KIHES's

# MAHARASHTRA COLLEGE OF ARTS, SCIENCE & COMMERCE

246-A JBB Marg, Mumbai-400008

## Best Practices 2018-19

**Best Practice I**

1. **Title of the Practice:**

Students Aid Fund (SAF)

2. **Objectives of the Practice (What are the objectives / intended outcomes of this "best practice" and what are the underlying principles or concepts of this practice (in about 100 words)?)**

To provide financial support to economically challenged, deserving and regular students.

3. **The Context (What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words)?)**

The SAF was started somewhere in early 1980's with the vision to encourage more and more students to attend the college. The then teaching faculty, especially those residing in the nearby locality of the college observed that many students though enrolled for the course would not attend the regular classes. On investigation it was found that these absent students had to work to meet their basic needs left alone the education. With this context in mind the college started the practice to financially support economically challenged students.

4. **The Practice (Describe the practice and its uniqueness in the context of India higher education. What were the constraints / limitations, if any, faced (in about 400 words)?)**

The teachers of various faculties identify students who are economically weak. Such students are then recommended for SAF. The Students approach SAF secretary for the application form wherein they are subjected to interview about their economic constraints, residence, family dependents and other related details. The detail of the interview is written on the back of the application form. Once the application form is duly filled and submitted along with the photocopy of ration card and previous year's mark sheet to the secretary. An investigation is carried out with reference to their suitability of availing the facility. This activity is carried throughout the year. The fund for the same is generated from each and every student enrolled in the college as a part of admission fee. There is a separate bank account for it at Bombay Mercantile Co-operative Bank with the name as 'SAF account, Maharashtra College'. The students receive the aid through cheque. There are three signatories for the issuance of cheque. They are: - The Principal of the College, The Chairman (Management representative) and the Secretory (Member of teaching faculty). On an average students receive Rs. 2000/- to Rs. 2500/- as financial support. For the much needy student the fund amount may be raised to Rs. 3000/-. The duration required for receiving of financial support is on an average of one week from the time of submission of application form. In urgent cases especially at the time of admission, the duration of receiving financial support is reduced to couple of hours.

5. **Evidence of Success (Provide evidence of success such as performance against targets and benchmarks, review results. What do these results indicate? Describe in about 200 words.)**

Every year approximately an amount of Rs. 1 lakh is distributed among the needy students under SAF scheme. In the academic year 2018-19 an amount of Rs. 180500/- was distributed among the needy students. A total of 76 students were able to avail this facility from degree section. Following is the detail of SAF facility disbursed to the students.

| **SAF Facility 2018 - 19 (Degree College)** | | | | |
|---|---|---|---|---|
| | No. of beneficiaries | | | Total |
| | ARTS | SCIENCE | COMMERCE | |
| F.Y | 17 | 05 | 01 + 02 = 03<br>(02 – F.Y.B.M.S.) | 25 |
| S.Y. | 07 | 06 | 05 + 02 = 07<br>(02 – S.Y.B.M.S.) | 20 |
| T.Y. | 06 | 13 | 06 | 25 |
| M.Sc. | N.A. | 04 | N.A. | 04 |
| M.Com | N.A. | N.A. | 02 | 02 |
| Total | 30 | 28 | 18 | **76** |

**Best Practice II**

1. **Title of the Practice:**

Rooftop Solar Plant

2. **Objectives of the Practice (What are the objectives / intended outcomes of this "best practice" and what are the underlying principles or concepts of this practice (in about 100 words)?)**

Objectives:

- To reduce the carbon footprint of the college.
- To make the institution self-reliant in electricity production.
- To inculcate the value of electricity saving and infuse the idea using of eco-friendly methods among students.

3. **The Context (What were the contextual features or challenging issues that needed to be addressed in designing and implementing this practice (in about 150 words)?)**

The college on an average was incurring a whooping annual expenditure of approximately ₹ 15 lakhs. There was an additional issue of connected load for which the college had the chance of facing fine from the BEST. For these reasons the college went for Rooftop solar plant. This will also decrease the electric supply load on BEST. The fund for the electricity bill can be diverted for other institutional activities.

4. **The Practice (Describe the practice and its uniqueness in the context of India higher education. What were the constraints / limitations, if any, faced (in about 400 words)?)**

Located in South Mumbai, Maharashtra College of Arts, Science & Commerce is the first educational institute in South Mumbai to be powered 100 % by solar energy. It also boasts of the largest solar power plant capacity among educational institutes of South Mumbai. The cumulative capacity of 84.5 kWp rooftop solar plant was done in 2 phases of 50 kWp & 34.5 kWp in the year 2017 & 2019 respectively. The contract for the project was given to MSS Renewtech LLP. It is a Mumbai based EPC catering to the retail rooftop solar segment (10kWp – 100kWp). GI sheets were used in the solar panels. The electricity generated through these panels are supplied to the BEST and accordingly the bill for the institution is decided. The expenditure for the two phase Rooftop solar plant is of total ₹ 58 lakhs (Phase I - ₹ 38 Lakhs; Phase II - ₹ 20 lakhs).

5. **Evidence of Success (Provide evidence of success such as performance against targets and benchmarks, review results. What do these results indicate? Describe in about 200 words.)**

Following are the details of the performance of Rooftop Solar plant installed in two phases:

**Power Consumption prior to Rooftop solar plant – 2017**

- Average consumption of units: 105000 kW-hr
- Total CO2 consumption of the institution in one year: 52500 kg
- Electricity tariff per unit of electricity: ₹ 14/kW-hr
- Annual electricity bill of the institution: ₹ 1470000/-

**Phase-I October 2017**

- Plant capacity: 50 kWp
- Energy generation: 67070 kW-hr
- Plant life: 25 years
- Carbon footprint saved: 33535 kg
- Total solar panels installed on roof: 150
- Cost of the Plant: ₹ 38 Lakhs, Self-Financed
- Payback period of the project is 4.93 years
- Annual savings on electricity bill after installation the Rooftop solar plant: ₹ 972515/-

**Phase-II- March 2019**

- Capacity of Plant: 84.5 kWp biggest Solar Power Plant capacity to be installed in an education institute in South Mumbai.
- Maharashtra College is the first institute in South Mumbai to be powered 100% by solar energy.
- Estimated annual generation of electricity: 972515/-
- Annual savings on electricity cost:Rs.1359520/
- Cost of the Plant: Rs. 20 Lakhs, Self-Financed
- Estimated carbon footprints to be saved: 46880 kg of $CO_2$ every year.

**Overall performance in past 2.5 years since installation:**

- Total energy generation from Rooftop solar plant: 160830 kW-hr
- Total carbon footprint saved: 80415kg
- Total savings on electricity bills: ₹ 2332035/-

6. **Problems Encountered and Resources Required (Please identify the problems encountered and resources required to implement the practice - in about 150 words.)**

There were two issues encountered during this project. First was the funding and second was the space for the installation of the Solar panels.

7. **Notes (Optional - Please add any other information that may be relevant for adopting/ implementing the Best Practice in other institutions (in about 150 words). Any other information regarding Institutional Values and Best Practices which the Institution would like to include.)**

Neighboring colleges inspired by the success of our institution have initiated the rooftop solar plant in their respective institutions. To name a few are Mehta College (Airoli), Rizvi College (Bandra), College of Home Science, Nirmala Niketan (Churchgate). Times of India has also given coverage to Maharashtra College rooftop solar plant and stated this project to be the first biggest solar plant.

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