

**SOCRATES THEMATIC NETWORK
AQUACULTURE, FISHERIES AND AQUATIC RESOURCE MANAGEMENT 2008-11**

**LIFELONG LEARNING PROGRAMME
ERASMUS
Academic Network**

Report on MSc Terminology

Project Acronym: AQUA-TNET

Project title: Aquaculture, Fisheries & Aquatic Resource Management TN

Contract number: 2008 – 3209 / 001 – 001

Project number: 142245 – LLP -1 – 2008 – 1- BE – ERASMUS – ENW

Master degrees in aquaculture, fisheries and aquatic resource management
in Europe
confusing use of basic terminology

Deliverable WP1.2: it is planned to propose standard descriptions for programmes, modules, courses and related items. In addition, a proposal for desired characteristics of vocational and scientific master programs in the field of Aqua-tnet will be described.

Introduction

An important aim of the Aqua-tnet Socrates thematic network in aquaculture, fisheries and aquatic resource management is to contribute to the realization of the European Higher Education Area (EHEA) and the current Bologna priorities, supporting and enhancing cooperation within Europe. Transparency in the used terminology and understanding of each other's program design is an important part of this, in order to avoid misunderstandings and enable better understanding and collaboration between the parties involved.

Previous work done in Aqua-tnet, benchmarking of European Master programs in aquaculture, fisheries and aquatic resource management (Lekang & Reuver 2008, <http://www.aquatnet.com/index.php/11/wp1-msc/>) showed that there was confusion and misunderstanding regarding the used terminology in Master programs in the Aqua-tnet domain. Results from discussions showed that there are still large variations within Europe which inhibit cooperation. According to Davies (2009), the European "*Master is not yet 'readable' across the 46 Bologna jurisdictions. Its profile remains clouded by titles and nomenclature which, although usually clear at national level, lose clarity when viewed across external borders. It is not yet universally simple for students and other stakeholders to be guaranteed first-glance recognition of what a particular Master offers*".

In the context of a knowledge-based economy and globalization, Aqua-tnet thinks it is necessary to work on terminology standardization for the purpose of better scientific communication. This report will provide transparency of terminology used in the Aqua-tnet domain regarding Master programs which will facilitate knowledge exchange, mutual cooperation between the parties involved and integration at international level. We will give a brief review of used terminology within the partnership, and make some recommendations for use of terminology. This report is based on information given by members and discussion within Aqua-tnet Work package 1, Master programs, as well as on the recently published report "Survey of Master degrees in Europe" (Howard Davies, 2009. EUA Publications).

Important results from “Survey of Master degrees in Europe” (Howard Davies, 2009. EUA Publications)

- The three-cycle qualifications framework is formally in place, but much remains to be done. The Bologna second cycle – consisting of postgraduate pre-doctoral study and, in particular, the Master qualification – is not fully up and running. Not all countries have had time to implement their recent legislation. Not all courses have had time to produce their first cohorts of successful students.
- Master-level provision takes three principal forms. First, taught Master courses with a strong professional development application, available in full-time, part-time, distance and mixed modes. Secondly, research-intensive Master programmes, many of which are integrated into innovation and knowledge transfer activities and function as pre-doctoral studies for the career researcher. Thirdly, Master-level courses of varying duration delivered mainly to returning learners on in-service, executive release or self-referral bases. There is no reason to assume that patterns of demand will become less varied.
- The Master is well defined in terms of the bands of full-time duration and credit points determined by ministers. The level of academic attainment which it represents is expressed by agreed level descriptors
- **This does not mean that the Master is ‘readable’ across the 46 Bologna jurisdictions. Its profile remains clouded by titles and nomenclature which, although usually clear at national level, lose clarity when viewed across external borders. It is not yet universally simple for students and other stakeholders to be guaranteed first-glance recognition of what a particular Master offers. A set of informative markers should be developed for the benefit of all users**
- Transparency at European level may be compromised by the very distinctions introduced to clarify matters at national level. ‘Research Master’, ‘professional Master’, ‘continuation Master’, ‘consecutive Master’, ‘advanced Master’, ‘top Master’, ‘lifelong Master’, ‘European Master’, ‘international Master’ are terms which reveal the shortcomings of the apparently common language of description. The understanding of each depends on its precise legal and administrative context. This context is usually national. At European level, the danger of misrecognition has not yet been dispelled. Increasing numbers of students will complete the new generation of Bologna Master programmes in the post-2010 period. Regular monitoring and stocktaking are therefore essential to ensure that the Master gains in definition and readability.
- The Master has a crucial role to play in the knowledge society. It assures the acquisition of competences on which doctoral research depends. It develops human capital in many fields and should be accessible from as many points and by as many persons as possible. Its range of core activities, delivery modes and durations make it a hugely flexible instrument with which to confront the challenges of the global economic crisis.

Master typology (Howard Davies, 2009. EUA Publications)

Master-level provision takes three principal forms. First, taught Master courses with a strong professional development application, available in full-time, part-time, distance and mixed modes. Secondly, research-intensive Master programmes, many of which are integrated into innovation and knowledge transfer activities and function as pre-doctoral studies for the career researcher. Thirdly, Master-level courses of varying duration delivered mainly to returning learners on in-service, executive release or self-referral bases.

Beyond this typology, more precise definition is difficult. The list below indicates some categories of Master as they exist in some jurisdictions. The fact that readability is compromised by the proliferation of designations is one of the report's main conclusions.

- Academic Master: used in binary systems to distinguish the university-based programme from the Professional Master awarded by non-university HEIs
- Consecutive or Continuation Master: a Master undertaken immediately following, or very soon after, a Bachelor qualification in the same discipline
- Conversion Master: a Master undertaken in a discipline other than that studied in the preceding Bachelor
- Joint Master: a Master delivered by two or more HEIs awarding single or multiple diplomas
- Lifelong Master: used in some systems to designate second cycle provision delivered quite separately from the Consecutive Master
- Professional Master: used in binary systems to distinguish the Master awarded by non-university HEIs from the university-based Master

Countries with binary HE systems make a distinction – whether in law or in institutional mission only – between the ‘academic Master’ and the ‘professional Master’. In some countries the gap is wide, as in Finland where access to the Master in UAS institutions requires three years of prior work experience, while in the universities Bachelor to Master progression may be immediate. In the Netherlands, the distinction is maintained between the Master – awarded by the practically oriented UASs – and the Master of Arts and Master of Science degrees conferred by the research-oriented universities. In many countries, binary systems have become more flexible, or at least more congruent, as Hogeschools and Fachhochschulen – reborn as UASs, in English, although not in the national language – aspire to higher levels of research and second cycle teaching programmes, and as universities introduce more vocational courses in an attempt to raise the employment rates of their students. The separation may ultimately be dissolved by legislation, as happened in England in 1992, or it may be retained with some tolerance of institutional drift, as is the case in Portugal. The softening of binarism raises the question of whether the term ‘professional Master’, which the Danish UAS sector at one time sought to make its own prerogative, continues to have any real content (Howard Davies, 2009. EUA Publications).

The European Network for Universities of Applied Sciences wishes the professional Master to be perceived as: enjoying parity of esteem with the research-oriented Master and commutable with it in terms of access and progression. The ‘professional Master’ should have its place within an EHEA attuned to the Lisbon Agenda; in this context no HEI should be excluded from engagement with applied research and innovation. The designation, however, is precise only in certain national circumstances. It cannot be generalised. At the European level, it is best to regard it as a symptom of the stress evidenced in binary environments, in which mission steer expresses the university aspirations of generic UASs, while the search for new markets drives universities to target cross-binary clientele. It is the product of the process of transition. In the EHEA, it will be difficult to find a Master that has

no professional application. It is therefore hard to predict a prosperous future for the 'professional Master' in the wider European and international recruitment market (Howard Davies, 2009. EUA Publications).

What is the Bologna Master? (Howard Davies, 2009. EUA Publications)

- Normally carrying ECTS 90-120, of which at least 60 should be at Master level
- Typical duration of one to two full-time equivalent years
- Disciplinary content consistent with generic level descriptors
- Curriculum design and pedagogy defined by learning outcomes
- A recognized point of entry to the European labour market

The Bologna Master, at the very least, is specifiable in terms of its location in the second cycle, its bandwidth in the European Credit Transfer and Accumulation System [ECTS], its level descriptors, and its typical duration in full-time equivalent years. It is recognisable – at least to the professionals, agencies, institutions and governments active in higher education. However, it has yet to be fully implemented.

AQUA-TNET experiences & recommendations

Also within the Aqua-tnet institutions a lot of different descriptions and typologies of Master programs exist. There are Masters, Masters of Science, research based masters, professional masters, vocational masters, experience based masters, masters of art, etc. It is important to be aware that not all professional/ vocational masters will give access to PhD doctoral level. Several of the programs do include a master thesis (see later). Some also use the term course based master, which include several courses or modules and research based master, which mainly is a large thesis work. It was discussed to use the following recommendation separating into three terminologies

1. Master of science
2. Vocational/professional master
3. Mix of science and professional

However it was difficult to agree on this classification within the aqua-tnet partnership, so the recommendation for the moment is to only use the term Master and then in the individual program description give the other important information.

Course duration

The Bologna Master does not have a standard full-time length. Nor is there, within Bologna, an agreed universal standard for the total of full-time years, or the total of ECTS points, required by the Bachelor-Master sequence. In most European HE systems, the duration of second cycle qualifications is expressed as 60 ECTS points per full-time equivalent academic year (Howard Davies, 2009. EUA Publications).

In the Aqua-tnet domain, the size of a Master program varies from 60 – 120 ECTS, normally 90 -120 ECTS. It is therefore important in addition to describe the program to describe the number of ECTS.

Thesis

Some master programs include a thesis but not all do. Instead of thesis some use the terminology dissertation or just project work. It is important to inform about these differences. This will also be included in future work in Aqua-tnet. The size of the thesis varies from 30 to 120 ECTS, most typically 30 or 60 ECTS.

Progression to the doctorate

Access to the third cycle from the second is in principle assured in the Bologna Process. The research Master represents the classical model of transition. It is well established, although its designation and status across Europe is not readable at first glance. In some countries, the research Master is the absolute pre-condition for entry to the doctorate and is explicitly defined as such. Elsewhere, it is not the absolute pre-condition (Howard Davies, 2009. EUA Publications).

In addition it is therefore important to describe if the Master degree qualifies to start on PhD – doctoral level or not.

Typology

- Aqua-tnet recommends using the term programme when describing the master, meaning Master programme / Master degree programme.

Master programmes are usually described/constructed by smaller elements. To describe these elements a lot of different terms are used which makes discussion confusing. Additionally confusing is it since the same term is used for different elements. Examples of used terms for elements within Aqua-tnet are Modules (some subdivided this further into courses) (in France unit and modules are the same), courses, units, Classes, years and blocks.

Often the nomenclature is corresponding with the construction of the individual master programme; some use a strict structure while other use a more open structure with large possibilities for choices. Within the structure, the size of the elements also vary a lot, some have small elements on a few lecturing hours, while other used year as the smallest element.

- AQUA-TNET recommends using the term module when describing elements of programs. This also corresponds with what TUNING recommends. The size of each module is recommended to be multiples of 5 ECTS. It is however important to be aware of the different construction of the programs, and when describing the programs this is an important part.

ANNEX I – Glossary

From: http://ec.europa.eu/education/policies/rec_qual/recognition/ds_en.pdf

Definitions and usage of terms vary from country to country. To reduce the possibility of misunderstanding this glossary aims only to cover all the main terms used in the papers associated with the Diploma Supplement initiative. It is partly based and fully consistent with the definition used in the 1997 Lisbon Convention on the Recognition of Qualifications Concerning Higher Education in the European Region..

ACADEMIC RECOGNITION refers to the recognition of courses, qualifications or diplomas from one (domestic or foreign) higher education institution by another. Usually this is sought as a basis for access to further new study at the second institution (cumulative recognition) or, as recognition allowing some sort of exemption from having to re-study elements of a programme (recognition with advanced standing). A further type of academic recognition is recognition of studies taken elsewhere in another institution (recognition by substitution) that replace a comparable period of study at the home institution (see PROFESSIONAL RECOGNITION).

ACCESS (to higher education) refers to the right of qualified candidates to apply and be considered for admission to higher education. Access is distinct from admission, which concerns the individuals' actual participation in the higher education programme concerned.

ACCREDITATION is the process by which one higher education institution gains authority to award, and/or gains recognition of, its qualifications from another senior competent authority. This might be the State, a government agency or, another domestic or foreign higher education institution (see FRANCHISE). The term has its origins in the American system and is used in some European countries in the same way as 'recognition'.

ADMISSION the act of, or system for, allowing qualified applicants to pursue studies in higher education at a given institution and/or a given programme.

ASSESSMENT i) (of institutions or programmes) the process for establishing the educational quality of a higher education institution or programme; ii) (of individual qualifications) the written appraisal or evaluation of an individual's foreign qualifications by a competent authority; iii) (of individual students) the actual testing of a student's ability and skills within a programme (e.g. by examination).

AWARD this is used synonymously with qualification.

COMPETENT RECOGNITION AUTHORITY a body officially charged with making binding decisions on the recognition of foreign qualifications.

COURSE a part of a programme of studies that is normally self-contained and assessed separately. Complete study programmes are normally composed of several courses.

CREDENTIAL a term sometimes used to refer to a qualification (see QUALIFICATION).

CREDENTIAL EVALUATOR the individual who makes a judgement on the recognition of foreign qualifications (see COMPETENT RECOGNITION AUTHORITY).

CREDIT the 'currency' providing a measure of learning outcomes achieved in a notional time at a given level. Usually associated with credit-based modular courses (see ECTS).

DE FACTO RECOGNITION refers to situations of unregulated recognition for professional purposes, such as where no national legal authorisation to practice a particular profession exists or is required. This is the most problematic area of professional recognition (see PROFESSIONAL RECOGNITION and RECOGNITION).

DE JURE RECOGNITION refers to the recognition of the right to work in a specific country in a regulated profession (e.g. medical doctor) in the European Union or European Economic Area. These situations are subject to various European Union Directives whereby if a citizen is a fully qualified professional in one Member State, he or she has a right to exercise that profession and be recognised as a professional in another Member State (see REGULATED PROFESSION, PROFESSIONAL RECOGNITION and RECOGNITION).

DIPLOMA here refers to any formally awarded qualification/credential. In some educational systems the term refers to a specific category or type of qualification. It is not being used in this restricted sense here.

ECTS the European Credit Transfer System (developed by the European Commission). This is a system based on ECTS credits (student workload), designed to facilitate mobility, credit accumulation and transfer, and the international recognition of periods of study completed abroad.

ENIC European National Information Centre on Academic Recognition and Mobility (Council of Europe/UNESCO).

FRANCHISE the situation where an institution agrees to authorise another institution (nationally or internationally) to deliver an approved programme whilst normally retaining overall control of the programme's content, delivery, assessment and quality assurance arrangements. However, significant variations in franchise relationships exist.

FIELD OF STUDY the main disciplines or subject areas of a qualification.

HIGHER EDUCATION all types of courses of study, or sets of courses (programmes), training, or training for research at the post secondary level which are recognised by the relevant authorities as belonging to its higher education system. Higher education builds on the level of competence, knowledge and skills generally acquired through secondary education (see HIGHER EDUCATION INSTITUTION and PROGRAMME OF STUDY). Higher education normally comes after secondary education in time and is normally offered through higher education programmes at higher education institutions. However, it should be noted that higher education institutions may give courses of study that are not higher education level.

Conversely, institutions which are not considered as belonging to the higher education system may offer some higher education programmes. The exact definition of higher education and higher education institutions vary from country to country. For example, in some countries, nursing is considered to be a field of higher education, whereas in other countries, nursing is considered to be part of post-secondary education without being higher education.

HIGHER EDUCATION INSTITUTION an establishment providing higher education and recognised by the competent authorities as belonging to its system of higher education (see HIGHER EDUCATION and PROGRAMME OF STUDY).

LEARNING OUTCOMES the specific intellectual and practical skills gained and tested by the successful completion of a unit, course or whole programme of study.

LEVEL the place of a qualification in the higher education system. Normally, a national hierarchy of qualifications exists. The number of levels of higher education qualifications vary between countries and/or kinds of higher education (see LEVEL INDICATORS).

LEVEL INDICATORS these can range from any general information on the role of the qualification to highly detailed specific statements about the nature, skills and competencies associated with the successful completion of parts or all of a qualification (see LEVEL).

LISBON RECOGNITION CONVENTION refers to the Council of Europe/UNESCO Convention on the Recognition of Qualifications Concerning Higher Education in the European Region adopted in Lisbon April 1997.

MODULE a separate and coherent block of learning. Part of a modular programme of studies where the curriculum is divided into a range of similar sized segments.

NARIC National Academic Recognition Information Centre (European Union and European Economic Area). Some NARICs also have responsibilities for professional recognition.

PROFESSIONAL RECOGNITION refers to the right to practise and the professional status accorded to a holder of a qualification. In the European Union recognition for professional purposes is defined as the legal act by which a competent authority in a host Member State recognises that the qualifications obtained by an applicant in another Member State are suitable for the pursuit on its territory of a professional activity whose practice is legally regulated (see REGULATED PROFESSION, DE JURE RECOGNITION, DE FACTO RECOGNITION and RECOGNITION).

PROGRAMME OF STUDY a set of courses, the various components of which complement and build on each other in order to provide the student with a higher education qualification (see HIGHER EDUCATION, HIGHER EDUCATION INSTITUTION and COURSE). 'Programme' also denotes the academic fields of study and requirements that collectively define the qualification (see FIELD OF STUDY).

QUALIFICATION i) higher education qualification: any degree, diploma or other certificate issued by a competent authority attesting the successful completion of a higher education programme; ii) qualification giving access to higher education: any diploma or other certificate issued by a competent authority attesting the successful completion of an education programme and giving the holder of the qualification the right to be considered for admission to higher education (see HIGHER EDUCATION, HIGHER EDUCATION INSTITUTION and PROGRAMME OF STUDY). Also termed as any higher education award given for the successful completion of a programme of learning; a generic term that refers to the wide variety of higher education qualifications at different levels and across different countries.

QUALITY ASSURANCE refers to the internal and external processes by which the quality of academic provision is maintained.

RECOGNITION a formal acknowledgement by a competent authority of the value of a foreign educational qualification with a view to access to educational and/or employment activities. An assessment of individual qualifications. Such assessment may be any kind of statement on the value of (in this case) a foreign qualification. Recognition refers to a formal statement by a competent recognition authority acknowledging the value of the qualification in question and indicating the consequences of this recognition for the holder of the qualification. For example a qualification may be recognised for the purposes of further study at a given level (academic recognition), or for the use of a title, or for the exercise of employment purposes (professional recognition) (see COMPETENT RECOGNITION

AUTHORITY, QUALIFICATION, ACADEMIC RECOGNITION and PROFESSIONAL RECOGNITION). Recognition can also refer to the accreditation of a higher education institution by another authority (see ACCREDITATION).

REGULATED PROFESSION refers to professions whose practice is regulated in some way by law or administrative rules. A given profession may be regulated in one country and not in another (see DE JURE RECOGNITION).

TRANSCRIPT an official record or breakdown of a student's progress and achievements. Many credit-based education systems employ detailed transcripts that show the credits and grades for units undertaken (e.g. ECTS Transcript of Records).

VALIDATION the process by which a recognised awarding institution judges that a programme of study leading to a qualification is of appropriate quality and standard. This can be a programme of its own or that of a subordinate institution (see FRANCHISE).