The importance of information sharing automation for university timetable planning

ABSTRACT

University timetable planning is one of the major management activities for any universities in the world. The quality of the timetabling would ensure the smooth registration process by students and avoided unnecessary adjustment. The quality of university timetable is determined by the degree of soft constraint satisfied while hard constraints cannot be compromised. Timetabling problem is the classic problem for computer science domain. Over the past three decades many research has been carried but mostly focusing on the methods or techniques rather than information sharing. Heuristics approaches such as evolutionary computing was the most appeared in literatures. The complexities and size of the problem depends on many factors such as total number of courses from different departments, and resources such as lectures, rooms and timeslots. The cross departmental academic courses registration increases the complexity that requires good communication to avoid missing courses that supposed to be included and the occurrence of redundancy for courses scheduling. This paper present the issue of information sharing for timetabling problem and outlined some automation efforts that potentially employed to overcome communication gap among course providers within university. The initial study was conducted at Faculty of computer Science and Information Technology Universiti Putra Malaysia (UPM) to determine the communication problems during timetable planning and automation method was proposed to reduce the communication gap. The automation method was simple system to gain more insight on the importance of information sharing for the timetable planning.

Keyword: Information sharing; University course timetabling; Sharing academic resources; Autonomous software; Web-Based decision making supporting tool