

A. Title of the Practice: Capacity building of students for accessing online systems.

Objective: The objective of this capacity building exercise is to enable students to confidently access specific online systems in the Institutional environment. It is expected that this will make students confident and capable of accessing services available online and make them self-reliant.

The Context: Student services in the College that need a student to interact with an online system include library access, digital payment of college dues, online student registration and examination form fill up, online form fill up and submission for admission to the College and availing of scholarships administered through the National Scholarship Portal. Again, online Google forms are used in the College to capture student information for student support schemes and other uses.

A large majority of the students are found to be hesitant when they first interact with digital interfaces on critical tasks. This is largely because tasks like examination form fill up or applying for a scholarship leaves no room for error and students are afraid of making mistakes. It was therefore decided that hand- holding would help them in adapting to the online environment.

The Practice: The practice addresses an institution-wide problem of adapting to specific online systems. It embraces initiatives that seek to make students self-reliant in the use of these online systems. The different hand- holding initiatives that the practice consists of have been led by the College's Library, the Computer Science Department and the Examination Committee with support from the administration and help from all staff members.

Hand-holding initiatives for online functions: Library access: A library-user's orientation programme for all students includes

- Use of OPAC with live demonstration in SOUL 2.0
- Live demonstration in accessing e-resources in the N-LIST repository
- Live demonstration in D-Space on gaining access to the Institutional repository Familiarization with the automated system of borrowing and return of books.

Digital payment of College dues:

- Help with opening bank accounts with ATM cards.
- Orientation in the use of ATM Cards and other digital payment modes.

An important component of this initiative has been the training of the College staff in the use of POS machines.

Error-free and timely online registration and examination form fill:

- Lecture-demonstration sessions for students on the use of the portal.
- Training of trainers approach to capacity building, with student volunteers from the Department of Computer Science, first oriented to the online registration and examination form fill up process. They then help groups of students assigned to them with the process of registration and examination form fill up.

Online Admission form fill up and submission:

- An online help desk
- A prompt response mechanism to help build confidence in the system.
- Providing assistance in real-time for online form fill up and submission.

Student access to the National Scholarship Portal:

- Making students aware of their role and responsibilities as a user of the NSP, as defined in the NSP's SOP.
- Live demonstration of the portal and guidance in its use.

Google Forms to capture student data online:

• Peer support from students familiar with the Google form who assist their peers in filling up and submitting the form.

To further the capacity building of students, the College has implemented the Spoken Tutorial Project developed by Mumbai IIT, where a student learns a particular Free and Open Software (FOSS) through an online audio-video tool. Students can also enrol in 6 months' certification course for Computer Basics & Office Automation that is run in the College.

Evidence of success: The Evidence of success of the initiatives under this best practice can be seen in the following:

- Students' familiarity with the automated lending system, their growing use of OPAC and, their accessing of the N-LIST resources.
- Students pay all their College dues through the digital mode and have gained sufficient confidence in making digital payments. Some of them have been a part of a volunteer campaign to make street vendors aware of digital payment modes like PayTm and Mobile Wallet.
- Students' approach to online registration and examination form fill up with growing

confidence which has led to these processes becoming progressively error free.

- Successful access of the NSP by students and their receiving their scholarships through the portal.
- Use of Google forms by students to provide information sought by the College, including student records for the Student Satisfaction Survey.
- The hand-holding initiatives can be limited to newly admitted students, with the other students having become generally capable in the use of the specific online system.

Problems encountered and Resources required:

- Large differences in student familiarity with online systems.
- The continued dependence of some students on cybercafés for assistance in accessing online systems. These cafes fill up the forms very casually, leading to errors that require a cumbersome correction process to be undertaken by the College.
- This practice does not need resources beyond the computer facilities and Internet connectivity available in the College.

Notes: Although not resource hungry in terms of infrastructure, the practice requires capable volunteers for the hand-holding of students during their familiarization with the online systems.

B. Title of Practice: Fostering undergraduate research.

Objective: The objective of the undergraduate research initiative in the College is to enable students to experience the excitement of learning through discovery. Engaging with research, the student learns the practice of a discipline and gains an understanding of research and research methods. They also acquire practical skills by learning the techniques they use in their research. It is also an opportunity for them to gain an understanding of academic honesty which is essential in research.

Context: The College runs undergraduate programs in the Arts and Sciences and seeks to provide the students enrolling in these programs with a rich learning experience. Undergraduate research is one strategy that the College has chosen to create the desired learning experience.

The Practice: Undergraduate research in the College is collaboration between student (s) and faculty member (s), in a research experience which promotes student learning. The design of the research project varies with some of them deriving from class-based activities while others are out of class initiatives.

Class-based Research Activities:

The Class-based research activities that are undertaken by students in the College are planned to follow the methods of research. These can take different forms:

- Writing Assignments: Writing assignments undertaken as a part of project work are designed to have a research focus through the following:
- The topic is one which encourages the accessing of material in reference books and journals.
- The assignment is written in a structured manner with emphasis on a comprehensive introduction, a review of the reference material, the student's insight of the topic and a conclusion.
- Proper method of referencing following the standards prevalent in the discipline.
- Presentation before peers.

Service Learning and Community-based Research: These research projects help students relate their course activities to issues of concern to the community. They have the following common features:

- Articulation of a community need.
- Orientation and Training of students in the relevant area.
- Engaging with the problem with tools of research. The tools of engagement can vary with the disciplinary approach but survey methods are widely used.
- Addressing the community need.
- Evaluation and reporting.

Out-of-Class Research Activities: The College supports out-of-class research activities through its funding of Teacher-led Students' Project. These projects, which are usually initiated by a mentoring faculty with a group of students, are administered by the College's Research Activities Cell.

A teacher –led students' project has the following essential features:

- Teacher-led students' groups submit proposals in the specified format.
- Proposals are sent for peer review to external evaluators for assessment of suitability for funding. On receiving a recommendation for funding, the Research Activities Cell informs the particular group of acceptance of their proposal and requests the College administration to release the funding.
- On completion of the research project, the group prepares a draft project report and presents their findings before a peer group.
- The project report is finalized after addressing any points raised during the presentation.

Evidence of success: The evidence of success for the College's initiative to foster undergraduate research can be seen in examples of the class-based research activities that the students have undertaken. Some examples of the completed research projects, which conform to the description of service-learning and community-based research, are

- An Assessment of Diversion-Based Irrigation System of Kamrup (R) District Of Assam
- An Assessment of Livelihood through Eri- Production and Marketing
- An Assessment of Livelihood Profile of Piggery Business Workers of Kamrup (R) District.

The teacher- led students' project scheme was initiated in the College in the year 2010.During the period between 2015-16 to 2018-19, the College has funded a total of 27 projects under the scheme. It has been encouraging, seeing the diversity of research questions these projects have addressed and the forays into interdisciplinary that they have encouraged.

Problems encountered and Resources required: The problems encountered in fostering undergraduate research in the College are as follows:

- As this is an initiative that requires a faculty member to work directly with a student or a small group of students, faculty shortages arising from long standing vacant posts have been a problem.
- Limited laboratory space and facilities often results in user queues as regular practical classes take precedence over research projects.
- A heavy class load often discourages students from coming forward to take up an out-ofclass research activity like the teacher-led students' project, which is not graded.

The resources that the initiative would gain from are:

- Higher funding as the undergraduate research initiative like all research activity demands an allocation of funds and the funding support from the College is not adequate.
- Filling up of vacant faculty positions as this would bring in the much needed faculty support.
- Higher equipment to student ratio in all laboratories, including computer labs.

Note: The College persists in its efforts to foster undergraduate research and hopes to see it grow as we see it as a form of engaged learning that teaches students disciplinary practice and also practical skills.