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Paper proposal form

Deadline 2 August 2013

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Proposal

Title:

QUALITY FOR LEARNING – Presentation of the EIT Quality Assurance and Learning Enhancement Model for Master and Doctoral Programmes and “The EIT Handbook”

Abstract (150 words max):

In March 2008, the EU launched the European Institute of Innovation and Technology (EIT). EIT can be said to be a “new animal” in the European educational landscape, based on *the knowledge triangle*, which means to foster the integration between research, higher education and innovation/business. The mission of EIT concerns both creating new innovations and businesses, but equally important, fostering and developing students through master and doctoral programmes focused on creativity, innovation and entrepreneurship.



EIT also has the task of being a role model for European HE. The EIT Quality Assurance and Learning Enhancement (QALE) Model has been developed in accordance with this, as to be adaptable to other contexts.

This paper presents the model and the handbook it is available in; Quality for Learning <http://eit.europa.eu/education/eit-label/>

For the workshop: The author proposes questions related to the slow implementation of the LO paradigm in European HE, QA and sustainability, and Learning Challenges.

Text of paper (3000 words max):

QUALITY FOR LEARNING

Presentation of the EIT Quality Assurance and Learning Enhancement Model for master and doctoral programmes and “The EIT Handbook”

What is EIT and its mission?

In March 2008, the European Parliament and the Council of the European Union launched the European Institute of Innovation and Technology (EIT <http://eit.europa.eu/>). A new initiative at EU-level intended to complement existing EU and national policies in increasing European innovation and business. EIT can be said to be a “new animal” in the European educational landscape, based on *the knowledge triangle*, which means to foster the integration between research, higher education and innovation/business. The mission of EIT concerns both creating new innovations and businesses, but equally important, fostering and developing students through master and doctoral programmes focused on creativity, innovation and entrepreneurship and distinguished by an “EIT label”. The EIT Label is given to an educational programme, not to individual students. All students who have passed an EIT labelled programme are awarded a degree, by their university, with the EIT Label.

EIT is a distributed organisation consisting of a Governing Board, Headquarters in Budapest, Hungary, and three Knowledge and Innovation Communities (KICs). These are multi-stakeholder, independent, legal and financial integrated entities, governed by a CEO appointed by a board of main stakeholders from academia and business. Each KIC is focused on a theme (“the Grand Challenges”, presently climate, ICT and energy issues) they are based at a European university and collaborating with a number of other universities. For the three existing KICs; Climate-KIC, EIT-ICTLabs and KIC InnoEnergy currently approximately 20 to 25 top European universities are involved. Calls for a set of new themes are being launched and the future budget estimated to somewhere between 2,5 and 3 billion €.

EIT is a new innovation infrastructure but it is not a new infrastructure for education. EIT master and doctoral programmes are carried out at these universities by their faculty but with EIT specific learning outcomes and other quality criteria that are required for the EIT label.

EIT also has the task of being a role model for European Higher Education. The EIT Quality Assurance and Learning Enhancement (QALE) Model has been developed in accordance with this in order to also be adaptable to other contexts. The model is presented in a handbook “Quality for Learning – Handbook for planning, labelling and follow up reviewing of EIT Master and doctoral Programmes”.

Educational programmes with a Knowledge Triangle Profile

The knowledge triangle has so far mostly been presented as a theoretical concept and political marker over the changes that are needed in Europe when it comes to improving the integration between education, research and innovation/business. The EIT is the first context where this has been transformed into a real world model of action - an everyday working model. Teaching and learning within the KICs should always take all three sides of the knowledge triangle into account. Through creating a simple enquiry-based process around the three nodes of the triangle, questions are raised that should be in the mind of everyone when planning and performing all EIT/KIC activities: What are the best ways of linking research to education and business? What are the best ways of teaching for creativity, innovation and entrepreneurship? How can optimal conditions be created for returning students’ experiences from business back into research and education? These questions were the first steps towards creating a quality assurance model for these programmes. The work took place in the EIT Educational panel consisting of the three educational directors from the KICs, one coordinator from EIT Headquarter, one representative from the European Commission, DG Education and Culture, and one contracted expert (the author).

Building the process...

- How do we do best link research to the teaching and learning situation?
The teaching – research nexus
- How do we teach for creativity and innovation?
The teaching – innovation nexus
- How do innovators feed back knowledge and experience into research?
The innovation – research nexus

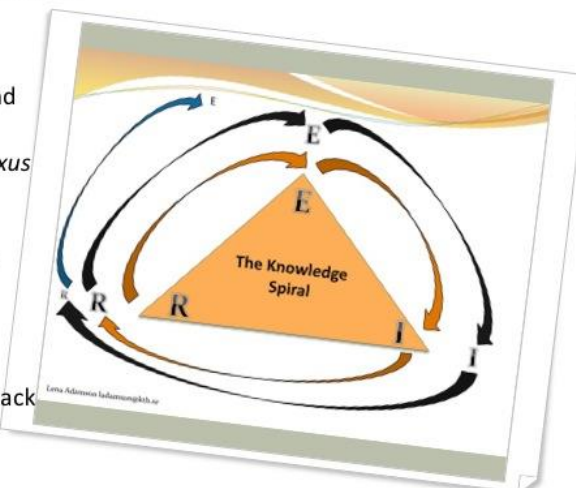


Figure 1. Teaching for the Knowledge triangle – building the process.



The next step the group took relates to an aspect of the Bologna Framework (QF-EHEA), which has not been overly discussed; the way the level descriptors of this framework originally were structured and presented. The Dublin Descriptors were built on five different “knowledge forms”: knowledge and understanding, applying knowledge and understanding, making judgements, communications skills and finally, learning skills. For the first time, formally articulating the need for focussing also on other things than just factual content knowledge. Although the learning outcomes clearly moves students’ learning from knowledge possession to knowledge

performances, they do in fact not by themselves guarantee that these knowledge performances cover much else than the application of knowledge and understanding, that is the use of pure factual content knowledge. The explicit use of different types of knowledge forms brings these issues up to a meta-level, and here we have the true key of moving from content-based to competence-based education. It is surprising that this point has not received more attention in the learning outcome debate. In fact, when the learning outcomes of the Dublin Descriptors were adopted into the formal QF-EHEA these knowledge forms were removed (although kept but often in altered forms in national qualification frameworks). In addition to securing that higher education includes such things as making value judgements, communication and learning skills, knowledge forms can also be used as profilers of specific degrees and this was the next step in the process of creating the EIT QA model. To begin with five knowledge forms related to the Knowledge triangle were agreed upon, all connected to the three sides of the triangle: skills and competencies in creativity, innovation, entrepreneurship, intellectual transformations and research skills and competencies. Finally, leadership and making value judgements were added since the EIT degrees also are geared towards educating a new brand of leaders, fit to lead in a blended context of education, research and business. After this framework was created the third step commenced; formulation of a set of EIT overarching learning outcomes (i.e., descriptors; EIT OALOs), overarching to fit and guide all KIC programmes, regardless of current or future theme.

EIT labelled programmes should ensure that students can demonstrate:

Creativity skills and competences

Master The ability to think beyond boundaries and systematically explore and generate new ideas.

Doctoral

The ability to think beyond boundaries and systematically explore and generate new ideas and to inspire and support others in this process and contribute to the further development of those ideas.

Innovation skills and competences

Master

The ability to use knowledge, ideas or technologies to create new or significantly improved products, services, processes or policies or new business models.

Doctoral

The ability to use their research combined with the knowledge, ideas or technologies of others to create, test and implement, new or significantly improved products, services, processes or policies.

Entrepreneurship skills and competences



Master and Doctoral

The ability to transform innovations into feasible business solutions.

Research skills and competences

Master

Knowledge and understanding of cutting-edge research methods, processes and techniques; their application, within their study field; the investigation of new venture creation and growth, and the capability to work in cross-disciplinary teams in the thematic field of their KIC.

Doctoral

Original research contributions and the ability to apply, extend and develop research methods, processes and techniques using cross-disciplinary approaches towards new venture creation and growth in the thematic field of their KIC.

Intellectual transforming skills and competences

Master

The ability to transform practical experiences into research problems and challenges.

Doctoral

The ability to autonomously and systematically transform practical experiences into research problems and challenges and to lead and support others in this process.

Leadership skills and competences

Master

Leadership and decision-making, based on a holistic understanding of the contributions of higher education, research and business to value creation, in limited sized teams and contexts.

Doctoral

Leadership and decision-making based on a holistic understanding of the contributions of higher education, research and business to value creation.

Making value judgments

Master

An appreciation of ethical, scientific and sustainability challenges as they pertain to their field of work.

Doctoral

The application of critical analysis, and evaluation of ethical, scientific and sustainability challenges in relation to their work.

Table 1. The EIT Overarching Learning Outcomes (EIT OALO).

It is this framework, these knowledge forms and overarching learning outcomes, that in fact profile the EIT master and doctoral degrees most clearly, and bring these programmes one step further into the future, reflecting new societal needs and fostering a new generation of students. The goal is to develop students with an integrated view of research, education, innovation and business, combined with a spirit to transform ideas into business and to make a societal difference. In the real world teaching and learning situation, these knowledge forms of course are blended into each other.

The EIT Quality Assurance and Learning Enhancement Model (EIT QALE)

The model is based on the learning outcome paradigm as it has been brought forth within the Bologna process where the aim is to move from 'teacher driven' to 'student centred' teaching and learning, changing higher education from being just knowledge based into also being competence based. The Bologna system levels (with QF-EHEA and National Qualification Frameworks, NQFs, at top levels) for LOs constitute a corner stone in the EIT QALE model, where the top EIT level (EIT Overarching Learning Outcomes) is used as frame of

reference to which the individual EIT programmes are evaluated against. Two definitions need to be pointed out here; *results* in the EIT programmes are considered that students have “learnt something” (here the EIT overarching learning outcomes) during their study periods, *quality* then is that programmes ensure that this happens.

The model has a strong focus on the promoting and enhancing aspects of a quality assurance, in addition to that of accountability. The main question the model is to answer, the logic of the model, is “do programmes ensure that students attain the EIT learning outcomes?” That is, that the programs provide students with opportunities to develop a true entrepreneurial mind-set combined with knowledge triangle skills and competencies.

The structure consists of a total set of five *quality indicators* each comprised of a number of *assessment fields*, where the first indicator consists of obligators that must be fulfilled before any further evaluation work is proceeded with. These obligators do not concern quality in the real sense (e.g. mobility windows, number of ECTS, DS and recognition issues, application, selection and admission procedures of students).

The 1 + 4 Quality Indicators of the EIT Quality Assurance and Learning Enhancement Model

Q Indicators:	Q Indicator 0 COMPULSORY REQUIREMENTS	Q Indicator 1 ALIGNED TEACHING AND EIT CONTENT COVERAGE P 11-12	Q Indicator 2 LEARNING ENVIRONMENT AND FACILITIES	Q Indicator 3 RESULTS	Q Indicator 4 STAKEHOLDER EXPERIENCES
Assessment areas:					
Ass area 1	0.1 Mobility	1.1 EIT Overarching Learning Outcomes Coverage	2.1 Robust Entrepreneurship Education	3.1 Student Creativity	4.1 Students
Ass area 2	0.2 Business Partner Curriculum Collaboration	1.2 General Quality of Intended Learning Outcomes	2.2 Highly Integrated, Innovative "Learning-By-Doing" Curricula	3.2 Achieved Learning Outcomes	4.2 Alumni
Ass area 3	0.3 ECTS, DS and Recognition	1.3 Fit for Purpose Assessment	2.3 Mobility, European Dimension and Openness to the World	3.3 Retention Rates	4.3 Other Stakeholders
Ass area 4	0.4 Application, Selection and Admission	1.4 Grading Criteria		3.4 R & D Projects on KIC Educational Activities	
Ass area 5	0.5 English as teaching language, EIT Logo	1.5 Active and Appropriate Teaching Methods			

2013-10-02 lena.adamson@me.com for InnoEnergy 2

Figure 2. The EIT Quality Assurance and Learning Enhancement Model.

For the labelling process of new EIT programmes *Quality Indicator 1 Aligned teaching and content coverage* and *Quality Indicator 2 EIT learning environment and facilities* are used. *Quality Indicator 1* uses five different assessment fields to evaluate if the programme sufficiently covers the EIT learning outcomes in relation to the thematic field of the KIC, if is characterized by aligned teaching and activating teaching methods and if it provides students’ access to grading criteria (rubrics). *Quality Indicator 2* is concerned with the study environment in terms of “robust entrepreneurship education”, innovative "learning-by-doing" curricula,



mobility and the European dimension and openness to the world. This part of the model has been used in all three KICs by now to label all new programmes.

For the future review process of on going programmes there are two more Quality Indicators focusing on the results of the programmes. *Quality Indicator 3 – Results* consists of four assessment fields. The first field evaluates students' creative thinking and potential and the second achieved learning outcomes. This will consist of samples of actual (degree) products by EIT students. However, instead of evaluating individual student work and then draw general conclusions about the quality of the programme, the evaluation concerns whether students with poor results in relation to the EIT specific thesis grading criteria (previously evaluated in Indicator 1) have been allowed to pass through the system or not. This is to ensure that the model evaluates educational quality and not student quality. The third assessment field of this indicator consists of retention rates. In the case of low retention this needs to be closely analysed since student drop out does not automatically mean low programme quality. The fourth and last assessment field concerns outcomes by the KICs in the form of published articles, reports, conference presentations etc. on research and development projects on KIC educational activities. This assessment field will stimulate the KICs in doing close evaluations and research on their educational activities in order to know what results they achieve and why. This assessment field will truly drive the quality of these educational programmes in the sense that it will promote researchers to keep their "research glasses" on also in the teaching context. Hence it will enhance the teaching research nexus in a concrete manner and contribute with new knowledge in the field of teaching and learning in higher education.

The last indicator *Quality Indicator 4 – Stakeholder experiences* is divided into four assessment fields, stakeholder experiences and opinions of a) students b) alumni c) industry/business stakeholders and d) other stakeholders. Data will be gathered by questionnaires or interviews depending on how big the groups are. Focus of the questionnaires will primarily be on issues to do with Indicator 1 – 3 in order to keep the model focused.

The EIT and the KICs highlight the importance of information to students and stakeholders about educational quality. The indicator and assessment field structure (graded on a 1 – 4 scale) of this system creates the possibility to present the results in quality profiles. These profiles will provide students and stakeholders with transparent quality information. The profiles can also be aggregated on, for instance, KIC or EIT level to generate a "bigger picture" and be the basis for making meaningful comparisons of educational quality.

The Handbook – Quality for Learning

The handbook describing the QA model is divided into four main parts and offers guidelines and hands-on working tools to educational coordinators, teachers and reviewers in order to support them to *planning and developing, awarding the EIT label, and doing follow-up reviewing* of EIT labelled programmes.



The first part consists of templates that should be used doing the reviews for awarding new programmes with the EIT label and doing the follow-up reviewing of on going, already EIT labelled programmes. These templates are also recommended to be used when planning and developing the programmes. References to other parts of the handbook can be found at relevant places in the templates making it possible to start working with these without further initial reading.

The second part of the handbook describes the basis for the EIT label and the EIT QALE model, its components, logic and the two processes; *labelling*, that is awarding, the EIT label to new programmes and the (future) process for *follow-up reviewing* of on going already labelled programmes.

The third part defines quality in higher education in the EIT context and presents and defines some important terms and concepts connected to this, and related to teaching for quality in the Knowledge triangle. This part can be used as a glossary and the recommendation is to read it when working with any of the templates.

The model is originally worked out for master programs and the fourth part of the handbook consists of adjustments of the model to doctoral programmes. Here the definition of a doctoral programme is a Doctoral Work Plan (DWP) to be used for each doctoral candidates, in order to handle the big variety of third cycle programmes in terms of numbers of candidates.

The task for review teams is to assess the “KIC added value” that is, if the programmes fosters a true integration of the knowledge triangle dimensions; research, education and innovation/business. Other aspects are left to local or national QA systems. The responsibility for the labelling process rests with the KICs on the basis of the handbook. The responsibility for the review process rests jointly with the EIT and the KICs complemented by external experts, selected by the KICs and approved of by the EIT and according to a set of rules. The normal review cycle is four years, one year for those programmes that have received more substantial recommendations for development and improvement during the labelling process. There will be one representative from each KIC in each evaluation team in order to keep the same educational quality level between KICs. The EIT Educational Panel will, at regular intervals, discuss and benchmark the results of these reviews.

The general principle for the choice of material to be used in both the labelling and the follow-up review process is that the person(s) who are responsible for this choose the necessary documentation in order to give evidence for the requirements of each assessment field of each quality indicator (the questions of all assessment fields in the templates should guide this selection.) This is due to three reasons, first, overall reviews of all programme modules will be too extensive and random selections will risk that essential information is missed out, second, the documentation looks different at different universities and it is impossible to list all these correctly here. The third reason is that when the persons who work and teach in the



programmes do the selection in direct relation to what is required for the five quality indicators, this will become a strong driver of development of the programmes. The approach is similar to the portfolio methods for assessing students.

Each review should result in a short quality report where each assessment field should be rated on a four-graded scale and then aggregated to Indicator level. The reports should also include recommendations for further development of the programme. The reviewers are instructed to write short reports, clearly qualify their statements, preferably with some examples and avoid giving information about anything else than the assessment fields that are listed.

Finally, *European Standards and Guidelines* explicitly express the need for external quality assurance to be fit for its purpose and to place only an appropriate and necessary burden on institutions for the achievement of its objectives. Reichert & Tauch (2005) showed in a survey of 29 European higher education institutions that, in many of them, external quality assurance tended to be seen as a bureaucratic burden of only limited use for development. The EIT model is formally an internal quality assurance system but often perceived as an external system by those who are involved due to the complexity of the EIT organization. Efforts have been made to design this model and handbook to support faculty in their daily work when teaching and planning teaching, avoiding becoming just an administrative burden arriving at regular intervals. This includes efforts of making it transparent, easy to work with and easy to understand. The results of an evaluation should never come as a surprise for the teachers involved. If students benefit from teaching and learning characterized by aligned teaching and fit for purpose assessment methods, including transparent grading systems and assessment criteria, I believe higher education institutions and their teachers will benefit from quality assurance procedures characterized in the same way.

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Questions for discussion:

- 1. My experience from review work of HE educational programmes as well as institutional audits is that the occurrence of student centred learning outcomes based on teaching and learning *in actual practice* is still very patchy in Europe. How can we work to enhance and speed this process up via QA systems? One important question here is the issue of institutional audits vs. programme evaluations.**
- 2. The EIT is based on the concept of the Knowledge Triangle but also on a thematic rather than disciplinary logic in order to contribute to future societal needs – sustainable development and intergenerational fairness. How can we promote this development via internal or external QA systems?**
- 3. Is it time to take the next step in student centred learning; from *learning outcomes* to also include students' own *learning challenges* within the programmes they have joined?**

Please submit your proposal by sending this form, in Word format, by 2 August 2013 to Ivana Juraga (Ivana.Juraga@eua.be). Please do not send a hard copy or a PDF file.