Research Paper

Faculty Loading System

1. **Intro**

The administrator/s of the SoCIT department needs to have an Automated Faculty Loading Module. As of now, there is a tedious manual process of scheduling teaching assignment caused by careful consideration of a number of factors (constraints) such as, matching the course offerings with the faculty member who can teach the course (based from specified faculty qualification and expertise). Based on our research, there are 80 SoCIT serviced courses per term matched to about 22 faculty (both fultime and part-time). The tedious manual process also consists of matching the teaching schedule of faculty with course schedule, Matching the schedule of faculty and course with room or lab availability, providing a teaching load within the required teaching unit of the faculty, and institutional policy of no more than 2 consecutive classes or 3 classes per day. Because it is manual, there are time that human error occurs (eg. Unintentional violation of institutional policy).

The administrator/s of the SoCIT department needs to have an Analytics-Based OTE Reporting Module. Currently, only a standard OTE report showing the faculty evaluation rating per course is generated. There is a need to enhance reporting feature by including a more comprehensive information on faculty’s teaching approach and methodology to find out the faculty member’s strengths and weaknesses, areas of concern, and correlation between faculty loading and students’ OTE, if any.

**Immaculate Heart of Mary College**

Immaculate Heart of Mary College (IHCM)HC is a Catholic school established in June 1949 and is administered by the Daughters of Charity of St. Vincent de Paul and St. Louise de Marillac. The school offers Preschool, Primary and Secondary Education open for boys and girls (CoEd). It is located at 54 Aurora Boulevard, Quezon City, Philippines.

**Mapúa Institute of Technology**

Mapúa Institute of Technology (MIT, Mapúa Tech or simply Mapúa) is a non-sectarian, research-oriented, Filipino tertiary institute located in Intramuros, Manila and in Makati.

It was founded by the first registered Filipino architect, Don Tomas Mapua, a graduate of Cornell University, in 1925. After he died, the tradition was continued by his children, Don Óscar B. Mapúa Sr., a graduate in Civil Engineering from the Massachusetts Institute of Technology, and Gloria Mapúa-Lim.

**Asia Pacific College**

Asia Pacific College (APC) was established in 1991 as a non-profit joint venture between IBM Philippines and the SM Foundation. It was envisioned as a learning institution that produces graduates who fulfill information technology industry demands.

Asia Pacific College emphasizes industry-academe links, orienting their programs and faculty toward industry needs. APC's cornerstones are its IT curriculum, industry-experienced faculty and its six-month internship program.

1. **Faculty Loading Process**

The Faculty Load System provides the ability to analyze and report faculty loads against contract requirements. Faculty loads are defined in terms of Equated Load Units (ELUs) which are the "units" faculty earn for teaching courses and for performing non-instructional activities such as department chair and research.

The faculty loading process of IHMC is as follow:

1. The faculty loading process type of IHMC is manual (through papers)
2. The number of professor is 30-50 and the number of students is 300-350
3. Their process applies in all departments
4. Professors create their own syllabus, and they are required to pass their syllabus to their professor coordinator
5. If approved, the latter will pass it to the dean’s office
6. The dean checks if the syllabus is legit. If it passes their criteria (not emphasized), it will be passed to the registrar. Otherwise, it goes back to the professor with comments of improvement

The faculty loading system of Mapúa Institute of Technology is as follows:

1. The faculty loading system of Mapúa is manual, however, it uses a module to load
2. The purpose of the module is for clarification of the load and checking of errors
3. Faculty load is sent to the board for approval
4. Limited faculty members
5. Faculty must have Master’s degree in order to be a full-timer. Provisional for faculty who finished Master’s but have not taught a term
6. Part-timers are mostly industry workers but must have a few units in the Master’s degree
7. Pseudo-enrollment for students in order to know what subjects to be loaded next term. Minimizes effort of faculty loading due to predictions of subjects for the succeeding term
8. Approximation of pre-requisites and prediction of passers
9. Criteria for loading is specialization and what the faculty can teach
10. Faculty planning for strengths and weaknesses.

The faculty loading system of APC is as follows:

1. Program Director (PD) and/ or Program Coordinator/ Cluster Coordinator (PC/CC) consults the faculty members regarding their availability for the following term.
2. PD and/or PC/CC assigns a faculty member to a class based on his/her expertise and availability. In the case of a service subject, the PD and/or CC of the academic unit offering the service subject will be in charge of assigning a faculty member to a class.
3. PD and/or PC/CC informs faculty members of their respective tentative load.
4. PD and/or PC/CC revises the faculty loading if there are changes in the schedule or subject offering, i.e. when classes are merged or dissolved, or when petitioned subjects are opened.
5. PD and/or PC/CC informs the faculty members of their respective final load.
6. PD and/or PC/CC finalizes the loading using the Faculty Loading module in FLAVIO.
7. In case of faculty load revision after the end of the enrolment period, PD and/or PC/CC secures a faculty load revision form (refer to Annex F3 – Faculty Load Revision Form) from the HR Department.
8. PD and/or PC/CC fills up the form, indicating the specific revisions in the load of the faculty member concerned (e.g. additional subjects, dissolved subjects, additional administrative load, etc.).
9. PD approves the recommended revision.
10. PD and/or PC/CC forwards the approved form to the Registrar's Office not later than a week after the revision.
11. Record Officer of the Registrar's Office signs the form, encodes the revision in Project Flavio, and forwards the same to the HR Department.
12. HR Director signs the form and forwards the same to the Payroll Office.

Comparison of faculty loading process of IHMC and Mapúa to APC

* All are manual, but both Mapúa and APC uses a type of module
* The use of faculty loading process of IHMC is done for all departments while in Mapua and APC, departments will load do the load for their own department.
* Both IHMC and APC do not require the faculty to have a Master’s degree.
* A form of evaluation exists within Mapúa, much like the OTE of APC.
* In Mapúa, prediction of subjects for the next term is useful for faculty loading, while IHMC and APC do not have such thing.

1. **Proposed Faculty Loading Process**

Our goal is to create a faculty loading module that is controlled but flexible. This is the proposed process of our faculty loading system:

1.Retrieve all necessary OTE data from ITRO.

2. Analyze OTE data and use an analytics tool in order to get results of professors' performance.

3. Output results of OTE module and match with professor for a given subject.

4. Tag subjects to be taught and professors who will teach next term.

5. Using an algorithm to be implemented, load the schedule of professors depending on the professor's performance, availability, specialization, and history of teachings, the subject's time, and special cases.

6. Admin confirms the draft schedule and sends it to the designated supervisor.

7. If the draft is approved, it will be sent to professors for any revisions to be made

8. Finalize faculty load and show results of final faculty schedule to be approved by the supervisor.

9. The approved final schedule will be sent to the registrar's office.