

Combining evaluation and accreditation cultures: A collaboration between AEQES¹ and CTI² for the joint evaluation and accreditation of civil engineering programmes in the French community of Belgium in 2012-2013.

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Abstract

In December 2009, after an official demand coming from four universities of the French community of Belgium (FCB), AEQES and CTI initiated collaboration in order to organize a joint mission in 2012-2013. The objective of this mission is twofold: the evaluation of engineering programmes by AEQES according to the legal requirements; the accreditation of these programmes according to CTI's criteria.

The collaboration between a generalist evaluation agency (AEQES) and an engineering accreditation agency (CTI) in order to perform a joint mission has brought to surface a number of issues. The main theoretical and practical challenge of this project is to provide a satisfactory answer to the following questions: "How to combine evaluation and accreditation cultures? How to conciliate the sometimes confronted objectives of quality enhancement and accountability in a single exercise?"

This paper presents the main outcomes of this collaboration up to now. After describing the institutional background of the two agencies, the origin and scope of the collaboration is presented, as well as the different phases of the project. As part of the conclusion, a number of questions are addressed to the audience concerning a number of fundamental issues that are being raised in the current phase of the collaboration.

1. Institutional background: presentation of AEQES and CTI

1.1. Presentation of AEQES

AEQES was established by the French community of Belgium in 2002. The agency has been restructured by law in 2008. The decree defines the agency's missions as follows:

- To ensure that the study programmes organized by the institutions are subject to regular evaluation, highlighting best practice and any inadequacies or problems which need to be resolved

¹ Agence pour l'évaluation de la Qualité de l'Enseignement Supérieur- Evaluation agency for higher education in French community of Belgium. <http://www.aeqes.be/>

² Commission des Titres d'Ingénieur- French engineering accreditation body. <http://www.cti-commission.fr/>

- To promote, in collaboration with all higher education institutions, the introduction of best practice, allowing for enhancement in the quality of teaching in each institution
- To provide information to the Government, stakeholders and beneficiaries of higher education on the quality of higher education
- To formulate suggestions, addressed to policymakers, in order to improve the overall quality of higher education
- To make any proposals deemed to be of use for the accomplishment of its missions, at its own initiative or request
- To represent the French Community of Belgium in national and international bodies in matters concerning quality assurance in higher education.

AEQES uses a formative quality evaluation process, working in a context where an authorisation ("*habilitation*"³) is granted *ex ante* by Government decree. The results of evaluations conducted by AEQES therefore have no formal effects in terms of an institution's funding or authorisation. AEQES does not carry out any scoring or ranking of institutions and believes that such an approach encourages the emergence of a quality culture among stakeholders involved in higher education, promoting its appropriateness and fostering creativity.

The bodies of the Agency are the Steering Committee, the Secretariat, and the Executive Unit. Agency decision-making is in the hands of the Steering Committee which is made up of 24 full members (representatives from Universities, *Hautes Écoles*, higher arts colleges and adult education institutions; student and trade union representatives, representatives from business, civic society and the arts, and the director-general of higher education).

The Secretariat, consisting of the president, vice-president and director of the Agency's Executive Unit is responsible for preparing the work of the plenary sessions, carrying out all tasks delegated by the latter and making decisions on current issues. The director-general of higher education can be present in an advisory capacity.

The Executive Unit is responsible for implementing the decisions taken by the Steering Committee and the Secretariat. Its main task is to make sure that all evaluation work is carried out smoothly.

AEQES is an active participant of the European higher education area and has recently been reviewed by ENQA in order to become full member.

1.2. Presentation of CTI

CTI ("Commission des Titres d'ingénieur") is a nonprofit organization officially recognized as the independent body in charge of performing programme accreditation of engineering degrees in France. CTI was established by the French law in 1934.

CTI is composed of 32 members, appointed upon legislative order, coming from different origins (public and private higher education institutions, employer organizations, professional engineering associations and trade unions); it is thus an equitable organization in terms of professional and academic participation.

³ "Habilitation: the authorisation, accorded by decree to a higher education institution, to organise all or part of a study programme, to confer academic degrees, and to issue the associated certificates and diplomas."
Definition taken from the Decree of 31 March 2004 defining higher education, promoting its integration into the European Higher Education Area and refinancing the universities (Article 6, §1).

Its missions are respectively: the evaluation and accreditation of programmes in the fields of engineering and applied sciences; the development of quality in engineering education; the promotion of engineering curricula and careers in France and abroad.

Since 1997, all French engineering programmes must be periodically accredited every six years. Upon the result of CTI's accreditation, the Engineering higher education institutions are authorized ("habilitées") by the French ministry to deliver a particular Engineering degree ("Diplôme d'ingénieur").

Upon demand of foreign institutions, CTI is also authorized by the French law to accredit engineering programmes abroad. The result of this accreditation may, upon the concerned governments' request, result in "State admission" of these degrees by the French government. Up to the current moment, CTI has accredited engineering programmes belonging to ten institutions outside of France in six different countries (Belgium, Bulgaria, Burkina Fasso, China, Vietnam and Switzerland) [1].

CTI is a full member of ENQA (European Association for Quality Assurance in Higher Education) since 2005 and it is registered in EQAR (European Quality Assurance Register) since 2010. CTI is also a founding member of ENAEE (European Network for the Accreditation of Engineering Education) and is one of the agencies authorized to deliver the EUR-ACE label (a quality accreditation label for engineering programmes developed by ENAEE) [2]. CTI also participates in the works of ECA (European Consortium for Accreditation).

2. Origin and scope of the collaboration

Since 2008, all higher education programmes in the French Community of Belgium must be evaluated regularly; engineering programmes are no exception. According to AEQES ten-year plan, engineering degrees must be reviewed in 2012-2013.

In October 2009, the concerned universities expressed their wish that AEQES established a partnership with CTI in order to organize a joint mission. An official letter was sent to AEQES in order to formalize this demand in February 2010.

The objective of this mission would be twofold:

- The evaluation of the programmes in order to comply with the requirements established by the 2008 AEQES decree (see section 1)
- The accreditation of the programmes according CTI's accreditation criteria. This exercise would thus provide access to the expected outcomes of CTI's accreditation: the "admission" of the programmes by the French government and the EUR-ACE label.

The demand includes five engineering programmes in the field of agronomic sciences and biological engineering and fifteen in the field of engineering sciences (see table 1); these programmes are delivered by the following institutions:

- Catholic University of Louvain (UCL)
- Free University of Brussels (ULB)
- University of Liège (ULg) (including Faculty of Agricultural Sciences of Gembloux - FUSAGx)
- University of Mons (UMons)

As a result of this demand, AEQES established contact with CTI in December 2009 and a joint working group was created in order to deploy the collaboration. Section 3 explains the different phases of this project as well as its current state.

Table 1: engineering programmes and number of students per programme delivered by HEIs in the French community of Belgium (reference year : 2009)

SCIENCES AGRONOMIQUES ET INGENIERIE BIOLOGIQUE	Ulg	UCL	ULB	FUSAGx	FPMs	Total
Sciences de l'ingénieur-Bioingénieur (grade de bachelier)		487	235	497		1219
Bioingénieur : sciences et technologies de l'environnement		62	25	89		176
Bioingénieur : sciences agronomiques		72	21	71		164
Bioingénieur : chimie et bio-industries		51	28	37		116
SCIENCES DE L'INGENIEUR	Ulg	UCL	ULB	FUSAGx	FPMs	
Sciences de l'ingénieur - Ingénieur civil (grade de bachelier)	463	782	602		430	2277
Ingénieur civil des mines et géologue	26				28	54
Ingénieur civil en chimie et science des matériaux	15	64	20		28	127
Ingénieur civil physicien	17	8	26			51
Ingénieur civil électricien	33	44	44		72	193
Ingénieur civil électromécanicien	38	74	54			166
Ingénieur civil en aérospatiale	43					43
Ingénieur civil mécanicien	27	81	35		50	193
Ingénieur civil biomédical	23	14	21			58
Ingénieur civil en informatique	16	33	26			75
Ingénieur civil en informatique et gestion					70	70
Ingénieur civil en mathématiques appliquées		59				59
Ingénieur civil des constructions	56	58	46			160
Sciences de l'ingénieur - Ingénieur civil architecte (grade de bachelier)	32	74	50		45	201
Ingénieur civil architecte	25	58	28		23	134
Total	814	2021	1261	694	746	5536

3. Phases of the collaboration

The collaboration between AEQES and CTI is currently being deployed according to the following planning:

3.1. Preparatory phase: December 2009- January 2011

The purpose of this preparatory phase was twofold:

- to assess the feasibility of the collaboration
- to agree on a set of common principles and a basic work framework (once the feasibility confirmed).

As a result of this preparatory phase, a formal collaboration agreement was signed between the presidents of the two agencies. Additionally, a number of issues were detected that would have to be carefully addressed during later stages (see section 4).

3.2. Detailed design of the collaboration: January 2011- December 2011

Since January 2011, after the signature of the formal agreement, the collaboration has entered a new phase. A number of specific documents and procedures are being developed, such as a common evaluation and accreditation framework and the selection procedure of the experts to compose the panels.

According to the planning, this phase has not yet been completed and will not be further addressed in this paper.

3.3. Execution phase: January 2012- September 2013

The execution of the collaboration (designation of the expert panels, specific training sessions, evaluation visits, etc.) will start in January 2012.

4. Development and main outcomes of the preparatory phase

4.1. Assessing the feasibility of the collaboration

As a preliminary step, during the preparatory phase, the feasibility of the AEQES-CTI collaboration was assessed. The feasibility assessment concerned three main issues:

- The compatibility of the two national quality assurance frameworks and the detection of possible legal and material barriers to the collaboration
- The compatibility of evaluation/ accreditation methods and procedures put in place by the two agencies
- The applicability of CTI's accreditation framework to engineering programmes in the French community of Belgium.

Compatibility of the two national frameworks; detection of legal and material barriers

As explained in section 1, the French law authorizes CTI to accredit engineering programmes abroad, upon the concerned institutions' and governments' request. CTI is also authorized by ENAEE to deliver the EUR-ACE label in those countries, such as Belgium, in which a national EUR-ACE accredited agency doesn't exist.

As for AEQES, upon the signature of a formal agreement respecting certain conditions (i.e. the respect of AEQES' ten-year plan and compatibility of methods and procedures), the agency has the autonomy to establish collaboration with another quality assurance agency [3].

Overall, the two national legal frameworks posed no major barriers to the collaboration. However, one difficulty detected at this stage was the difference between the two periodic calendars. As explained in section 1, programmes in FCB are assessed every ten years, whereas CTI's accreditation is performed every six years (the minimum accreditation periodicity allowed by the French law). The coordination of calendars between the two agencies doesn't seem to be possible for now. This difficulty, which has not been judged to be a major obstacle for this initial collaboration, will have to be addressed in a future stage.⁴

⁴ This is in fact a dynamic issue, as periodic national calendars are subject to possible regulatory changes. For example, in France, a recent regulatory change has altered the periodicity of contract between the Ministry of

Concerning material issues, after an analysis of the demand, CTI's board confirmed the interest of the agency in establishing this collaboration. CTI transmitted the estimated costs of the operation, which were accepted by the concerned higher education institutions.

Compatibility of evaluation/ accreditation methods and procedures put in place by the two agencies.

In order to test the compatibility of procedures and methods, the working group decided to use the comparison tools and procedures developed by ECA⁵ in the TEAM project⁶[2]. A number of work meetings were held in order to perform a comparative analysis of standards and procedures. Additionally, representatives of the two agencies were included as observers in a CTI and an AEQES mission.

As a result of this comparison, the procedures and methods of the two agencies were found to be globally compatible with regard to their principles and conception. However, during the crossed visits, a number of implementation differences were detected, which would need to be carefully addressed along the collaboration.

Indeed, a number of crucial elements, such as the dynamics and objectives of the HEI's self-evaluation phase, the balance between quantitative and qualitative criteria, the particular role of the panel members during the site-visits or the attitude of the higher education institutions with regard to the assessment exercise are fundamentally influenced by the fact that HEIs undergo an accreditation process (as opposed to going through an evaluation process in which no final yes/no decision is made). Being able to effectively combine the accountability and the quality enhancement approaches comes up as one of the main challenges of this collaboration.

These issues are currently being addressed in the detailed design phase of the collaboration and will definitely have an impact on the structural elements of the mission (composition of the panel, role of the panel members and organization of the site-visits).

The applicability of CTI's accreditation criteria to engineering programmes in the French community of Belgium.

CTI's accreditation criteria, whose first version was released in 1998, is explained in the document "References and Guidelines" [3]. A permanent working group at CTI is in charge of revising and updating this document every three years. CTI's reference framework is compatible with EUR-ACE accreditation criteria.

Even if all the institutions wishing to deliver the « Diplôme d'ingénieur » must demonstrate a global compliance with CTI's accreditation criteria, a certain flexibility is allowed for institutions abroad to adapt to specific national legal and regulatory frameworks. Nevertheless, a number of criteria have been identified as "mandatory"; that is to say, they

higher education and the higher education institutions from 4 to 5 years. This change could have an impact on CTI's periodic calendar.

⁵ European Consortium for Accreditation (<http://www.eaconsortium.net/>)

⁶ ECA's TEAM tools were in fact developed in order to compare accreditation frameworks in view of developing mutual recognition agreements. In this case, the tools were slightly adapted to perform the comparison between an evaluation accreditation agency.

need to be respected by the totality of the accredited institutions. Fulfillment of these criteria is a condition for good employability in engineering activities.

- A strong and broad basis in fundamental sciences in order to guarantee analytical competences and the capacity for adjusting in the long term the demanding evolutions of the engineering and management activities.
- The engineering sciences provide a guarantee of efficiency and short term adaptation to a professional activity (experience and innovation).
- Business culture and economic, social, human, environmental ethics awareness (partnerships of the higher education institutions with the profession, involvement of professionals in training, internships in industry, entrepreneurship, ...).
- Communication skills and international awareness (international partnerships, intercultural experiences, language skills, joint diploma, ...).

CTI's accreditation criteria pay more attention to "what" than to "how". In this sense, some of the strict quantitative requirements imposed by CTI in the case of French engineering programmes, such as a minimum of 28 weeks of internships, are not directly transposable to foreign degrees. This requirement is in fact related to the second mandatory requirement (short term adaptation to a professional activity). CTI accepts that the organization of internships is frequently diffculted by legal and material barriers and accepts that there could be other methods in order to develop this outcome.

These mandatory requirements were transmitted to the concerned deans. Without anticipating the results of the accreditation, no prior incompatibilities have been detected which could put the accreditation at risk.

CTI's accreditation criteria are currently being adapted in order to accommodate to Belgium's French community specificities⁷.

4.2. Collaboration agreement between AEQES and CTI

As a result of the preparatory phase, the feasibility, as well as the will of all parties to participate in the project, was confirmed. The main outcome of this phase has been the establishment of a formal agreement signed between the presidents of the two agencies [6], covering:

- *The objective and the scope of the collaboration* (institutions and programmes concerned by the collaboration)
- *The general organization of the project.* As a general principle, all stages of the joint mission (composition of the expert panel, site visits, production of reports) will be

⁷As an example, concerning the context of the institution, CTI considers three levels: local, national and international. In the case of FCB, two new levels have to be introduced: Regional and Community level. Another example concerns the methods used to control graduate employability; in France, this aspect is controlled at the institution level, normally through a yearly survey, whereas in Belgium this practice is not widespread and is controlled at the community level. CTI's criteria concerning employability control have been adapted accordingly.

jointly managed by AEQES and CTI. AEQES will ensure the logistic coordination during the execution phase. Costs will be equally shared by the two agencies.

- *The organization of the site-visits*
An evaluation visit of 5 to 7 days, covering all engineering programmes involved, will be organized in each of the higher education institutions. This configuration permits to ensure the evaluation and accreditation coherence at the institutional level.
- *The composition of the expert panel*
A mixed team of experts will be appointed jointly by the two agencies. The composition of the panel will respect the minimum criteria imposed by the two agencies: the academic/professional balance and the presence of a student (CTI); an expertise in science of education and in quality management by at least one panel members (AEQES).
The expert panel will be lead by two coordinators: a president in charge of coordinating the evaluation process and a CTI member who will ensure the link with the accreditation phase. The specific roles and missions of these two coordinators are currently being defined in the detailed design phase.
- *The main outcomes of the mission*
The following reports will be produced by the expert panel:
 - A draft report, addressed to the HEIs in order to incorporate possible correction of any factual errors and/or content observations.
 - The final review report, published at full length on the AEQES website.
 - The system-wide analysis, published on the AEQES website. This analysis consists of a contextualised presentation of the programmes and their prospects in the French community, within the European Higher Education Area (EHEA). This report also contains a SWOT analysis of all reviewed programmes, along with a list of recommendations for improving overall quality.

The final review report will be addressed to CTI's general assembly.

A final executive report will be produced stating the accreditation decision and some final recommendations. The accreditation report will be published on CTI's website.

5. Conclusions and questions for the audience

Since the beginning of the collaboration in December 2009, a preliminary phase has been completed, which has permitted to agree on a certain set of basic principles and to set a basic work framework.

The collaboration between an evaluation agency (AEQES) and an accreditation agency (CTI) in order to perform a joint mission has revealed to be an illustrative and interesting exercise for both parties. The comparison exercise has permitted to confront the procedures and methods of the two organizations; underlying principles behind two apparently similar procedures have been brought to surface

This step by step, practical and detailed comparative analysis has built a space of trust and confidence between the two organizations as it has raised the following issues:

- What are the fundamental differences between an evaluation and an accreditation approach?

- How do these differences impact on the organizational culture of the agency?
- What is the impact of this aspect over the structural elements of an external evaluation:
 - The HEI's self-evaluation phase
 - the role, behavior and mission of the different panel members
 - the overall attitude of HEI towards the process
 - the organization and course of assessment visits
- To what extent can the agencies conciliate the sometimes confronted objectives of accountability and quality enhancement in this single exercise?

The AEQES-CTI working group would welcome any inputs from the audience of this congress concerning these fundamental issues, which are currently being addressed in the detailed design phase of the collaboration.

References

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