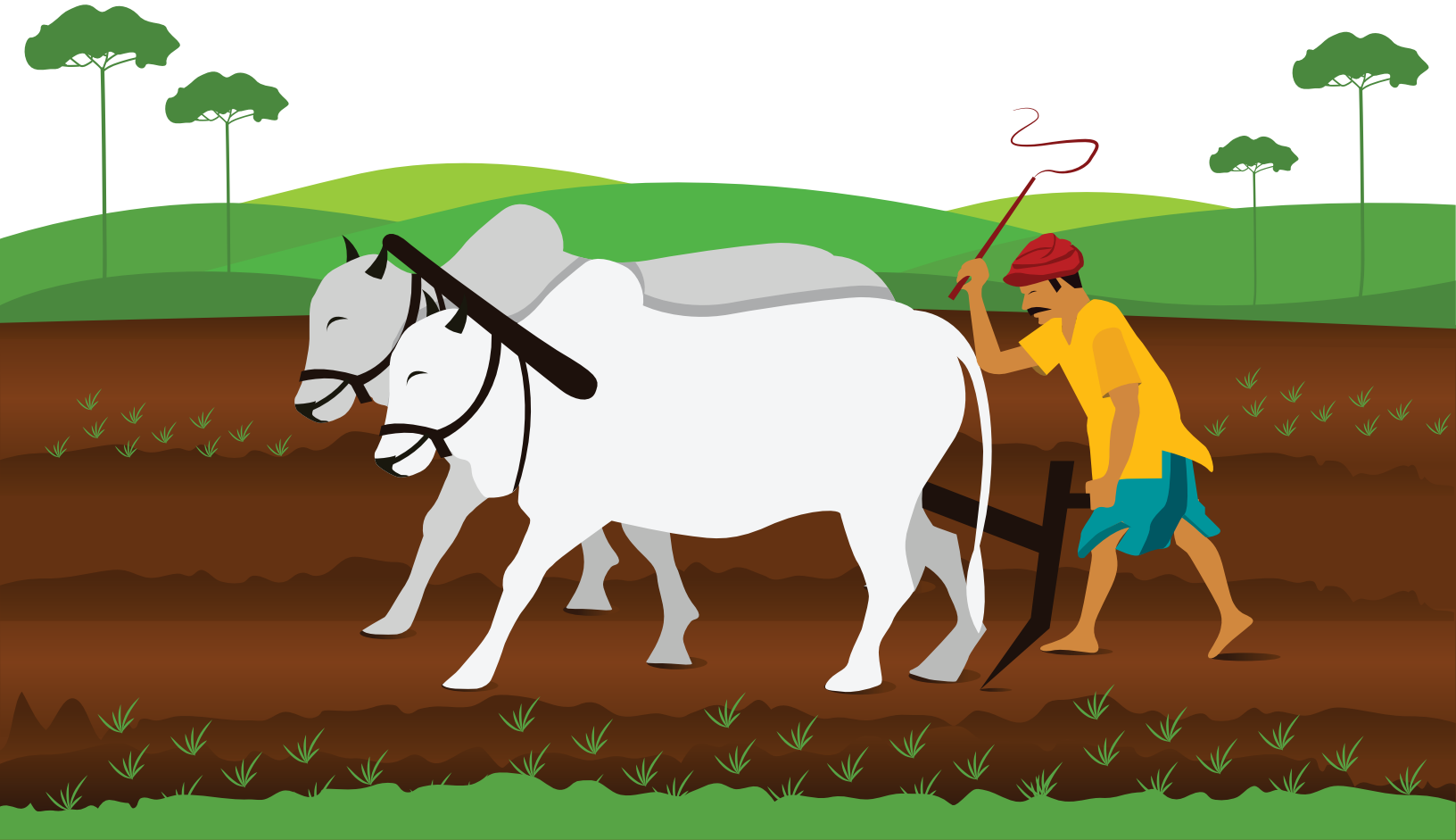


UNIVERSITY LIBRARY AND INFORMATION TECHNOLOGY



Chapter - 7



7.1 University Library

The University Library acquaints services to the scholars, scientists and extension activists under 6 constituent colleges and 6 polytechnics as well as research stations and extension education centers of Junagadh Agricultural University, Junagadh.

Collection:

The University Library possesses around 58712 books. These books are very valuable and helpful in studies, research and preparation for competitive examinations. It provides around 16000 back volumes, 3792 theses, 10 newspaper, 990 e-books.

Services:

Cyberary with 100 mbps LAN connectivity facilitates users to access online database like J-Gateplus (Complete) online which has full text journals. Commodities (CMIE) which as economical data. Our library has 990 e-books and this year we have subscribed 85 more e-books, Facility by ICAR for foreign Journals through Online Access of Journals through Consortium for e-Resources in Agriculture (CeRA) and KRISHIKOSH are available and CD-ROM databases like CAB, AGRICOLA, AGRIS. The University Library is fully automatized after the implementation of RFID system. Full time internet, scanning and CD writing facilities are available for the students in the Cyberary in which there are 40 work stations with internet access. These facilities are being extensively utilized by both faculty and students on an average of daily 50 to 300 users for about 12 hours per day. Students are provided with books of their concerned subject of their respective semesters through BOOK BANK facility, 33 more books were purchased of Agriculture Engineering faculty for the book bank. The Library runs through RFID with the software KOHA & LIBSYS.

The library renders its services to the users from 8:00 to 18:30 h. A separate Air Conditioned Reading Room is developed with the best facilities as well as good ventilation and aeration. This AC reading room accommodates approximately 100 students. The Reading Room remains open for its users from 8.00 to 23.00 hours on working days whereas 8.00 to 14.00 hours on holidays.



Library Infrastructure





Facilities inside the Library

Reading Facilities in Library



E-Library Facility

Reading Materials and Reference books



7.2 Information Technology



Junagadh Agricultural University has made significant strides in leveraging internet technology for the efficient management of its educational, research, and extension activities. The Directorate of Information Technology plays a pivotal role in centrally managing the university's IT services, catering to students, faculty, research scientists, extension personnel, and administrative staff. The university's IT unit is at the forefront of employing cutting-edge technology, supported by a highly qualified team.

High-speed internet access is available campus-wide, including locations beyond the main campus, enabling seamless connectivity for all users. The university's website, www.jau.in, serves as a valuable resource, offering up-to-date information that helps students envision themselves as part of the university community. The website also features a wealth of resources, including answers to farmers' queries, weather-based agricultural advice, agricultural education materials, video gallery and more. To streamline access to internally generate and other online materials and the portal "Online JAU" consolidates these resources under a single umbrella.

7.2.1 IT infrastructural facilities of JAU

Data Centre:

As an integral part of JAU's IT infrastructure, the data centre stands as a testament to the institution's commitment to technological advancement. Equipped with state-of-the-art technology and cutting-edge computing tools, including servers, workstations, firewalls, routers, and various other resources, the Information Technology Cell at JAU ensures seamless

operations. Operating round the clock, the data centre boasts three different power sources, including solar panels, to ensure cost-effectiveness, uninterrupted service. The data centre serves as the backbone of JAU's IT operations, enabling efficient data storage, processing, dissemination, empowering students, faculty and staff to embrace a technologically advanced environment.



Data Centre at IT Cell, JAU

High-speed Internet Access

JAU benefits from a robust internet infrastructure with a total of 305 Mbps dedicated 1:1 Internet Lease Line (ILL) connections provided by multiple service providers. Railtel, as a part of the National Knowledge Network (NKN), contributes 100 Mbps 1:1 ILL, fostering the use of specialized applications and facilitating the sharing of high-performance computing resources, e-libraries, virtual classrooms, and extensive databases. Additionally, BSNL ensures uninterrupted redundant internet connectivity with a standby 25 Mbps 1:1 ILL. Moreover, the campus network is extended to twenty-five sub-centres through a Wide Area Network (WAN) utilizing a 180 Mbps 1:1 ILL provided by a private firm. This centralized management under the IT





conferencing experiences, the university has dedicated a fully furnished conference room equipped with both software-based and hardware-based video conferencing solutions. The room features high-definition cameras, a full duplex voice communication system, flat panel monitors, and an acoustically optimized space, ensuring optimal audio and visual quality.

During the challenging times of the COVID-19 epidemic, the university's newly constructed Video Conference Room has played a vital role. As of the

2023-24 year, more than 50 university-level conferences have already been organized in this centralized video conferencing room, serving as a pivotal hub for engaging and productive discussions.

7.2.4 In-house Developed Programmes:

The IT Cell has developed a range of in-house applications to cater to the needs of university staff, students, and farmers. Some notable applications include:

Tour/HRD Programme
Achieving personal and professional growth is crucial for faculty and officers of a university campus. They often embark on Human Resource Development (HRD) events or university work with prior permission, in compliance with the JAU statute, within a short time frame. However, the process requires administrative approval before they can participate. In the past, obtaining permission was a challenge, resulting in missed opportunities. Fortunately, the implementation of an Online Tour/HRD system has addressed these issues. This innovative system has significantly reduced problems related to permission for attending these events, saving both time and stationary resources. Additionally, the system digitally stores the attendance history of each HRD event, providing a valuable reference during the approval process. Remarkably, in the span of 2023-2024 alone, the system successfully processed 4863 tours and 919 HRD events, highlighting its efficiency and effectiveness. Beneficiaries: JAU Employees and Officers
“Junagadh Janvani” website
The creation of the janvani.jau.in portal has provided a powerful tool for archiving and showcasing all the broadcasted programs and activities associated with the "Junagadh Janvani" (91.2 MHz) community radio station. Through this portal, the archived programs are conveniently accessible at any time, offering individuals the opportunity to explore and engage with the diverse range of activities conducted under the program. By providing easy access to these valuable resources, the portal acts as a gateway to knowledge and inspiration, benefiting over 300,000 recipients during the 2023-24 year. Beneficiaries: Farmers and all related community
Online Fee Receipt Software
As an integral component of the digital India initiative, JAU's colleges and polytechnic have implemented an Online Fee Collection Portal, revolutionizing the fee payment process for students. This online platform has greatly simplified the payment procedure, enhancing convenience and efficiency. In the academic year 2023-2024, a total of more than 3 crore rupees was collected as fees through 6090 transactions, with the funds being directly credited to the respective college/polytechnic account. This streamlined and secure system





not only aligns with the vision of a digitally empowered India but also ensures smooth financial transactions, benefiting both the institution and its students.

Beneficiaries: Students, Account Section of each college of university

Information Retrieval System (IRS):

To facilitate the efficient retrieval of published journal articles, books, and conference proceedings from employees and research scientists at JAU, an Information Retrieval System has been developed. This system proves invaluable during situations that require urgent data collection, enabling quick access to the desired information. This system proudly holds a wealth of knowledge, with a total of 6,031 publications, 437 books, and 574 conference proceedings registered. In the 2023-24 year alone, 246 publications, 21 books, and 9 conference proceedings were added, marking a continued journey of growth and intellectual contribution.

Beneficiaries: Faculties/Research Scientists of JAU

Online IT Asset Management Solutions

In accordance with the statute of JAU, any procurement of IT-related products or services requires the technical recommendation of the Director(IT). This recommendation encompasses activities such as new purchases, repairs, or write-offs of IT products. To streamline the approval process, the entire procedure was conducted digitally, resulting in a total of 481 technical recommendations provided during the 2023-24 year. This digitization ensures a faster and more efficient approval process, streamlining the procurement of IT-related items and services within the organization.

Beneficiaries: Purchase/Store section of each department

JAU Kiosk App

To cater to the needs of visiting farmers and stakeholders at JAU, dedicated kiosks located at "Krushi Darshanalay" and Sardar Smruti Kendras have been established. Through these innovative kiosks, JAU ensures that over 2000 farmers and stakeholders have access to valuable agricultural information and support, promoting knowledge sharing and empowering them to make informed decisions in their farming practices. The development and maintenance of the kiosk applications are undertaken by the proficient IT Cell Team.

Beneficiaries: Farmers, Students and all related stake holders

Online allocation system for Coconut Saplings & Seed Sales

Each year, the Agricultural Research Center (Fruit Crops) in Mahuva embarks on a mission to cultivate and distribute remarkable hybrid coconut DxT seedlings. Meanwhile, the Mega Seed department at JAU, Junagadh tirelessly develops an array of high-quality seeds, including those for wheat and groundnuts. In a powerful effort to support farmers, they open their doors to online applications from those eager to benefit from these valuable resources. The year 2023-2024 witnessed an astounding response, with the online application system expertly handling over 6,082 applications for coconut saplings, and an impressive 15,000 applications for the distribution of seeds.

Beneficiaries: Farmers

Online Salary Management Software

On the university campus and off campus, there are roughly 58 withdrawal and payment officers from various offices. These officers were frequently required to visit the Office of the Comptroller to approve adjustments to the salaries of their office staff. These offices can now complete this process online via authentic channel with the help of the Online Salary Management System. As a result, the process of approving salary





bills became faster and requires less travel. Additionally, the facility is included in this online system to view individual salary slip by using their login credentials.

Beneficiaries: DDOs and Comptroller’s Office, Employee

Online Grievance Redressal

The establishment of an online grievance redressal mechanism for the repair of IT hardware/software items and the campus area network has proven to be a transformative step. Throughout the year 2023-24, the IT Cell successfully resolved an impressive number of registered queries, demonstrating their commitment to efficient problem-solving. With over 384 hardware and 183 software-related issues addressed, this initiative has undoubtedly made a significant impact. By swiftly resolving these technical challenges, the IT Cell has not only enhanced the productivity and effectiveness of the organization but has also provided a seamless and uninterrupted digital experience for all stakeholders.

Beneficiaries: JAU Main Campus Offices, Students and all the employee

JAU iKrushi Sanhita

Empowered by the IT Cell, the JAU *iKrushi Sanhita* Android app is a beacon of support for farmers in Gujarat State, India, with an impressive record of over 5,000+ downloads. It goes beyond being a mere application, acting as a dedicated source of farming-related information in the local language. Through this platform, farmers gain access to valuable agricultural insights and weather-based agro advisory services. Moreover, the app stands as a conduit for disseminating information about agricultural education and diverse university activities. Within this user-friendly interface, individuals can effortlessly explore popular articles, FAQs, and delve into the rich repository of archived broadcasts from the Community Radio Station. It's not just an app; it's a motivational tool for farmers on their journey to success.

Beneficiaries: Farmers, Students and all related stake holders

Online Billing and Accounting Software

In the age of e-Governance, the imperative for digital billing processes and associated accounting reports has become undeniable. The IT Cell has tailored this software for all types of procurement billing procedures. This tool not only saves time but also minimizes the need for extensive manpower, thereby enhancing the overall accuracy and capacity of accounting operations.

Beneficiaries: DDO, JAU Staff who engaged with procurement procedure

7.2.5 Other Service

Services include online circular management systems, billing and accounting, provident fund (PF) management solutions, salary management, IT asset management, IT grievance systems, online management for the government of India's "Mera Gaon Mera Gaurav (MGMG)" scheme, job application systems, online fee collection systems, e-Learning

solutions for students, online placement solutions, online alumni management systems and online mock test systems. The IT Cell has developed a local online system for registration and user management for the Government e-Marketplace (GeM). This facilitates university purchases made through GeM, streamlining procurement processes and enhancing efficiency.





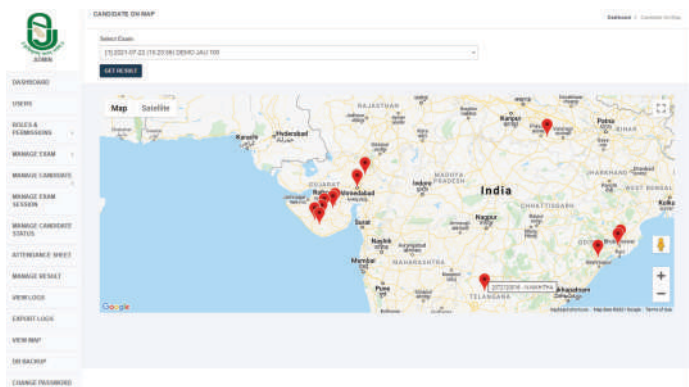
Moreover, the IT Cell oversees various Google Apps, granting users access to a wide range of Google services such as Gmail, Google Drive, video conferencing via Google Meet, and many others. Furthermore, an online system has been established to provide services to farmers, including online weather updates, seed distribution, allocation of coconut saplings, FAQs, and more.

Online Examination System

The adoption of online tests, commonly referred to as e-exams or electronic exams, has seen substantial growth and is now widely implemented by higher education institutions around the globe. The COVID-19 pandemic significantly accelerated this trend, with online exam management quickly becoming the preferred choice to ensure the safety and well-being of students during and after the pandemic.

At Junagadh Agricultural University, over 755 exams for undergraduate, postgraduate, and polytechnic programs were successfully conducted across various colleges. With the participation of more than 33,000 peer students, these exams were held under virtual supervision. The IT Cell is responsible for managing the online exam system portal.

This system allowed students from different regions of India to participate in exams from the safety and convenience of their homes, removing the need for physical attendance and ensuring a secure and efficient evaluation process.



JAU Online Examination System

7.2.6. Reference Services

The university facilitates access to agricultural e-Resources for both UG/PG students working on research projects and university staff engaged in teaching and research activities through a local area network (LAN). This network enables users to explore valuable resources such as CAB, AGRIS, and AGRICOLA.

The entire university network grants users the ability to browse and search national and international journals through online access to the Consortium for e-Resources in Agriculture (CERA). Additionally, users can benefit from the J-Gate database and Krishi Prabha, an online service providing access to doctoral theses offered by All India Agricultural Universities. These resources enhance the research and learning experiences of students and staff, facilitating comprehensive access to scholarly information in the agricultural field.



E-Resources facilities for UG/PG students

7.2.7 Training

The IT Cell is dedicated to empowering rural women and youth by conducting regular training sessions on computer usage and internet connectivity. These sessions aim to disseminate valuable agricultural information among these individuals. Additionally, faculty and students receive training on effectively utilizing the resources provided by network services, enhancing their digital literacy.

Furthermore, when the University implements new digital initiatives, the IT Cell goes the extra mile by providing additional training sessions for university staff. These trainings cover various aspects such as the usage of online salary systems, online fee collection systems, online admission systems, and the government e-marketplace (GeM), among others. The IT Cell is committed to ensuring that staff members are well-equipped to embrace and utilize these digital tools effectively.

7.2.8 University Website

The IT Cell plays a vital role in managing and hosting the university's website, www.jau.in, ensuring it remains up-to-date. With over 120,000 views during 2023-2024, the website serves as both a farmer's hub and an extensive academic resource. The website

provides valuable information on topics such as admissions, academic regulations, scholarships, library services, student results, awards, and agricultural updates, making it a vital resource for both students and the farming community. It also features regularly updated content on important announcements, university circulars, tenders, advertisements, RTI (Right to Information), news, and activities. Additionally, it serves as a hub for research recommendations, newly released crop varieties, university publications, memoranda of understanding, and extension education activities. The website is diligently maintained and updated year-round. To cater to farmers and disseminate agricultural-related information effectively, the website also includes content in the local language. This initiative aims to inform farmers about the various agricultural activities conducted by the university, empowering them to make timely and appropriate use of the available information.

7.2.9 Visitors

The IT Cell has had the honour of hosting numerous esteemed visitors who have lauded its initiatives. The IT students from various colleges in Junagadh city frequently visit the IT Cell as part of their project work, seeking inspiration and guidance.

