



Bharat Shikshan Sanstha's
Shri Chhatarapti Shivaji College Omerga

Affiliated to Dr. Babasaheb Ambedkar Marathwada University Aurnagabad

INTERNAL QUALITY ASSURNACE CELL (IQAC)

Common Research Facility Centre (CRFC)

BEST PRACTICE -1

TITLE:

“Common Research Facility Centre (CRFC)” in Shri Chhatrapati Shivaji College, Omerga.

OBJECTIVE:

The common research facility center (CRFC) was started in our college from March 2010. This center was started to provide research facility to all faculty members of our college and researchers from all nearby colleges. The purpose of the CRFC is to provide research facility to all researchers in this rural area. Our college is situated about 350 km away from Dr BAM University Aurangabad which imposes limitations on research activity in this area. This research center provides good opportunity for research students from Physics, Chemistry and Life sciences. This center is equipped with sophisticated instruments assisted by UGC like X-ray Diffractometer, UV-Visible Spectrophotometer, FT-IR, Muffle furnace, DC electrical conductivity meter, LCRQ meter and KBr press. The objective of this research center is to provide interdisciplinary research facility for this area.

THE CONTEXT:

The CRFC is well suited for research in material science. The research in material science has two main parts. One is material preparation and another is characterization of prepared material. Material preparation facility is available in our CRFC which includes Muffle furnace, palletisation machine, electronic balance etc. The second part includes material identification which requires XRD facility.

This instrument provides information on structural arrangement on molecular level. Our college has purchased Powder XRD instrument named **Miniflex II benchtop X-ray diffractometer from Rigaku Japan**. The management is always motivated for research

THE PRACTICE:

X-ray diffractometer facility in our CRFC is unique feature of this center. X-ray powder diffraction technique is primary tool for solid state characterization. It is an indispensable method of material investigation, characterization and quality control. It has many salient features and advantages that promote its wide range use. It has numerous applications that cater to industrial and academic research that ultimately enriches the growth and development of Science and Technology.

Powder X-ray diffractometer has numerous advantages like its nondestructive sample investigation nature, reliability, low cost maintenance and easy sample preparation. Operational procedure is convenient and fast. In this method data interpretation is easy. Samples for analysis could be metals, metal composites, organic compounds, inorganic complexes, fiber polymer, pharmaceuticals, earth science samples, microelectronic materials and nanomaterials. XRD can be used to analyses very large variety of samples and plays vital role in multidisciplinary research.

However XRD has few disadvantages due to use of harmful radiations. The X-ray tube used in this instrument is very expensive and needs replacement after few years. The cooling system used for this instrument need periodic maintenance.

EVIDENCE OF SUCCESS:

The common research facility is very extensively used by over three hundred research students from our home university and universities nearby. The XRD unite is used to scan over 2000 samples and generated revenue of Rs. 6,50,000/- All other facilities like FT IR, UV- Visible spectrophotometer, muffle furnace, electrical conductivity measurement facility and sample preparation facility in CRFC is utilized by research students from our college and nearby colleges. These facilities are provided free

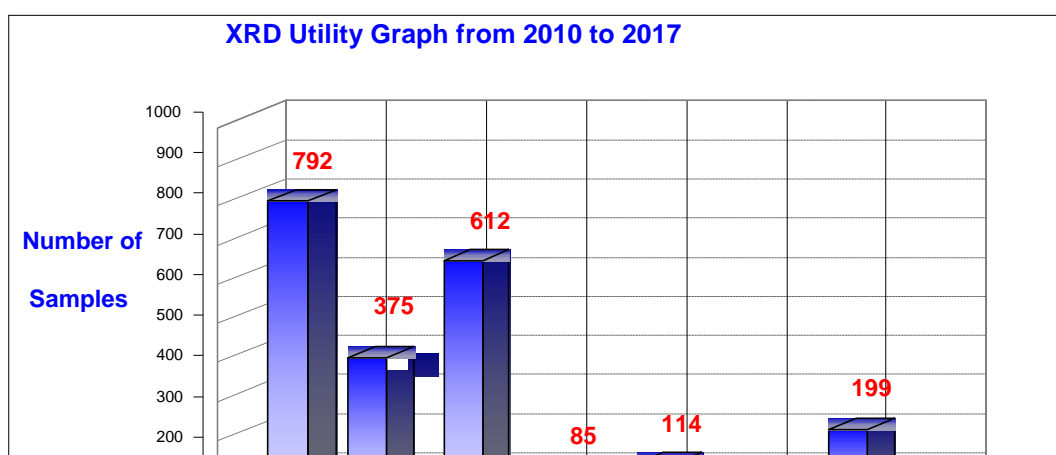
of cost to any research student with prior permission of Principal of our college. The table showing revenue collected per year is shown below.

**Table showing
Revenue generated from XRD
During 2010-2018**

Year	No. of Samples	Revenue collected in Rs.
2010	89	17800
2011	478	92500
2012	985	197000
2013	367	121700
2014	157	78500
2015	107	53500
2016	62	31000
2017	23	11500
Total	2268	603500

Source – College Register

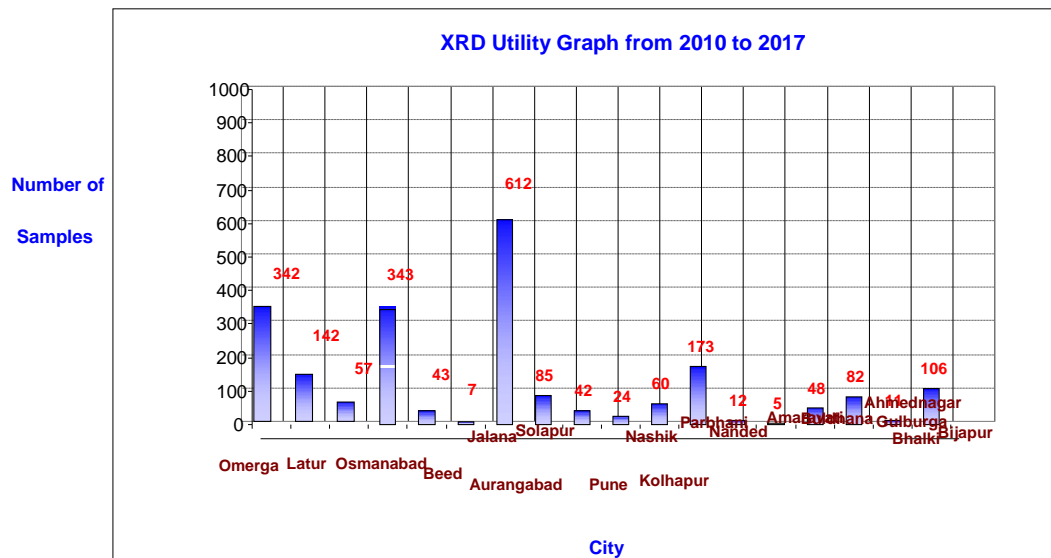
Graph showing utilization of XRD by research students from different Universities is shown in the following XRD utility graphs.



It is seen from the above graph that majority of the researchers (792) are from Aurangabad University followed by Solapur (612), Nanded (375). It is found that researchers from other state University and other region university are also utilized XRD.

We proud to say that our XRD unit not only provide the research facility to our college and region but also provide research facility to other region of the state and Out of state too.

Graph showing utilization of XRD by research students from different cites is shown in the following XRD utility graphs.



The above graph clearly depicts that the researchers from 18 different cities are utilized our common research facility center. Majority of the researcher (619) is from Solapur city followed by Aurangabad (343) and Omerga home college (342).

Major Achievement:

The major achievements of this unit are

- 1- Near about 30 researchers got Ph. D. who were Beneficiaries this unit
- 2- Two faculty got Patent by using this unit.

Contact:

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INTERNAL QUALITY ASSURNACE CELL (IQAC)
Commerce Association

BEST PRACTICE -2

Title of the Practice –

The Department of Commerce has started students circle under Commerce Association from the academic year 2014-15 entitled as “SCSCO STUDENTS COMMERCE QUALITY CIRCLE”

Objectives of the Practice –

The objectives of the practice of Commerce Quality Practice are

- To imbibe the leadership skill among the students
- To inculcate the values of Commerce and management mong the students.
- To give the experiential and Problem solving learning, practical knowledge in Commerce by creating students quality circles, conducting events filed survey, small projects and counselling.

The Context:

Commerce education and Quality are interrelated. Students learn the content like Management, Marketing, Business Environment, Accounting & Auditing and HR management etc. To get the practical knowledge in these subject and make the students as a leader it is necessary to give the hand on experienced knowledge to the students. Commerce Association is formed every year and Students quality circles are created. This circle conducts the curricular, extracurricular and extension activities.

The Practices:

Commerce Association conduct the meeting of B. Com. to M. Com students at the beginning of the Academic year. They elect the student as a Secretary of the Association. There are 18 Students Quality circles like Discipline Circle, Remedial Coaching Circle, Group Discussion Circle, Commerce Bulletin Circle, Test –Tutorial

and Seminar Circle, Field survey, Competitive Exam and Placement Circle, Event Management Circle, Sports & Culture Circle etc. Every circle having Chairman and two –three as a member. The head of the department is guide motivator of this practice. One faculty is working as President and other is Vice President. On the occasion of the inauguration of the Commerce association, a separate files are given to each chairman with plan of action. The chairman and members of the each quality circle conducts meeting, discuss and decide the plan to conducts activity. In this practices they learn the subject skills like Management functions, Accounting, Reporting and communication skills, Leadership skills etc. Every chairman prepare their Quality Circle report and present at the closing meeting of the Commerce association.

Evidence of Success:

The students who actively participate in this quality circle are placed in the campus drive and also became the entrepreneur and also became the overall developed student.

Achievement:

All the yearly activities related to Curriculum –Curriculum, research and extension are to be conducted by these Quality circles. So the students become the leader and to know how the event is organized, planned and control.

Problems Encountered and Resources Required:

It requires efforts and time from both teachers to bring about a positive change in the mind-set of the student.

Contact:

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कॉमर्स असोसिएशनच्या सचिवपदी सूर्यवंशी, सहसचिवपदी घोडके

प्रतिनिधी | उमरगा

शहरातील श्री छत्रपती शिवाजी महाविद्यालयाच्या कॉमर्स विभागाच्या वतीने शनिवारी (दि.१८) शैक्षणिक वर्षासाठी कॉमर्स असोसिएशनची स्थापना केली. अमर सूर्यवंशी यांची सचिव तर अश्विनी घोडके हिची सहसचिवपदी निवड करण्यात आली.

विणा जाधव कोषाध्यक्ष व जना जमादार व शरद जाधव यांची सह कोषाध्यक्षपदी विनविरोध निवड करण्यात आली आहे. महाविद्यालयाचे उपप्राचार्य डॉ. संजय अस्वले यांच्या हस्ते नूतन पदाधिकाऱ्यांचे कौतुक करण्यात आले. अभ्यासक्रमाबरोबर शिस्तपालन, गुणवत्ता व नेतृत्व आदी गुण विद्यार्थ्यांच्या अंगी यावे, यासाठी कॉमर्स असोसिएशन अंतर्गत विविध समित्यांचे गठन करण्यात येते, असे



प्रतिपादन डॉ. अस्वले यांनी केले. यावेळी असोसिएशनचे चेअरमन म्हणून डॉ. अजित आपटे, व्हाइस चेअरमन म्हणून डॉ. केशव लॅंगरे यांचे विद्यार्थ्यांना मार्गदर्शन होणार आहे. यावेळी असोसिएशनच्या १७ उपसमित्या व त्यांचे चेअरमन व सदस्यांची निवड करण्यात आली. सर्व सदस्यांचे डॉ. अस्वले व डॉ. आपटे, डॉ. केशव लॅंगरे यांनी कौतुक केले. सूत्रसंचालन डॉ. अजित आपटे यांनी तर आभार अमर सूर्यवंशी यांनी मानले.

