

Quality Assurance for Open Learning Units in an International Postgraduate Program

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Abstract

There is an effort to offer a postgraduate program which is convenient for the learner in terms of space and time in that learning may be obtained anywhere and anytime as long as tools are available to facilitate and support learning, hence, an industry practitioner, for instance, can access information on technical courses, participate in class activities, consult his mentor, and do other similar activities right in his own workplace or home. The so called correspondence education has allowed the learner to obtain learning through correspondence between teacher and student by way of mails and television. Today this correspondence takes place via the internet. Communication is faster and almost all teaching methods employed in traditional face-to-face classroom instruction can be applied or replicated. Five partner academic institutions in Europe and Asia have forged a linkage to study the possibility of offering an international postgraduate program towards sustainable technology through open learning. The partners are yet in the process of developing the materials for the learning units and establishing a quality assurance system that will harmonize the various quality assurance systems of the partners. One of the issues currently looked at is the way the level of achievement that a student gains in a program can be measured in order to award him the degree. In this paper a comparison of the way units are credited in the five partner institutions is presented. It attempts to offer a solution to harmonizing, not necessarily making uniform, the different ways of giving credits to units earned if a collaborative international postgraduate degree program is endeavored to be offered.

Keywords: quality assurance; open learning; credits; learning units

This paper attempts to identify the commonalities as well as differences in the way quality assurance is ensured in five universities in Asia and Europe for postgraduate programs, in particular in the way credits to units to be taken by a student are given.

Answers to the following problems are sought:

1. What is the quality assurance system for higher education in each university, namely, University of Portsmouth (United Kingdom), Universiti Teknologi Malaysia (Malaysia), Royal Institute of Technology (Sweden), De La Salle University, and Xavier University (Philippines)?
2. What are the commonalities in the way credits are given to units in postgraduate programs in the five partner universities? What are the differences?
3. Is it possible to adopt a common quality assurance for all the above-named universities for a postgraduate open learning program? If it is, what could be a common system to assure quality of open learning units in an international postgraduate program?

Quality assurance is defined as planned activities carried out with the intent and purpose of maintaining and improving the quality of learning rather than simply evaluating activities [1]. In educational systems quality assurance means putting in place a mechanism in which standards and quality of instruction, facilities, laboratories and other learning resources, are maintained, if not, improved. These standards mentioned in the preceding statement are ways of describing the level of achievement that a student has to reach to gain an academic award (for example, a degree).

This paper examines and compares the quality assurance systems of five universities in Europe and Asia which are currently engaged in a project of developing, testing, and disseminating information on three open learning units. The project aims to embed the units in postgraduate programs in the partner institutions and to offer the said units as short term courses for industry practitioners. The project will investigate extensions to the units and conditions for quality assurance leading to proposals for an accredited international MSc Degree in Sustainable Technology. The challenge is not much on the embedment of the open learning units or on offering the units as industrial short term courses. The challenge is more on creating an entire postgraduate open learning program the units of which can be 256 credited in any partner institution or in any other institution not part of the partnership.

2. The process in the quality assurance of higher education in the countries of the partner institutions

2.1. United Kingdom

Higher education institutions in the United Kingdom are autonomous and as such, are responsible for the standards and quality of the programs they offer. It is imperative that they do regular monitoring and periodic review, which is an internal activity undertaken by the department through its program team, to ensure that the program is able to meet its goals and objectives, such as, the accomplishment of the intended learning outcomes. Other than the internal evaluation which is carried out by the university itself an external evaluation is carried out by the Quality Assurance Agency for Higher Education, which is responsible for ensuring that these higher education institutions maintain, if not improve the standards and quality of education.

2.2. Malaysia

The quality assurance process undertaken by higher education institutions in Malaysia is similar to that of the United Kingdom. The process involves two parts: an internal evaluation and an external evaluation. In the first part the institution constitutes a task force to self-assess its programs, whether they comply with nationally agreed standards, based on certain criteria. The internal task force may also invite external examiners in the self- evaluation. The other part of the quality assurance is the external evaluation involving the Quality Assurance Division which constitutes a panel of reviewers to study and review the report of the internal evaluation submitted by the institution. The panel then visits the institution not only to evaluate the institution if it operates within standards but also to clarify some issues identified in the report.

2.3. Sweden

The quality assurance process for higher education in Sweden is very similar to the other countries'. There is self- assessment conducted by the higher education institution to evaluate the programs based on developed guidelines, and an external assessment which can involve international assessors and student bodies for peer review. In the external assessment the assessors visit the institution to observe the institution or program. The assessors interview students and staff to fully understand the institution's system and the other aspects that need to be observed. The output of the external assessment is a written report given to the institution which can give its comments and feedback on the report. The head of the National Agency for Higher Education then either approves or disapproves the accreditation. If the institution receives a very low assessment it is given two years to improve on the areas of weakness. If a special review still finds the institution or program not considerably improved the authority to award a degree is withdrawn from the institution or program.

2.4. Philippines

In the Philippines where the authors come from, universities adhere to policies, standards, and guidelines of the Commission on Higher Education (CHED), a regulating body of the government mandated to formulate and implement policies, standards, and guidelines for higher education in the country. The CHED is mandated to safeguard the quality of higher education in the country. For instance, before a program may be offered by a university it has to secure the necessary permit and recognition from the CHED which gives the university the authority to operate the program, if the proposed program complies with the standards set by the CHED. Generally, a university in the Philippines conducts self - survey and periodic monitoring of its programs with the vision, mission, and objectives of the university and of the program in consonance with government regulations as the guiding principles. It also applies for accreditation from an accrediting body, such as, the Philippine Association for Accrediting Schools, Colleges, and Universities (PAASCU) for peer review.

How did open learning come to be? It can be said that the history of open learning has its roots from technology – based correspondence education which gained popularity in the early 1900s when audiovisual instructional materials and tools were introduced in schools and universities. In 1940s some educational institutions in the US had used the television to transmit instructional materials to the public. The introduction of television as an instructional medium was an important entry point for theorists and practitioners outside of the correspondence education tradition and marks parallel paths for correspondence study and instructional media [6].

Although open learning is becoming popular in the Philippines with the University of the Philippines taking the lead in this endeavor only a few universities in the country have so far gone into this direction. Open learning, which is both a process which focuses on access to educational opportunities and a philosophy which allows the learner to choose *how* to learn, *when* to learn, *where* to learn, and *what* to learn as far as possible within the resource constraints of any education and training provision [2], is yet to be employed by several universities in this country. As such, universities offering graduate degree programs through open learning have yet to establish quality assurance systems which at this time, may be gained from experiences and practices in universities abroad.

The United Kingdom which began introducing open learning in the universities in the early seventies is one of the signatories in the Bologna Declaration in 1999. The Declaration is a vital document which reflects the shared vision of European countries for the development of higher education in Europe. It is not a reform imposed upon the government or any educational institution, but is a commitment freely taken by the same. It aims at coming to a convergence of all higher education systems to address common European problems and issues faced by the different European institutions to offer their citizens greater mobility in terms of employment. The Declaration recognizes and respects the diversity of cultures and languages and the autonomy of the higher education institutions.

The University of Portsmouth (UoP) of the United Kingdom entered into an international collaboration with four other universities in Europe and Asia and was granted by the European Commission a funding for the Asia Link project entitled Open Learning Provision for Postgraduate and Industrial Training in Sustainable Technology. Under this project the five partner institutions develop, test, and disseminate three open learning units which are to be embedded in postgraduate programs of each institution and to be given as short term courses to industry practitioners. It is envisaged that quality assurance could be studied for the possibility of offering an international MSc degree in Sustainable Technology.

3. Research Design

This study is descriptive in nature as it presents a collection and analysis of gathered data and information. The data presented herein are obtained from the proceedings of meetings and workshops among the partners all directed towards developing a quality assurance for an internationally accredited MSc in Sustainable Technology.

3.1. Findings and Discussion

In a meeting on 19 – 23 February 2007 in De la Salle University, Manila and subsequently on 22-27 October 2007 in the University of San Carlos, Cebu City the partners tackled the commonalities, as well as differences of quality assurance of the partner institutions. At the start of the discussions some confusion arose from the differing terminologies used by the various participants. So as to avoid repeating this confusion it is best that some terms are given an explanation before they are used. A *learning unit* or simply a *unit* is a subject or a course which makes up a program such as the MSc in Sustainable Technology. *Credit* refers to a figure attached or associated to a learning unit when the unit has been successfully completed. *Total learning hour* refers to the length of time required to complete a unit. It is composed of *lecture* or *contact* or *teaching* (taught) hours and *student study hours*. *Lecture* or *contact* or *teaching* (taught) hour is the length of time specified for faculty in a traditional face-to-face instruction to conduct a lecture or consultation with the students. *Student study hour* is the length of time expected of a learner to dedicate to doing the requirements of the units, such as, assessment activities and case studies, on his own.

Table 1 outlines the commonalities and the differences in the way credits are given for

postgraduate programs in the five institutions for traditional education.

UoP has a total of 180 credits for an MSc course, i.e., 120 credits of coursework and 60 credits of thesis or project. The lecture or contact is between 36-40 hours per unit. UoP specifies a student study hour of approximately 114 so that the total learning hours for each unit is 150. Normally it takes 1 year to earn an MSc degree.

UTM on the other hand has 36 credits for an MSc course and 39 credits for a Master of Engineering program. The latter is composed of 11 units of 3 credits each, and a 6-credit practicum. The lecture or contact is 42 hours for every 3 credits. Like the UoP, UTM specifies a student study hours of approximately 120 so that the total learning hours is 162 for each unit.

KTH of Sweden uses what is called the Swedish Academic Credit (SAC). Each learning unit has 4 or 6 SACs so that it normally requires 15 units of 4 credits each or 10 units of 6 credits each plus a 20- credit project or thesis to complete a postgraduate program normally in 2 years. SAC is equivalent to 1.5 credits of the European Credit Transfer System (ECTS). KTH's total credit for a full MSc program is 80 SACs or 120 ECTS. Under this system the total learning hour prescribed for a postgraduate program is 3,200. This is more than twice the total learning hours of UoP.

It can be gleaned from Table 1 that Philippine partners have the same number of credits, that is, 48 credits, for the Master of Engineering program. This credit is composed of 14 units of 3 credits each plus a 6-credit practicum. A credit of 3 means a lecture/ contact with the students of 3 hours per week under the traditional system of education. DLSU having 3 semesters per school year has about 42 hours of lecture or contact per trimester while XU which has only 2 semesters per school year has 48 hours of lecture or contact per semester. Both universities do not specify the number of hours required for a student to dedicate to studying alone on each unit. DLSU also offers MSc in some engineering fields. The MSc, a research – oriented program, has a total credit of 36 which is broken down into 30 credits of coursework and 6 credits of research or thesis.

It is observed that UoP and UTM have about the same specification for learning hours for each unit, i.e., 150 ~ 160 hours. These universities prescribe that the number of hours that a student should devote to studying each unit is about 114 ~ 120; the number of hours for lecture or contact between the professor and the student is 36 ~ 40 for each learning unit. However, they differ in the total learning hours for the entire program by about 450 hours. The difference is due to the fact that while the prescribed learning hours for each unit are almost the same the number of learning units in the post graduate program in both universities differ by 2, UTM having 10 learning units while UoP has 8 learning units.

The Philippine partners have the same credits for the Master of Engineering Program, a postgraduate program offered by both universities, since this program adopts the credit system which was prescribed by the Department of Science and Technology (DOST) consortium of network schools. However, both universities, like most, if not all, universities in the Philippines do not specify the number of hours that a student should spend studying on his own for each unit. To be compatible with UoP's credit system DLSU and XU can choose to adopt 2,100 learning hours for the 14 units in their MEEngg program and modify the 480-hour practicum requirement to a 900-hour practicum requirement, almost the same as KTH's learning hours for thesis or project, of which 300 hours is for industry exposure and immersion and the remaining 600 hours is for the

technical report- writing, for a total learning hour of 3,000 for the entire program. This is twice that of UoP's total learning hours of 1,500 the reason being that a postgraduate program in DLSU and XU normally takes 2 years to complete while that in UoP takes 1 year. Philippine partners can therefore specify 150 learning hours per unit if they were to follow UoP's and UTM's learning hours of 150 ~ 160. Hence, if an internationally accredited MSc program is to be offered, the Philippine partners, like the other partners, can make use of all learning units that will be developed without deviating from the number of units that should be offered by the program since this number of units is prescribed by the consortium of DOST network schools in which both DLSU and XU are members of.

There is reason for using the model as presented in the following table for crediting units in open learning programs although the model is that for traditional face-to-face education. Since the attainment of the learning outcomes is made the basis for the award of a degree this should also be the basis for the award of a degree in open learning. The learning outcomes for a particular program have a meaning when quantified. It therefore becomes evident that the total learning hour is a suitable yardstick for measuring the attainment of the learning outcomes.

Table 1. Comparison Among five Universities in Europe and Asia on Credits for a Postgraduate Program in Traditional Higher Education

Institution/ Degree	Taught Units					Project Units			Total (Taught and Project)		No. of Yrs
	No. of Units	Credit /Unit	Total Learning Hrs	Total Credit	Total Taught Hrs	Project Credits	Total Contact Hrs	Total Learning Hrs	Total Credits	Total Learning Hrs	
UoP (MSc)	8	15	1200	120	288-320	60	-	300	180	1500	1
KTH (MSc) SAC	10-15	4-6	2400	60	900	20	~200	800	80	3200	2
UTM(MEng)	11	3	-	33	-	6	-	-	39	1950	1-1/2
XU(MEng)	14	3	-	42	672	6	-	480	48	1152 ¹	2
DLSU (MSc)	10	3	-	30	420	6	-	12	36	420 ¹	2
(MEng)	14	3	-	42	672	6	-	480	48	1152 ¹	2

If the five institutions have to develop an MSc Program in Sustainable Technology the individual units of which can be credited in any of the partner institutions, it would be appropriate to develop a logical framework for crediting these units without attempting to disrupt each partner institution's own system of crediting units. What could be a common basis for crediting learning units would be outlined in the objectives of the Bologna Declaration, the UoP and KTH being two of its signatories. One of the salient points in the Declaration is the objective of establishing a credit system such as the European Credit Transfer and Accumulation System (ECTS). The ECTS is a credit system which considers the student workload required to achieve the objectives of a program. These

objectives are specified in terms of the learning outcomes and competence to be acquired. ECTS is based on the principle that 60 credits measure the workload of a full-time student during one academic year. The student workload of a full-time study program in Europe amounts in most cases to around 1,500-1,800 hours per year and in those cases one credit stands for around 25 to 30 working hours [6]. Since the declaration aims at coming to a convergence rather than a standardization of European higher education, KTH and UoP can continue to adopt their current quality assurance systems, including their credit systems, and at the same time be compatible with the credit system specified in the Bologna Declaration. Each unit of the current credit system of the UoP can be multiplied by a factor of 1/3 so that the total credit of 180 for a postgraduate program can be credited as 60 credits. On the other hand, each unit of the current credit system of the KTH can be multiplied by a factor of 3/2 so that the total credit of 80 for a postgraduate program can be credited as 120 ECTS credits for a 2-year equivalent student workload. Thus, with these factors of equivalency carried out both these European universities can still very well fit into the system described by the Bologna Declaration without the necessity of changing their current systems. For the non-European partners the same credit system may be adopted if they have to fit in the credit system as described in the above. Hence, for UTM its MEngg program can carry a factor of 20/13 for each of its various units. DLSU's and XU's MEngg program can carry a factor of 5/2 for each of its units, which means that a learning unit of 3 credits has an equivalent credit of 7.5 in this harmonized system of the ECTS. Table 2 presents the factors of equivalency for ECTS credits of each partner institution. The factor is multiplied to the local credit of a partner institution for a unit earned. The product is the ECTS credit for the unit.

It should be noted that the factors discussed in the above to be used in the computation of the ECTS credits do not have any other meaning except as figures which should be multiplied to the credits earned in the delivering institution to be credited in the harmonized system of ECTS. As can be observed the factor is derived by dividing the 60 ECTS base credit by the institution's credit for a year of student workload so that for KTH, for instance, a student workload in a year is 40 Swedish credits, hence, the factor is 60/40 or 1.5.

Table 2. Factors of Equivalency, F_e , from Local Credits to ECTS Credits

Institution	Computations: base credit of 60 ÷ total credits for 1 year student workload = Factor of Equivalency	Factor of Equivalency of Institution/Program, F_e
UoP	$60 \div 180 = 1/3$	$1/3$
KTH	$60 \div 40 = 3/2$	$3/2$
UTM	$60 \div 39 = 20/13$	$20/13$
DLSU/XU (MEngg)	$60 \div 24 = 5/2$	$5/2$
DLSU (MSc)	$60 \div 18 = 10/3$	$10/3$

How should a learning unit of 6 credits derived from the KTH be handled by the other partners, such as the UoP, for example? The 6 credits should be multiplied by 1.5

(KTH's equivalent factor) to get its ECTS equivalent credits of 9. This SAC of 6 is the credit of 1 unit in the KTH. 1 unit of the UoP is 15 credits or 5 ECTS. What this means is that if the international MSc program is to be offered by the five institutions one or two partner universities, in this example UoP, which has the shortest time to complete an MSc program (1 year), can get a credit less than the credit received by the other partner institutions for the same learning unit. It seems plausible because KTH requires more learning units than UoP for a program so that for someone who has taken units from KTH he/she can have his/her ECTS credits transferred to UoP if he/ she desires to do so and will be able to complete the same program in lesser time. However, this is not supposed to be the case if the quality assurance of the partners has to be trusted. It is herein proposed that a different factor should be described to show the relations between credits of one institution to another. This is necessary for the case of a student who wishes to transfer from one institution, which for illustration purposes we shall call *sending institution* to another institution, which we shall call *receiving institution*. To determine this factor of conversion, F_c , the local credit for a unit of the receiving institution is divided by the ECTS credit for a unit of the sending institution. To get the corresponding local credit in the receiving institution of an ECTS credit of a sending institution this factor of conversion is multiplied with the ECTS credit earned. For example, a learning unit taken in KTH by a student has a local credit of 6. Its ECTS credit is 6×1.5 , or 9. If the student transfers to UoP for any reason this learning unit is to be credited as $9 \times 5/3$, or 15 local UoP credits. Table 3 illustrates the point emphasized in this section. It can be observed that it is important for the receiving institution to have all the information about the credit system of the sending institution so that proper crediting of units earned by a student can be done. Of course, the transferee has to comply with the other requirements of the program before his admission in the receiving institution to ensure quality assurance.

Table 3. Factors of Conversion, F_c , from ECTS Credits to Local Credits

Sending Institution	Factor of Equivalency, F_e	Factors of Conversion from ECTS Credits to Local Credits, F_c			
		Receiving Institutions			
		UoP	KTH	UTM	DLSU/XU
UoP	$1/3$	3	$6/5$	$3/5$	$3/5$
KTH	$3/2$	$5/3$	$2/3$	$1/3$	$1/3$
UTM (MEngg)	$20/13$	$13/4$	$13/10$	$13/20$	$13/20$
DLSU/XU (MEngg)	$5/2$	2	$4/5$	$2/5$	$2/5$

4. Conclusion

The quality assurance systems observed by the five universities described in the preceding sections are all similar to one another. There is usually an internal assessment done by the higher educational institution on its program enabling it to identify its strengths and weaknesses. The assessment is based on developed criteria and guidelines to ensure academic quality and student support. Part of quality assurance is an external assessment or peer review which provides for an evaluation of several areas for review.

It is now clear that it is not possible to standardize or make a uniform system of crediting units for all the partner institutions as each university has a unique and distinct way of crediting units. Besides, there are different guidelines and policies that have to be respected by the partner institutions each in their own region. DLSU and XU, once they offer an open learning MSc program have to comply with the CHED Memorandum Orders (CMOs) related to Open Learning and Distance Education, such as, CMO 35 Series of 2000 and CMO 27 Series of 2005. While presently the Philippine system does not specify the number of learning hours for each credit of a learning unit the Philippine partners should adopt a specification for student study hours so as to guide both the professor and the student of how much time is needed for correspondence between professor and student, face to face or otherwise, and the number of hours that the student has to spend studying on his own for each unit. Student study hour means to include studying for tests or exams, solving problems, reading, making reports, and the like. The authors believe that this could be one way of informing the students in advance of how much time is expected of them to be devoted to a learning unit. It protects the interests of the students in a manner that they are given requirements which can be completed within a just timeframe based on the specified learning hours. It also safeguards the professor at the same time from the demands of excessive number of hours to be devoted to the development of course materials, preparation for the assessment of student learning, an other like activities required of academic staff.

Of course, it is not to say that this is the only criterion for a harmonized quality assurance but it is to say that crediting the units in this manner is one of the ways of looking at an answer for one of the issues involved in quality assurance.

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