

Introduction of Analytics as a domain at IMI Bhubaneswar

2. Objectives of the Practice

Owing to the current need b-schools need to equip their students with analytical tools for making informed decisions. One of the greatest challenges for PGDM aspirants is to acquire the right set of skills that makes them industry ready. The initiative aims to develop the ability of students to explore key areas such as analytical process, data creation, storage, and information extraction which allows them to become a valuable asset to the organization they work for.

3. The Context

The need for Analytics as a separate domain came from the Alumni who were currently working in the corporate world. They wanted students who had more than theoretical knowledge of Analytics and were comfortable with tools and techniques used in the industry. For example, the software used in academics was primarily a menu driven software like SPSS whereas industry had moved ahead and was using programming languages like Python, Julia and R to analyze data in real time. This required that IMI Bhubaneswar was in need of an ecosystem which could mimic (if not replicate) the industrial scenario. Faculty Members who were teaching Analytics had to learn new programming languages and develop data sets which could be used in classroom settings. Another challenge was to convince the students to learn programming which became important for taking analytics.

4. The Practice

India is a knowledge-based economy and technology is beginning to have a huge impact in this space. There is competitiveness among educational institutions, especially top institutes like IIT's, IIM's and premiere private institutions to attract the best talent and offer the best academic experience. Whatever be the reason, data analytics has become one of the core fundamentals of corporate India for making informed decisions, increasing financial and operational efficiency, and demand for higher accountability. B-Schools, being the training ground for industry, thus, needed to adopt Analytics as a key domain in their course curriculum.

The task of introducing Analytics as a subject domain at IMI Bhubaneswar was compounded with multiple issues. Marketing, Finance, Information Technology, and Human Resources had different requirements of analytical abilities. For example, Finance normally works with time series or panel data whereas Marketing works with interval scale data. This imbalance of data requirements in the various domains needed to be rectified. Secondly, Faculty members needed to be re-skilled to be able to use the statistical programming languages like Python and R. Thirdly, the course curriculum needed to be re-evaluated to ensure that the same data analytical tool was being used in different domains in a consistent manner.

In order to overcome the obstacles, a conscious decision was taken to use R in most of the Analytics courses. Faculty members were tasked with learning R. The rationale for selecting open source softwares like R was that students could use the same software on their personal laptops without any cost. Initially, in 2017, a few courses were converted onto R and subsequently other courses were added to the list. Some of the courses which have been offered under the domain of Information Management and Analytics area at IMI Bhubaneswar are as follows: Marketing Analytics, Supply Chain Analytics, ERP, Blockchain and Cyber security, Process Analytics, Decision Modelling using Excel & VBA, HR Analytics, E-Business models & Analytics, Data Visualization and Dashboard, Finance & Risk Analytics etc. In 2020 Python was also introduced in a small way in "Machine Learning using R and Python"

5. Evidence of Success

The availability of open source softwares created a huge impact on students' interests to take Analytics. Another evidence of success in implementing this practice can be seen from the fact that a majority of the electives floated were subscribed to by the students. This was also evident in Placements of students. Approximately 10% of the graduating batch, got placed in Analytics domain in companies such as Deloitte, Amazon, TresVista, Flipkart, etc. Similar trends were also seen in the summer placements with students being placed in Kotak Mahindra Bank, Tommy Hilfiger, Sodexo, Decathlon. This practice also encouraged the faculty members of IMI Bhubaneswar to dive into research in the field of Analytics which resulted in increased publication in Scopus Indexed and other quality journals.

These results provided a positive sign to the decision to induct Analytics in a phased manner as a domain in its curriculum. The mix of tools and data sets ensure that the students were industry ready from Day 1 and did not feel left out in the competitive world of data analytics.

6. Problems Encountered and Resources Required

A multitude of problems were encountered in the process of making a separate domain of Analytics. Even though some of the problems have been elaborated previously, a summary of the same has been presented as follows:

- The development of an ecosystem for all activities in and around “Analytics” as a domain was time consuming.
- There was a requirement for a detailed action plan for the adoption and introduction of “Analytics”.
- There was a need to simplify the complexities for the benefit of an average student for the core courses.
- There was this paradigm shift that occurred as Analytics moved from labs straight into the industrial world, and academic institutions needed to domesticate it and make it a part of their course curriculum.
- Introduction and subsequent adoption of analytics required a conducive environment for it to flourish.

7. Notes

Based on our experiences of creating Analytics as a domain, we would like to suggest that other institutions that are wishing to adopt the same should follow the following:

- Continuous access to softwares for the students
- Creation of data sets which reflect industry problems
- Creation of a flexible ecosystem which encourages research and analytics

This would also provide a competitive edge to the institute adopting Analytics as a domain. One, it would attract better students to the institute. Two, it would provide impetus to research to the faculty members. Three, it would also attract better placements.