Venkatesh Mahajan Senior College, Osmanabad.
Affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.
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Govt. Sanction No. NGC 3599 /NMV / (1/99) M.S.3, Dt. 9.7.1999
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NAAC Accrediation 'B' Grade
Principal : Dr. Prashant G. Chaudhari

Ref. No. :

Date:

BEST PRACTICE

Title of the Practice

"Connecting Classrooms: The Impact of ICT on Teaching and Learning"

Objectives of the Practice:

- To enable the students to think critically and work creatively
- To transform the mode of teaching through strategic use of ICT, especially during pandemic times when physical classes are not possible.
- Quick adoption of an exclusive ICT-based examination and evaluation system during the pandemic
- ICT provides flexibility and the availability of learning materials for all students. While all resources are available in classrooms, students can also access them outside of college.
- This especially benefits students who are slow learners or have learning disabilities.
- ICT allows for the use of advanced technology and equipment in classrooms to give students a better learning experience.
- To increase the capacity of teachers.

The Context:

Educational systems worldwide had been affected by the COVID-19 pandemic, leading to the near-total closure of schools and colleges. This requires all elements of education to adapt and continue the teaching-learning process. Google Classroom and Google Meet platforms for digital sources have been implemented by the college. It is one way to be considered by colleges and

teachers to provide students with e-learning that can be attractive to the students while the process of teacher learning moves to virtual classes.

Information and Communications Technology (ICT) often deals with the use of different technologies such as mobile phones, telephones, computers, the Internet, and other devices, as well as software and applications to locate, save, send, and manipulate information.

- Use of Google Classroom and Google Meet
- Use of QR codes in the teaching and learning process

Faculty meetings were also conducted using Google Meet during the COVID-19 pandemic.

The Practice:

- The college has adopted the strategy of creating and enhancing its ICT infrastructure, which is continuously upgraded with the latest computing facilities.
- Important institutional information is disseminated through the college website and through a dedicated online platform. The staff and students have access to technology and information retrieval on current and relevant issues through the e-learning facilities.
- The ICT enabled learning environment of the College is conducive to developing creative and critical thinking as well as scientific temper among the students.
- Faculty is provided with the requisite facilities for preparation of computer aided teaching – learning material.
- The platform has been put to extensive use during the pandemic times when distant teaching-learning became the only mode of communication between the teachers and the students. Regular classes are taken through this on-line platform by using Google Classroom and Google Meet.
- Adequate number of high-end interactive projectors and computers for use in seminars and lectures
- Fully Wi-Fi campus for internet access.
- Interactive smart boards.
- A well open access computerized library with internet facilities is

available for faculty and students. E-resources are available through national networks like INFLIBNET(N-List)

- Security services of the campus have been enhanced by installing CCTV cameras at strategic locations.
- The college has 70 computers in various departments, including the computer laboratory. The college has installed five LCD projectors. All these LCD projectors are equipped with speakers. These LCDs have all the features that are needed to carry out the teaching and learning process. Apart from this, all the computers are connected to high-speed internet facilities. Installed system: The college has 70 computers in various departments, including the computer laboratory.
- Speed of internet: The speed of internet services from BSNL is 200 MBPS available on campus.
- Curriculum-based software is regularly updated based on the needs of the year.

Evidence of Success:

- The college has organized a seven-day e-content development workshop during the COVID-19 pandemic for faculties.
- The Department of Hindi organized five international conferences using ICT technology.
- A student of the Department of Botany made the QR code for plant growth on college premises.
- The Department of Botany has organized a one-day workshop for 10th grade students of Arya Chanakya High School, Osmanabad.
- On making QR codes for plants, it went further to help the other college make QR codes for plants occurring on their premises. After the formal request of the principal of Tuljabhavaini Mahvidyalaya, Tuljapur Dist. Osmanabad students of the Department of Botany made QR codes of plants occurring on their premises.
- The Department of Chemistry uses QR codes to make the curriculum easy for students.
- Technology-enabled learning has increased student engagement and motivation and accelerated the learning process.
- Blended learning has accommodated students' diverse learning styles and enabled them to work beyond regular class hours.

- Visual and multimedia presentations have enhanced the students' absorptive capacity, leading to greater learning and motivation for pursuing higher studies.
- The use of ICT has rendered the library user-friendly and made possible greater access to e-resources.
- Online feedback systems have ensured more effective assimilation and compilation of data.

- The platform was put to extensive use during the pandemic, when flip classes became the only mode of communication between the teachers and the students.

Problems Encountered and Resources Required:

Problem: Hardware or software malfunctions, connectivity issues, compatibility problems.

Resources Required:

- Skilled IT personnel or technicians for troubleshooting.
- Access to reliable technical support or forums.
- Regular maintenance and updates of hardware and software.

Problem: Threats like phishing attacks, data breaches.

Resources Required:

- Antivirus and firewall software.

Problem: Users may not be proficient in using certain applications or platforms.

Resources Required:

- Training programs or workshops on specific software or platforms.
- Online tutorials or guides for self-learning.

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BEST PRACTICE

Title of the Practice

"Green Harvest: Optimal Techniques in Shatavari Cultivation and Vermicomposting"

Objectives of the Practice:

Vermicomposting:

- Educate students and staff about the importance of composting, recycling organic waste, and reducing landfill contributions.
- Demonstrate how organic waste can be converted into nutrient-rich compost, promoting sustainability and reducing the need for chemical fertilizers.
- Provide students with practical experience in managing a composting system, fostering skills in observation, problem-solving, and teamwork.
- Showcase the vital role of earthworms in soil health and the overall ecosystem, enhancing ecological awareness.
- Create a platform for research projects related to composting techniques, soil health, and the benefits of vermicompost in agriculture.

Shatavari Cultivation:

- Provide students with hands-on experience in plant cultivation, including soil preparation, planting techniques, and ongoing care.
- Introduce students to the cultivation and potential health benefits of medicinal herbs, promoting holistic wellness practices.
- Highlight the nutritional value and potential therapeutic properties of shatavari, contributing to a broader understanding of herbal medicine.

- Encourage research into shatavari's growth habits, optimal cultivation conditions, and potential applications in traditional and alternative medicine.
- Provide opportunities for entrepreneurial ventures related to the cultivation and sale of shatavari, potentially generating income for the college.
- Contribute to the preservation of native plant species by cultivating shatavari, which may be threatened in its natural habitat.

The Context:

Vermicomposting:

- Integrate vermicomposting as part of the college's sustainability efforts, aligning with broader goals to reduce waste and promote eco-friendly practices.
- Use vermicomposting as an educational tool to teach students about the importance of organic waste management, nutrient cycling, and soil health.
- Utilize vermicomposting to process organic waste generated on campus, potentially reducing the need for off-site disposal and associated costs.
- Explore opportunities for research projects related to vermicomposting techniques.

Shatavari Cultivation:

- Use shatavari cultivation to educate students about the growth habits, medicinal properties, and potential health benefits associated with this herb.
- Highlight the cultural and traditional uses of shatavari, providing students with insights into indigenous knowledge and practices.
- Medicinal plants like shatavari, potentially creating opportunities for entrepreneurial ventures.

By incorporating these practices into the college context, you create a dynamic learning environment that emphasizes sustainability, hands-on experiential learning, and an appreciation for the cultural and ecological significance of these practices.

The Practice:

In the academic year 2020-21, two projects were initiated: one focused on Shatavari Cultivation and the other on Vermicomposting. A grant of Rs. 25,000 (twenty-five thousand rupees) was secured for their implementation. However, the actual expenditure for both projects amounted to Rs. 27,251 (twenty-seven thousand two hundred fifty-one rupees).
Both projects commenced in the month of July. Below are the detailed accounts for each project:

1. **Shatavari Cultivation Project:**

    - Land allocated and ploughed: 15/06/2020
    - Land prepared with small tractor: 31/06/2020
    - Shatavari seedlings obtained from Agronic Pvt. Limited Pune: 15/07/2020
    - Seedlings sowed: 03/08/2020
    - Drip irrigation system installed: 22/07/2020
    - Weeding: 23/10/2020 to 28/10/2020
    - Official inauguration: 26/01/2021

2. **Vermicomposting Project:**

    - Vermibeds ordered online (received on 10/09/2020): 07/09/2020
    - Animal dung and dried weeds added to vermibeds: 2/11/2020
    - Earthworms released in vermibeds: 21/01/2020
    - Vermicompost removed and sieved: 07/07/2021
    - Vermicompost packed: 19/07/2021
    - 281kg of vermicompost obtained
    - Cheques distributed for Earn and Learn Scheme: 07/08/2021
    - 145kg of vermicompost sold, generating Rs. 2902/-

Evidence of Success:

1. Both projects have shown a significant increase in yield compared to conventional methods. This can be measured by the quantity of Shatavari harvested and the amount of vermicompost produced.
2. The Shatavari harvested is of high quality, meeting or exceeding industry standards. Similarly, the vermicompost produced is rich in nutrients, enhancing soil health and plant growth.
3. The sale of vermicompost has generated revenue for the college, demonstrating the economic viability of the project
4. Both projects have optimized resource utilization, minimizing waste and reducing the need for external inputs. This is evident in the efficient use of land, water, and organic materials.
5. The projects contribute positively to the environment by reducing chemical fertilizer and pesticide use. Additionally, vermibeds play a role in waste management by converting organic matter into valuable compost.
6. The projects serve as valuable educational tools for students. They provide hands-on experience and practical knowledge.

By considering these factors, it becomes clear that the Vermicomposting and Shatavari Cultivation projects have not only met their objectives but have also contributed significantly to the college's sustainable efforts.

Problems Encountered and Resources Required:

Problems Encountered:

1. Controlling pests and diseases in Shatavari cultivation posed a challenge, requiring diligent monitoring and the use of organic pest control methods.
2. Unpredictable weather patterns affected both projects, with excessive rainfall leading to waterlogging in some instances and drought conditions in others.
3. The quality of Shatavari seedlings obtained from the supplier varied, leading to disparities in plant health and growth. This highlighted the need for a reliable and reputable seedling source.
4. Ensuring an adequate population of earthworms in the vermibeds for efficient composting was a challenge. This required periodic monitoring and, if necessary, supplementation with additional earthworms.
5. The small tractor and drip irrigation system required regular maintenance and occasional repairs, adding to the operational challenges.

Resources Required:

1. A reliable supplier of high-quality Shatavari seedlings is essential for a successful cultivation project.
2. Access to organic pest control solutions, such as neem oil or beneficial insects, is crucial for managing pests without harming the environment.
3. A steady supply of earthworms, either through on-site breeding or reliable sourcing, is necessary for successful vermicomposting.
4. Tools and equipment for the upkeep of machinery, including the small tractor and irrigation system, are required for smooth operation.
5. Workshops or training sessions for students and staff involved in the projects can enhance their skills and knowledge in sustainable practices.
6. Adequate funds for purchasing necessary equipment, seeds, seedlings, composting materials, and for covering maintenance costs are vital for the success of both projects.

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