Engineering Accreditation In The Philippines

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I. Introduction

The technological world is moving on at a rapid pace. Each new day offers new discoveries, new truths, new and oftentimes better ways of doing things. But, while technologies progresses by leaps and bounds worldwide, the Philippines is forced to stand and watch helplessly by. What is the cause of this helplessness.

The reason for this disparity lies in the quality of education our Engineering schools impart to its students. The typical Engineering school in the Philippines today is beset with grave problems as to give out mediocre results at most. The faculty, for one, mostly lack advance degrees necessary to enable them to teach with the necessary academic authority. The schools themselves sorely lack the instructional materials, laboratory equipment, library resources, computer facilities, and other such equipment and resources to deliver quality education.

So, how does one go about improving the quality of education Engineering Schools have to offer? One way is for the government to grant loans to finance engineering education in both public and private schools. This method was tried by the Department of Education, Culture and Sports in 1978-1982, when it supported twenty Engineering schools throughout the country with grants and loans. The grants helped teachers obtain much-needed advance degrees, and the loans purchased laboratory equipment as well as built classrooms and laboratories. In 1991 the Department of Science and Technology (DOST) selected 19 engineering schools all over the Philippines and provided a grants to these schools to improve their quality. The grants allowed the schools to improve the quality of almost all areas of engineering education. It even provided funds to create several Master of Engineering programs all over the country. This allowed more faculty members to obtain advance degrees in engineering.

However this assistance occurred between long periods of time and only supported a few of the 215 engineering schools in the Philippines. A typical engineering school which do not receive any loan or grant would not be able to develop the quality it would like to deliver. Such schools must tackle the added burden of how to give quality
education in the face of seemingly formidable problems which the administrations could hardly know how to go about solving them.

The first problem is inbreeding; present in most schools, inbreeding creates problems of how administrators would improve the quality if they do not know how to go about solving it. The second problem is how to get consultants to go to the school to review the state of the school so that they could recommend measures to improve the school. Lastly, how will the school, which

has taken the trouble to improve itself and the quality of education it will impart to its students, continue or keep up the improvements it has achieved?

The best solution to these problems is for the engineering schools to undergo the accreditation process. It is therefore necessary before it is undertaken all sectors of the school must agree and commit themselves to undergo accreditation. This is a very important commitment on the part of the school since any dissent in the drive to improve the quality of the school will always be a liability.

The main goal of accreditation is to improve the quality of engineering education of that school. This is done by using criteria and guidelines, which will be used to assess the educational effectiveness of the school. The main characteristics of accreditation are the following:

1. It is voluntary in nature
2. It is done as a self-regulation by the school itself
3. Its main focus is to evaluate the educational quality of the school.
4. It functions as an evaluative process and the institutional survey is the Instrument used in doing the evaluation.

All engineering institutions undergo one form of recognition before it can operate. This is when a school is recognized by the government to operate as an engineering institution. However, there is a need to continue the drive for improving the quality of engineering education after schools have been recognized and undergoing the accreditation process can do this.

There are several advantages for undergoing accreditation. The first and foremost advantage is that the school itself agrees to improve the quality of engineering education they deliver. The second advantage is that a team of external peers from other schools will visit the engineering school and review its state. The peers will then identify what the outstanding traits of the school are and at the same time give recommendations on how to improve the school. The last advantage is that if a school willing to undergo the accreditation process, it will be involved in a continuous process of improving its quality.

There are several disadvantages in undergoing accreditation. The first one is that it will cost money to improve the schools' resources in preparation of undergoing accreditation. When the recommendations are given, additional funds will also be needed to implement the recommendations. In the preparation process a lot of effort has to be exerted by the school to prepare itself for the survey the same thing will happen when the recommendations given by the peers will have to be implemented. However since it is the desire of the school to improve itself there is no other way but to undergo accreditation.

History of Accreditation in the Philippines

The accreditation movement in the Philippines started in 1951 when a group of twenty-six educators formed the Philippine Accrediting Association for Universities and Colleges (PAACU). The evaluation instrument used was formulated but PAACU did not prosper and faded by the end of 1952. In 1953 the Catholic Educational Association of the Philippines (CEAP) decided to revive the accreditation process. A total of eleven CEAP schools decided to

form the Philippine Accrediting Association of Schools, Colleges and Universities (PAASCU). The eleven schools became the charter members of PAASCU.

The next accrediting agency formed was the Philippine Association of Schools Colleges and Universities (PAASCU). The Association of Christian Schools and Colleges (ACSC) was formed in early 1970. In order to control the operation, work and recognition of schools done by the accrediting agencies the Funds for Assistance to Private Education in 1977 spearheaded the formation of the Federation of Accrediting Agencies of the Philippines (FAAP). On the basis of the document submitted FAAP awards the levels to the schools. In 1990 the Association of State Colleges and Universities (ASCU) formed their own accrediting agency and was known as AACUP.

In 1974 PAASCU started its accreditation work by undertaking a self-survey of the first engineering school. Other schools followed this so that by 1999 there were five schools identified as Level III, another five as Level II, and nine as Level I. In the case of PACU COA a total of eight engineering schools have attained the Level II recognition.

Stages of the Accreditation Process

Any engineering school in the Philippines which would undergo accreditation can go to any of the four accrediting agencies and seek permission to undergo accreditation. When the accrediting agency receives this letter of intent it then approves the request of the school upon verifying that the government has given recognition to the school. The school will then order the forms to be used, which is known as the institutional survey forms. The school is given six months to one year to undertake a self-survey. The purpose of the institutional self-survey is to try to determine what the strengths and weaknesses of the engineering institution are. It should be mentioned that the school should try to report accurately all the required facts and figures required by the survey instrument.

When all the figures and facts have been entered in the survey instrument, the form is sent to accrediting agency which will schedule a pre-survey visit. A team of four to five peers who are authorities in their own fields will be sent by accrediting agency to undertake a two-day visit of the applicant school.

The team then evaluates the report to determine the accuracy of the facts and figures found in the self-survey report. It then gives out several recommendations which they feel will further strengthen and improve the quality of engineering school. The team then decides if the school passes the accreditation survey. If the school passes the self-survey with a score of three, it is eligible to undergo the formal survey within a one year or more. The school is given the status of Level I. If it does not pass it is required to undergo another self-survey.

The school will then prepare another self-survey within a year's time and must implement and do the recommendations that were given. The same process is used for the formal survey as in the self-survey. If the school passes the survey it is given a Level II status. The school is given five years to prepare to undergo the final accreditation survey. The school is then subjected to another survey and again the recommendations given in the formal survey are evaluated to

determine if they have been complied with. If the school passes the survey they are given a level III status. The school is required to undergo a re-survey every five years.

Areas Covered by Accreditation

The survey instrument covers nine areas which are the basis on which the survey will evaluate the Engineering school. These areas are:

1. Purpose and Objectives
2. Faculty
3. Instruction
4. Laboratory
5. Library
6. Physical Plant
7. Student Services
8. Administration
9. College/Community Involvement

The first area is considered to be the most important. The reason is this is where the vision-mission statement is found together with the goals and objectives of the school.
The vision-mission statement is used as the main basis for evaluating the school. At the same time the survey team tries to determine if the vision-mission statement is known by the administrators, faculty and students.

The second area is faculty and the team takes a look at all aspects of education in which the faculty member is involved. It takes a look at the salary scale of the teachers as well as all the fringe benefits the faculty member enjoys. If the score in this area is less than three the school will not pass the survey. The next area is instruction. The engineering school will present samples of the instructional materials the faculty use in the teaching process. This will include syllabi, manuals, exam papers and projects for review by the accreditation team. Since this area is also important the school undergoing accreditation should obtain a score of three to pass the accreditation survey. A new requirement in this area is that the school should have a track record which shows that the performance of the graduates of the school has been at par or above the national passing average for the past three to five years.

Laboratories follow this area. The team will take a look at the laboratory rooms as well as the computer room used by the college of engineering. The team will also take a look at the type and number of each equipment available in the laboratory and determine if the students have used it. It will also take a look at the support facilities to maintain the laboratory room and equipment. A score of three in this area is needed to pass this area in the accreditation survey.

The next area is the library. The team will look at the library building and its support facilities. It will look at the engineering books and journal collections of the library. Evaluation of the number of book collections not more than ten years old per engineering subject is undertaken. It will also look at the use of the library by the faculty and students and the expertise (including advance degrees) of the library staff.

The area of physical plant is next. This covers the evaluation of the entire campus and its suitability for the needs of the personnel using it. It also takes a look on the accessibility of transportation. The area also covers the survey of existing structures in the campus especially classrooms and offices and tries to find out if adequate ventilation, lighting and electrical outlets are present. The survey team also takes a look at the support facilities found in the campus. This includes the canteen, cafeteria, the assembly hall, dormitories which are needed to support the students' needs.

The area of student services follows this. Particular emphasis is given to the work done by the student services to support the learning process as well as the emotional needs of the student. It also takes a look at the medical as well as the dental facilities of the school.

The next area is administration, which covers both that of the school and college. The team looks at the expertise of the school administrators including advance degrees administrators posses. It also takes a look at the expertise of the college administrators including their advance degrees as well as teaching experience. The records of the administration in terms of the work done by the Board of Trustees of the school are evaluated. The financial viability of the school is also reviewed.

The last area is college/community outreach, better known as extension. The work undertaken by the college in doing outreach is reviewed. A special emphasis is given to outreach work undertaken using the expertise that the students have learned in school.

All of the work needed to cover all of these areas is done through the evaluation of the self-survey report submitted ahead of time, through class observation and meetings with key personnel. Finally, one very important source of information is obtained through the interview with the students and the teachers.

Status of Accreditation and Benefits Given

On September 25, 1995, the Commission on Higher Education (CHED), which regulates the tertiary educational institutions in the Philippines, issued CHED Order 31, which classified accredited programs into various levels:

Level I applicant status - for programs which have undergone preliminary survey visit and are certified by the FAAP as being capable of acquiring an accredited status within two years.

Level II accredited status - for programs which have been granted accredited status by any member agency of the FAAP and whose status is certified by the latter.

Level III accredited status - for program which have at least been re-accredited and have met the following additional criteria/guidelines set by FAAP for this Level. Accredited programs must satisfy the first two

Criteria and two others of the succeeding ones:

a. A reasonably high standard of instruction as manifested by the quality of its teachers;
b. A highly visible community extension program;
c. A highly visible research tradition;
d. A strong staff development tradition;
e. A highly credible performance of its graduates in licensure examinations over the last three years. (Will apply only to those programs where such examinations are required)
f. Existence of working consortia or linkages with other schools and/or agencies.

Level IV accredited status – institutions which have distinguished themselves in abroad areas of academic discipline and enjoy prestige and authority, comparable to that of international universities. At least 75% of its programs must have attained Level III status for a minimum period of 10 years and must meet additional criteria or guidelines, such as excellent outcomes in research, teaching and learning and community service. There should be evidence of international linkages and consortia and well-developed planning processes, which support quality assurance mechanisms.

The CHED has given corresponding benefits to each level. These are as follows:

Level I: Partial Administrative Deregulation

PAASCU Engineering Accreditation Instrument Vol. I and II 1989
PAASCU A Primer Towards Quality Education, FAAP 1994
Ureta, P. The status of Engineering Education in the Philippines
AEESEAP '97 Proceedings of the 5th Triennial Conference on Engineering Education, Manila Philippines

Level II:

a. Full administrative deregulation
b. Financial deregulation
c. Partial curricular autonomy
d. Authority graduate students without need for Special Order
e. Priority in terms of available funding assistance and government subsidy
f. Right to use in its publications the word "ACCREDITED"
g. Limited visitation, inspection and/or supervision by CHED

Level III:
a All benefits for Level II
b. Full curricular deregulation

Level IV:
a. All the benefits for Levels II and III
b. Award of grants/subsidies

The Future of Engineering Accreditation

There is a need to revise the PAASCU accreditation instrument. This is due to the changes taking place in engineering education in the past decade and also to prepare for the future. The first recommendation is to see to it that an assessment instrument should accompany the development plan of the school.

An area that has to be included in the instrument is the area of research. It should also include a section on getting the feedback from the alumni and employers in order to find out what is the quality of the graduates of the school. All of these recommendations
are given in order to improve the PAASCU instrument in the future. This in a nutshell is the status of engineering education in the Philippines today.

In the latter part of the 1980's, roughly ten schools out of a total of one hundred eighty-five Engineering schools underwent accreditation survey. By 1999 the number increased to almost 20 schools, showing a very significant increase. This is due to the fact that the government gives more benefits to accredited Engineering schools. This is also due to the growing desire of more Engineering schools to improve the quality of Engineering education which they know results from accreditation. This in a nutshell is the status of engineering education in the Philippines today.

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