Revisiting Benchmarks

The question of benchmarks for the formation of an engineer has been widely discussed during the Presidency of my predecessor, Professor Abang Abdullah Abang Ali(FIEM). Upon graduation from an accredited 4 year engineering degree programme, a graduate is required to undergo a minimum of 3 years of professional experience before sitting for another competency/professional exam known as the Professional Interview (PI). However, whilst the IEM is concerned with qualifying these graduates for Corporate membership of the Institution and hence their registration with the Board of Engineers as professional engineers, the question of quality of graduates is often raised amongst our member who are employers.

Although engineering programmes are accredited presently by the Engineering Accreditation Council (EAC) which is jointly empowered by the Institution of Engineers Malaysia, the Board of Engineers Malaysia, the National Accreditation Board(LAN) and the Public Services Department (JPA) more has to be done to enhance the quality of graduates leaving the universities. Joining the Washington Accord(WA) is one method of raising the benchmark. Under the WA, member countries who are full signatories shall mutually recognise each other's accreditation process and benchmarks for engineering programmes as substantially equivalent. Malaysia via the EAC is now only a provisional member working towards full membership.

In raising the benchmark, an Outcome-Based Evaluation(OBE) has been widely discussed at the WA and that all members and aspiring members should be able to demonstrate that approach towards engineering education amongst its engineering academia. The aim of OBE is truly a revisit to the ways and means by which we are presently educating engineers and which is predominantly prescriptive at the moment. Although most elements of the prescriptive method that we know shall still be there, engineering educators are required to provide evidence that the defined outcomes of graduates have been achieved upon graduation. This is a paradigm shift in the way we educate engineers. The days in which engineering graduates are taught by academics who does not see the need to be professionally competent or relevant shall be most unacceptable when this takes place. Implied in the OBE is the requirement for enhancing relevance of their graduates to industry.

As for the Professional Interview (PI), it is presently benchmarked against the practices of the day namely by the industry itself. The professional interview consists of two parts, namely an oral examination to establish a candidate's "engineering" maturity and competency as reported by him in his document and two written essays from the candidate to demonstrate that maturity and competence. As a professional interviewer, one has one's own experiences to benchmark against in additional to the requirement by the IEM. Whether this method of evaluation needed to be revisited shall have to be discussed amongst the practitioners themselves in a forum to be hosted by the IEM Standing Committee on Professional Practice Committee (PPC). Is there a need to re-examine a candidate's academic strength in view of the wide variety of programmes being offered, some of which does not reflect the level of confidence implied? There is presently a global move towards defining substantial equivalence amongst professional engineers in the promulgation of the ASEAN Engineers Register (AER), the APEC Engineers Register and the International Engineer Register (EMF), all with the purpose of enabling mobility and cross-country practices.

On 3rd of June, IEM was visited by the entire board of the National Standards Committee (NSC), a steering committee which provided guidance and governance on the direction of development and usage of Malaysian Standards. I had the opportunity to introduce IEM's structure and efforts towards standards development to the committee. Tan Sri Dato' Hj. Mohd. Ramli Kushairi, the Chairman of the committee requested for a databank of experts who are IEM members and who are assisting in development of standards. The NSC is also concerned with how to increase the use of standards and technical regulations so developed. Being a consensus document and hence to avoid being dominated by any party with an agenda, the NSC welcomes the active participation of IEM members to moderate such documents when requested. IEM's representative on this committee is currently the Chairman of Standing Committee on Corporate Affairs, Ir. Choo Kok Beng (FIEM). The Honorary Secretary of IEM, Ir. MC Hee (MIEM), is presently also chairing the Technical Committee (IEM-SWO) for Standards in Design of Concrete Structures (EC2) production of local requirement for EURO Code 2 for concrete code of practice as well as involved with the Technical Committee (IEM-SWO) for Code of Practice for Design of Structural Steel (EC3). Furthermore, he is in the committee for the production of a Malaysian guideline on the design for Earthquake chaired by Ir. Dr Ch'ng Guan Bee (MIEM). Another member Ir. Dr Sooi Took Kowng(MIEM) also chairs the production of local requirement for EURO Code 3 which is connected with structural steel code. ■

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