

Part II: Challenges in the institutional context of EU-Asian academic collaborations

4. Quality assurance: A case study

A. Hunger, University of Duisburg-Essen, Germany

A. Muchtar, Universiti Kebangsaan Malaysia, Malaysia

This paper combines theoretical considerations on Quality Assurance with practical implementation and experiences. "Quality Culture" is proposed as a consideration for setting up new mobility programmes. Methods and measures for evaluating the results of a mobility scheme are given. It is shown how these ideas were exploited to start mobility programmes grounded on good understanding, trust and common goals, which now show good results. But it will always be up to new partners to make the most of all of this and it will always be a new adventure to bridge the gap between good theories and solving everyday problems.

4.1. Background of the UKM-UDE Double Degree Programme

As part of the internationalisation strategy of the National University of Malaysia (Universiti Kebangsaan Malaysia - UKM), and the University of Duisburg-Essen (UDE) in Germany, a double degree programme in engineering was launched between the two partners in 2003. Upon completion, students have the opportunity to obtain two degree certificates, one from the home institution and another from the host institution. In a globalised world, such a programme is exceedingly attractive, particularly when it involves the collaboration and partnership between two reputable engineering faculties in two distinct locations, one in Continental Europe and the other in South East Asia. Graduates of the programme are not only technically grounded to begin careers in engineering, but they have also learned skills in intercultural communication. This means that they deeply understand two different cultures by teaching, working and living together. These skills prepare them for their future lives in a globalised economy. This clearly puts the graduates at an advantage, more so in recent years where engineering careers often transcend national borders, actively engaging in a competitive global economy.

Since its inception, a total of 62 students from the Faculty of Engineering and Built Environment of UKM have flown to Germany to take part in the double degree programme at UDE. The programme is designed so that students from the home institution sit for their final year at the host institution. Only selected students who manage to satisfy a certain academic requirement and have completed a minimum of 300 hours of a German language course are allowed to proceed to UDE. Generally, the students spend 12 to 18 months completing several courses and a final year project. Once successfully completed, the students are awarded an engineering degree from each of the two universities. The students from UKM come from three departments namely the Department of Mechanical Engineering, Department of Civil and Structural Engineering, and the Department of

Electrical, Electronics and System Engineering (Table 1). The latest batch of twelve students who flew to Germany in October 2009 had a good mixture of students from the three departments. A further 24 students are expected to travel to Germany in 2010. In addition to following regular engineering classes at UKM, these students are also undergoing an extensive German language course in preparation for their travel next year.

The UDE students coming to UKM, on the contrary, are fewer in number (Table 2). Only ten undergraduate students have come to UKM since 2003. A point to note however, with the exception of a single student, is that the UDE students came mainly as exchange students rather than being enrolled in the double degree programme. Under the exchange, the German students need only stay a minimum of one semester at UKM, as opposed to the double degree requirements of generally a minimum of two semesters. Nevertheless, in the case of UDE students coming to UKM for an exchange period, there have been several occasions whereby UKM has received masters students (as opposed to undergraduates) from UDE.

Year	PROGRAMME					Total Number of Students
	Electrical, Electronics and System Engineering Department		Civil and Structural Engineering Department		Mechanical and Material Engineering Department	
	Electrical and Electronics	Computer and Communication	Civil and Structural	Civil and Environmental	Mechanical	
2003	1	1				2
2004	1	5				6
2005	1					1
2006	5	3	10		6	24
2007	2		8	1		11
2008					6	6
2009	6		3	1	2	12
Total	16	9	21	2	14	62

Table 1: Number of UKM students who travelled to UDE through the double degree programme

Year	PROGRAMME			Total number of Students
	Electrical, Electronics and System Engineering		Mechanical and Materials Engineering	
	Electrical and Electronics	Computer and Communications	Mechanical	
2003		1		1
2004				-
2005				-
2006	3	2	2	7
2007				-
2008			2	2
Total	3	3	4	10

Table 2: Number of exchange students from UDE to UKM

So far, the UKM-UDE partnership has yielded graduates who have reported increased employability upon graduation, particularly those earning double degrees as isn the case for UKM students who went to UDE to complete their studies (Muchtar *et al.*, 2009 & 2009). At present, 39 students from UKM have successfully graduated and have been able to find immediate employment at reputable multinational companies who tend to favour graduates with not only sound technical knowledge, but also a heightened intercultural experience after spending some time abroad.

4.2. Quality Assurance of Mobility Programmes - Generalisation of Experiences Made

From the experiences made, a generalisation was derived, allowing the development of a blue-print for the set up of new mobility schemes and formulation of considerations as to how the quality of mobility programmes can be assessed and managed. These general considerations have been elaborated in a largely European context in the frame of projects funded by the EUA and EACTS:

- Network 6: “Programme Evaluations: Joint Degrees” - Development of Joint Programmes in the Context of Globalisation in Higher Education, European University Association (EUA), QUALITY CULTURE PROJECT ROUND III, SOCRATES
- EU-ASEAN Credit Transfer System. Contribution towards an EU-ASEAN Credit Transfer System leading to Implementation of Student Mobility and Joint-Award Degree Programmes in Engineering Education, EU Asia-Link

Details on the EUA project can be found under Hunger *et al.*, 2006 & 2007a; and for those on the EACTS project under Hunger *et al.*, 2007b, Ramli *et al.*, 2007.

The first finding from experience and projects is that the development and implementation of a joint programme involving international partners requires specific considerations of

quality issues which are not relevant when operating a study programme within a single national context. The negotiation and implementation of quality assurance mechanisms and the promotion of an internal quality culture for such a project, on the one hand, has to satisfy formal requirements on quality assurance in higher education of the respective national contexts (e.g. accreditation, legislation). On the other hand, a common quality culture has to be cultivated in order to ensure mutual trust between the partners in the equality of quality of the institutions concerned as well as provide mechanisms to evaluate and further develop the quality of the joint programme.

Secondly, it has been found that the development of a quality culture for joint programmes in an international context has special requirements within different phases of the operation of such programmes, namely the set-up phase, the consolidation phase and the stabilisation phase. The **set-up phase** concentrates on the promotion of a common quality culture between the partners involved in the development of a joint programme. The **consolidation phase** focuses on the implementation of quality assurance procedures which form the basis of the emergence of a common quality culture shared by partners. The **stabilisation phase** builds up the routine of quality assurance procedures which are constantly tested and re-adjusted by evaluation procedures and thereby form the backbone to the promotion and maintenance of the common quality culture across partner institutions.

Phase 1: Set-up

Defining the goals and the content of the programme and choosing suitable partners and target groups as well as developing financial concepts are the bases for a successful joint programme. Regarding mobility programmes, this should start with considerations regarding the views of students and stakeholders.

How to understand the quality of joint programmes – and their different ways of certification – needs to be put in relation to the different expectations of various partners of a joint programme: Stakeholders, such as parents and financiers want to obtain proper educated and successfully graduated students. Students expect, besides education, additional services, such as tutoring or assistance in finding accommodation. Finally, students expect a better preparation for an international labour market (increased employability). Joint programmes enable departments and universities to establish programmes which they might not be able to set up by themselves, to find new sources of funding and to get an international reputation and higher rankings. Industry expects internationally trained students with adequate knowledge and competences.

The expectations of the target groups clarify the parameters according to which they define quality. Accordingly, quality assurance measures have to be implemented in order to observe the following:

- a high standard of educational offers
- a high level of knowledge and skills of graduates
- relevance of qualification for the labour market
- services adapted to the needs of the culture of students in joint programmes
- innovation capacity of joint programme in respect of educational add-on and funding

- a growing reputation of the departments and university involved.

Another key consideration is the quality of the mobility programmes. The pure merger of the quality systems of two or more partners is, in most cases, impossible for political or legal reasons. A more realistic approach towards ensuring the quality of joint programmes is that partners agree upon and mutually accept the systems of quality assurance instead of taking only the local requirements or trying to find a partner with an identical quality culture. A prerequisite for this is that all partners have a similar overall level of quality standards. If the partners agree that the procedures of the partner are different, but lead to the same level of quality in the frame of the common goals, accreditation is reduced to a local activity of each partner as shown in Figure 1.

This proposal seems to be the best in setting-up and running joint programmes. Accordingly, it is up to each partner to recognise their partners' quality culture as equal or fully acceptable. That also means that no single definition of quality can be given.

Another issue is to promote a common **quality culture** for the running of the joint programme. The goals lead to the definition of indicators and quality measures. The definition of indicators, in turn, leads to the identification of quality measures which are fit to ensure that the goals of the joint programme are met. The process has to be combined with mechanisms that guarantee the regular quality checks (also see Hunger *et al.*, 2006 for more details).

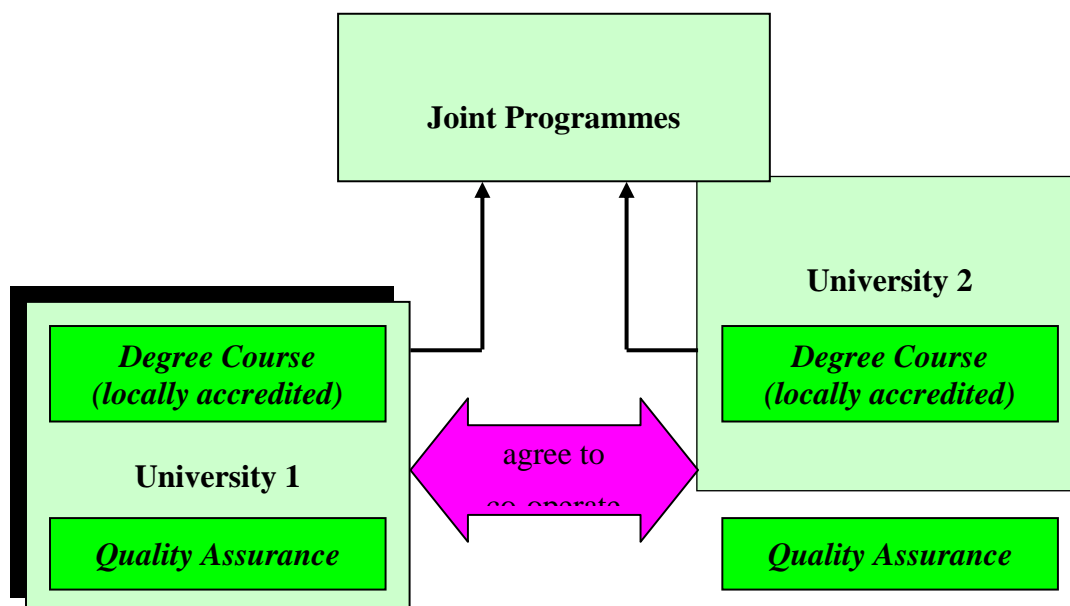


Figure 1: Co-operation based on mutual trust about the level of quality assured by different systems

Phase 2: Consolidation

Establishment of routine procedures for quality assurance

The consolidation phase goes hand-in-hand with the set-up and concrete implementation of quality assurance procedures suited for the joint programme. Basically, the issue at stake during the consolidation phase is to monitor the implementation of procedures and understandings that were agreed upon in the set-up phase. A routine is to be established regarding the following issues:

- *Application and student selection*
Information on actual practice has to be communicated between the partners. Procedures also have to be established on how to act in problematic cases. Likewise, transparent information has to be available to prospective students who want to apply. Regular feedback on deficits has to be collected and discussed between the partners. Based on this feedback, the process of application and student selection has to be improved continuously.
- *Recognition*
Comparison of courses is the basis of mutual recognition of student performance and, as such, is one of the key issues to be established in the set-up phase. This refers, for example, to regulations of how to agree on study plans and workload for students. Application of a Credit Transfer System is strongly recommended as they can systematise comparisons of academic achievements and facilitate recognition.
- *Mobility*
Agreement has to be established about the study periods to be spent at a partner institution: partners should strive for a balanced number of mobile students. Crucial for the successful performance of the students during the mobility phase is the establishment of adequate counselling services. These should be comparable at the respective partner institutions and students have to receive clear information on where to turn in case problems arise.
- *Responsibilities*
Responsibilities have to be clearly defined. This refers to tasks within each institution or on inter-institutional level, but also on internal organisation at each institution. The consolidation phase shows how far the distribution of responsibilities works well and in which regard it has to be adjusted.
- *Evaluation*
Even though quality cultures of the partners might be different, evaluation of teaching and procedures should be going on at all partner institutions. The results of these evaluations have to be communicated and discussed between the partners. Mutual comparison, performed in a co-operative approach, is to support the improvement of quality in the fields of teaching as well as organisation and procedures.

Key factors for assuring high quality of a joint programme are transparency and effective communication. Therefore, guidelines for procedures and organisation are to be defined, including regulations on regular up-dates on the current practice at the partner institutions (Hunger *et al.*, 2006)

Phase 3: Stabilisation

Routine of a common quality culture

Indicators for quality need to be defined according to the goals set for a joint programme in general. With the goals, indicators have to be defined which show whether the goals have been achieved and, finally, there have to be measures which allow the evaluation of the degree to which goals are achieved. For example, “Highly qualified graduates” can be a goal, “Employability” can be an indicator and “time to find first job” or “percentage in leading positions after x years”) which are outputs from tracer studies, can be seen as measures.

The implementation of quality measures and their check-up through indicators has to go hand-in-hand with a method of quality assurance that provides for regular evaluation and review. It is important that the review procedures are formalised and have a clear reporting route within the partner institutions.

There are nearly no standards available in the above mentioned regard since the aspects of a mobility scheme as well as their relevance, importance and implementation vary considerably between the different implementations. In Hunger *et al.* (2006), a list of examples for the relationship goals-indicators-measures is given which can be used to develop the set of indicators for a specific programme. In any case, the control mechanism needed to assess and manage quality based on these indicators and in the frame of quality culture, in general are the same, again implemented at individually different institutions at the partner organisations.

4.3. Promotion of a common quality culture

Academic partnerships across the EU and ASEAN in the field of student mobility can neither rely on hundreds of years of cooperation, as European universities do, nor are they embedded in a process comparable to the Bologna process. Mutual trust in the quality of the partner’s education in this context must grow by other means and requires an intensive effort of investigation of the partner’s institutional and national context.

Therefore, the ideas of the EUA project, a more theoretic one, without implementation, have been taken into consideration in the EACTS project which was mainly aimed at implementation. This project and its results can be taken as the basis for organising mobility programmes since the project covers not only the organisational aspects but also quality assurance and trust building by providing information on:

- Engineering education and professions in the EU and ASEAN (Budiardjo *et.al.*, 2006), and;
- Quality assurance and accreditation procedures in the EU and ASEAN (Budiardjo *et.al.*, 2007).

In the EACTS terminology this information has come to be called “Information to bridge EU and ASEAN” or abbreviated “bridge information”. The bridge information enhances, on a very general level, mutual understanding, trust and transparency in EU-ASEAN academic

cooperation. In addition, it provides the basis for checking the feasibility of new partnerships from the point of view of quality and general compatibility (Nik *et al.*, 2007).

The bridge information referring to quality assurance and accreditation procedures in the EU and ASEAN explicitly addresses the topic of quality assurance. It gives an overview of the classification of the higher education institutions concerned, within their national education system, including their profile as well as the type of accreditation and quality assurance in the respective national contexts.

The level compatibility of the partners' qualifications in an EU-ASEAN cooperation is the most crucial prerequisite for a successful cooperation in the field of student mobility, since recognition of study achievements depends on this. The qualifications frameworks not only facilitate the comparison, but also give evidence of the compatibility of levels. The documentation and transparency of level compatibility is particularly important to students as they depend on the recognition of their study abroad periods as qualitatively equivalent not only by their home institutions, but also by future employers and other higher education institutions where the student might continue their education.

EACTS was designed as an instrument for quality assurance in EU-ASEAN partnerships. In this context, it is important to note that EACTS is designed for quality assurance in the specific area of international cooperation. It does not aim at modifying the general institutional and national quality assurance system in place at the partner institutions.

The role of EACTS functions and procedures as instruments for quality assurance in international cooperation is illustrated in Figure 2. QA of student mobility lies like a bridge on the two pillars representing the quality assurance systems of two partner universities – linked by the term Quality Culture. QA of student mobility area refers to a joint quality assurance activity in the field of academic cooperation which does not merge with the institutional QA systems, but is nonetheless supported and reinforced by them.

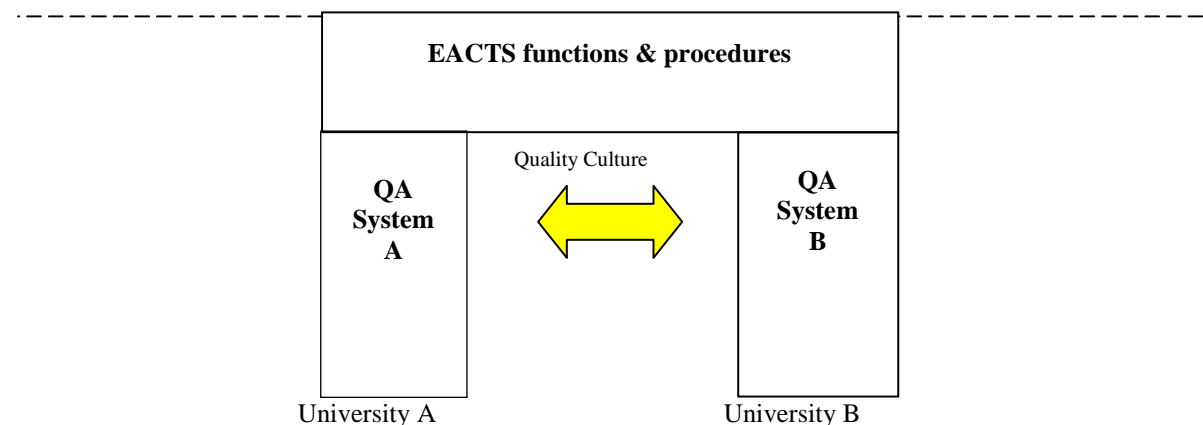


Figure 2: Quality assurance by EACTS functions and procedures

EACTS has been developed by a network of four universities from Germany, Indonesia, Italy and Malaysia and is funded under the Asia-Link programme of the European Commission. As an immediate step ahead the project partners seek to introduce EACTS to a wider public in the EU and ASEAN in order to ensure the adoption of EACTS beyond the existing partnership.

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