



## **WP2: PhD Curriculum Development and Assessment**

### **AQUA-TNET WP2 Deliverables:**

- 1. A database of all core data collected on PhD Course programmes**
  - PhD Study programmes & institutional strategies related to EC reforms
  - Entrance qualifications
  - Progress review procedures
  - PhD evaluation procedure of relevance for a PhD database of study programmes
  - Expanded emphasis on methodology of PhD assessment
- 2. Report on generic PhD Curriculum Development projects**
  - latest EC developments (such as ongoing generic project of European University Association) and its impact on partner courses
- 3. Identification of perceived strengths and weaknesses of current PhD Study programmes**
- 4. Virtual workshops available online**
- 5. Document on the analysis and the need for change of the PhD third cycle in the AquaTNet domain in view of the Lisbon objective for integrating the ERA and EHEA**
- 6. Document on the need (content and organisational structure) of new PhD courses in the AquaTNet domain**
- 7. An interactive PhD webportal for PhD activities across the partnership**

Will contain information on:

  - PhD courses and vacancies
  - PhD studies performed in the past
  - Ongoing PhD studies
  - PhD public defence presentations
  - PhD chatbox

### **Online questionnaire results:**

So far, around 30% of the 109 AQUA-TNET institutions filled in a questionnaire related to PhD Curriculum Development. Some results so far:

Entrance and application requirements:

- Most institutions require a Master degree (81%) for entrance in PhD studies, although BSc is sometimes sufficient too.
- PhD studies are usually open to everybody, not only to nationals, although most institutions require a foreign language (usually English) besides the national language
- Usually there is no entrance examination (38%), but entrance does depend of the financing body (72%)
- Usually the PhD student writes the PhD proposal him- or herself (38%)
- PhD topics are mostly proposed and selected by the supervisor(s), but often together with the PhD student.

#### Organisation:

- A PhD supervising committee is usually required (81%)
- Minimum duration of a PhD program is 3 years in most institutions (66%)
- In most institutions there is internal evaluation during the preparation of the PhD, but in 13% of the institution this is not the case at all.
- In half (50%) of the institutions there is no external evaluation during the preparation of the PhD

#### PhD Training Programme (note Marieke: this is not the PhD study itself, but a training programme alongside the study):

- In most institutions (59%) the PhD training programme is organised in ECTS  
This PhD training programme is in most institutions (56%) compulsory, and almost always (81%) recommended
- Generic components of the PhD training programme are usually presentation skills, statistics, computing, teaching, and (time) managements skills
- Specific courses are in most institutions (59%) included
- MSc thesis supervision and publishing papers are common ways to gain credits.
- Also, oral and poster presentations, both national as international are ways of gaining credits

#### PhD supervision

- Usually (41%) the associate or full professor is supervisor of the PhD student
- In most cases (38%) there is not formal requirement of supervision, and usually there is no record kept of held meetings (63%)
- In most institutions (91%) the PhD student could request a change of supervisor, although this is mostly exceptionally

#### PhD evaluation procedure

- In most institutions (38%) English is the compulsory language of the PhD manuscript
- Usually (84%) a draft of the PhD is being sent to members of the jury/examination panel before a final version can be printed
- Then there is usually (69%) an opportunity to redraft the PhD manuscript after a first reading by the examination committee
- In 78% of the institutions the PhD defence is open to the public.
- In 56% of the institutions the PhD student can fail during the public defence
- In most cases (75%) the candidate is asked to make a computer presentation (e.g. PowerPoint) for the PhD defence
- In half (50%) of the institutions there is unlimited question time
- In about one fifth of the institutions English is the compulsory language during the defence but in almost half (47%) another language is possible. 9% is bilingual
- In most (56%) of the institutions video conferencing during the PhD defence is not allowed for members of the jury
- In most (69%) of the institutions accepted peer-reviewed papers are not required at the moment of the PhD defence
- In the majority of the institutions (44%) a PhD thesis cannot be a collection of A1 (peer-reviewed) publications, but in 28% it can.
- There is usually (34%) no grading system attached to the PhD title

#### Some student questionnaire results: (very biased due to many responses from Spain)

- according to PhD students it is mainly a combination of supervisor and student who decide on the PhD subject
- Most of the students choose their supervisor themselves
- A lot of students have other duties and cannot completely focus on their PhD research

- The majority of PhD students lecture and/or are responsible for practical exercises at both BSc and MSc level
- Most PhD students have the following model: A structured programme organised within research groups or research/graduate/doctoral schools with two phases: a taught phase (mandatory and voluntary courses or modules) and a research phase
- The majority of PhD students is very interested in following a PhD training programme alongside their PhD study, and they gave many examples of specific and generic subjects the program should consist of.
- Many students plan, or would like to do a research period outside the lab where they do the major part of their research

### Conclusions / remarks during Barcelona:

- Orientation towards a wider labour market: how big is the need for highly trained people in the industry?
- A questionnaire for recent post-docs will be designed concentrating on their perceived needs for generic and specific training
- ECTS harmonisation across Europe of the PhD training programme is needed to enhance student mobility
- Offer the possibility for financial support for short term training mobility
- Recommendation to write/defend PhD in English
- At least 1 SCI-listed (Science Citation Index) paper from PhD thesis, preferably with the PhD student as first author as the minimum requirement for a PhD
- Recommendation to install a financial rewarding system (for the lab) for PhD-based SCI-listed papers
- Establish the baseline conditions for equivalence of a PhD degree across Europe
- Explore possibilities for partnership of industry in performing PhD studies (eventually through co-funding), to the benefit of the post-doc career
- Explore the possibility to include the PhD period in a structured career plan (e.g. appropriate salary)
- PhD student should be offered the opportunity to get involved in other activities, beneficial to the career (e.g. MSc guidance), but limited in time
- A structured PhD programme (including a taught phase), requiring a scientific output of high quality can only be combined in a programme that lasts minimum 3,5 years