

The Impact of Effective Staff Involvement on the Successful Realization of ABET Requirements

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One of the major endeavors of the faculty of engineering at An-Najah National University over the past few years was the “ABET project” which aimed at boosting the level of quality of education in the faculty. The “ABET project” started with seven engineering programs, Civil, Electrical, Telecommunication, Chemical, Industrial, Mechanical and Mechatronics, at once.

Although several obstacles were faced at the beginning of the project such as the resistance of change by both students and instructors, and the high number of evaluated programs, the seven engineering programs were evaluated by the ABET program evaluators during their visit which took place in October 2103, due process is underway, and the final results will be determined at the ABET Commission meeting in July 2014. The success of the “ABET project” was accentuated by several elements and innovative ideas.

Innovation was exhibited when a committee on the faculty’s level was set up that encompassed faculty members from diverse engineering backgrounds who were familiar with the quality standards of education, and had outstanding experience in the academic environment. The committee’s role was to lead the ABET process and provide the necessary guidance and advice.

Moreover, the faculty of engineering had realized that creating a successful assessment and evaluation processes require a dedicated executive team and a unit to coordinate, facilitate, implement and follow up the achievement of the quality requirements. That’s why a special center was established called “ABET Center - Quality and Accreditation unit”.

The center and its dedicated staff who have engineering backgrounds played a vital role in the success of the project by acting as a link between ABET committee and the engineering staff. This was followed by creating a computerized assessment system administered by the ABET center. The system, which was user-friendly, made it easy for the instructors to fill in marks and to monitor the students’ attainment in Student Outcomes through courses. It also made it easy for the evaluators to conduct their review smoothly.

Furthermore, several committees have been formed in the engineering departments with different roles and activities. For example, the Program Educational Objectives (PEOs) maintenance committees were appointed in all departments to review and maintain the PEOs. In addition, Quality Assurance Committees (QAC) were assigned in all departments to set and follow up the continuous improvement action plans.

It is important to note that ABET assessment process requires a considerable amount of data collection and paperwork. The environmental aspect, however, has been a priority to the faculty of engineering. This was reflected in the green policy implemented in the ABET assessment process by relying on electronic data (copies) instead of hard-copies.

All the above mentioned elements not only enabled the faculty of engineering to make it successfully to the ABET on-site review in a relatively short preparation period of time, but also immensely improved the academic process in the engineering programs. For example, the existence of a computerized system for assessing, monitoring and evaluating the Student Outcomes helped the engineering programs track and improve students' weaknesses effectively. In fact, over the past two years the engineering programs were able to detect some weaknesses in students' soft-skills, particularly in communication, working in teams and reporting. As a corrective measure, all the engineering departments have increased the additional criteria in the core courses that reached 88% by end of Fall semester 2013-2014, the fact that has improved students' attainment in these outcomes. Moreover, the "ABET project" contributed in strengthening the communication with the local market. This was translated in forming the Industrial Advisory Boards (IAB) in departments and increasing the number of graduation projects implemented jointly with the local market which has exceeded the 20 % in most of the engineering programs. Furthermore, several developments were made in the laboratories and facilities in the engineering departments. These developments comprised safety precautions, adding new equipment, and increasing the number of the Teaching Assistants that made the students experience much more effective and enjoyable.

In this paper a case success study from the chemical engineering program will be presented.

Finally, as for any other quality systems, success can't be achieved without real staff involvement, sound top management support, and existence of motivated employees who are eager to continuously improve the overall performance.