

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

**LIFELONG LEARNING PROGRAMME
ERASMUS
Academic Network**

Minutes of the joint WP4&7 – New Generic Skills and Competences Approaches & Multilingual Issues in International Cooperation & Lifelong Learning - meeting (year 1)

24-26 March 2009

Held at the University of Aberdeen, Aberdeen (United Kingdom)

Project Acronym: AQUA-TNET

Project title: Aquaculture, Fisheries & Aquatic Resource Management TN

Contract number: 2008 – 3209 / 001 – 001

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Agenda

24th March

14.00-18.00 - WP4 pre-meeting

25th March

09.00-13.00 – Joint meeting of WP4 and WP7

14.00-18.00 – continuation of WP4 meeting

14.00-18.00 – continuation of WP7 meeting

26th March

09.00-13.00 (continuation of WP4 business)

List of Attendees:

Margaret Eleftheriou	AMC Ltd
Elisabeth Grahl-Madsen	Bergen University College
William O'Connell	
Tasso Eleftheriou	AMC Ltd
Graham Pierce	University of Aberdeen / Instituto Español de Oceanografía
Jaume Fernandez-Borras	University of Barcelona
Ioannis Theodossiou	University of Aberdeen
Cristina Pita	University of Aberdeen
Belgin Hossu	Ege University Faculty of Fisheries
Elena Mente	University of Thessaly
Catarina Martins	Wageningen University
Sonia Seixas	Open University of Portugal

Minutes WP4 & 7 Core group meeting

24th March 14.00-17.00

Present: Margaret Eleftheriou (AMC Ltd), Tasso Eleftheriou, Elisabeth Grahl-Madsen (Bergen), William O'Connell (Dundee) (all WP7), Graham Pierce (Aberdeen), Jaume Fernandez (Barcelona) (WP4)

At this preliminary meeting, the meeting Agenda was reviewed, common issues for the two workpackages were discussed and Margaret Eleftheriou reviewed the background to WP7 and presented some of her current work.

25th March 09.00-18.00

Present: WP7: Margaret Eleftheriou (AMC Ltd), Tasso Eleftheriou, Elisabeth Grahl-Madsen (Bergen), William O'Connell (Dundee)

WP4: Graham Pierce (Aberdeen), Ioannis Theodossiou (Aberdeen), Cristina Pita (PhD student, Aberdeen), Jaume Fernandez (Barcelona), Belgin Hossu (Ismir), Elena Mente (Thessaly), Catarina Martins (Wageningen), Sonia Seixas (Lisbon)

(A written submission was received from Axel Miller (SAMS, Oban))

Graham Pierce explained administrative arrangements for the meeting and the delegates introduced themselves.

Margaret Eleftheriou introduced WP7. Aquatnet 1 focused on aquaculture but Aquatnet 2 extends to marine sciences as a whole. Aqt1 started 5 years ago and had 6 work packages: on BSc, MSc and PhD courses, mobility, e-learning and languages. The success of this thematic network and need to do more led to Aquatnet 2. The languages component of Aquatnet 1 this was reduced due to budget cuts. It included a survey of student language needs and experience. The previous Pescalex and Aqualex projects developed some initial learning modules, e.g. on fish health, haematology, delivered as free online courses, to cover the basics in several languages (10 languages so far; 3 more will be added in Pescalex 2). Pescalex developed a successful game-based course which will be continued in Aquatnet 2. This could be delivered as an induction package for exchange students. WP7 will also develop language teaching for MSc and PhD levels, content of which will be determined by a new language needs analysis, the questionnaire for which will be the first WP7 deliverable.

In a previous survey, most postgraduate students (82%) had received no language teaching at postgraduate level. Given resourcing issues, one solution is to offer web-based courses. Many universities did/do not provide language training for postgraduate students from overseas despite requiring competence in the national language. Where language courses are available there are sometimes issues of access (e.g. if the courses are run by a different department in a different location). Hence the emphasis in Aquatnet 2 will be on on-line delivery.

Graham Pierce introduced WP4. The main objectives of WP4 over 36 months are to canvass opinion about current skills training, through one or more questionnaires to students, employers, academics and graduates, and to make recommendations about how to improve it (e.g. identifying gaps and quality issues). The first immediate target is a questionnaire on skills training provision. Hence, prior to drafting the initial questionnaire the meeting would discuss:

- Guidelines on skills teaching that currently exist (e.g. institutional, national)
- Our views and experience of the range of generic skills teaching and delivery methods

Further discussions about skills training provision took place in the morning (see below for a summary) and in the afternoon the WP4 team worked on planning and designing the questionnaire (see below).

26th March 09.00-12.00

Present: Graham Pierce (Aberdeen), Ioannis Theodossiou (Aberdeen), Cristina Pita (PhD student, Aberdeen), Jaume Fernandez (Barcelona), Belgin Hossu (Ismir), Elena Mente (Thessaly), Catarina Martins (Wageningen), Sonia Seixas (Lisbon)

The questionnaire content was reviewed and revised. Future plans including meetings were discussed.

For the annual project meeting, WP4 partners request that it is not in late September or early October. Some partners are unavailable in September and a preference was expressed for late October.

The Year 2 WP4 meeting will be held around March 2010 at a venue to be confirmed. Possibilities include Athens and Izmir.

Notes from discussion on the range of generic skills currently taught

Graham (MSc in Marine & Fisheries Science, Aberdeen): there is a strong emphasis on statistics but also presentational skills, philosophy of science, experimental design, scientific writing, critical review, etc. Further courses are available through the graduate school "ASPIRE" programme.

Jaume (Barcelona): courses include scientific methods, presentation, review skills, applied statistics.

Catarina (Wageningen graduate school): the graduate school provides various courses (and certificates of completion) including: networking, IT information gathering from literature, arguments, effective behaviour in professional surroundings (how to approach supervisors etc, balance between respect and criticism).

Belgin (Izmir): the students give presentations in public.

Sonia (Open University, Lisbon): the focus is on e-learning, including language and mathematics modules (neither is popular with students and few choose these options since they are considered to be difficult). Industry is concerned about lack of knowledge of fish diseases and chemistry.

Elena (Thessaly): teaching of generic skills covers most of the topics listed.

Tasso: postgraduates tend to be highly motivated and have a good background in languages and statistics. Most skills training is done *ad hoc* by individual staff members for their students. Practical skills tend to be learned on the job. Students tend to focus on the immediate requirements for their degree at the expense of learning more generic skills.

Cristina (PhD student, Business School and School of Biological Sciences, Aberdeen): courses may be too generic, especially if people are brought in from outside academia to teach them (e.g. a recent time management course was not useful).

Ioannis (Business School, Aberdeen): induction is carried out by individual supervisors. The School runs a PhD student "conference" every 6 months to give experience in presentation. There are also specific courses throughout the PhD programme.

Elizabeth (Bergen): numerical skills are important to allow students to get places on MSc degrees. Courses in IT, business awareness, time and project management, teamwork, grant applications, etc are now compulsory at undergraduate level. Experience in the workplace improved employability because it provided familiarity with the work environment (and had the additional benefit for the students that the company knew them). Language courses were popular – they were optional courses but provided credits.

Notes from discussion on delivery methods for skills training

Graham: currently the trend is to move away from formal lecture-based teaching, with increased emphasis on practical sessions, informal approaches, role-playing, etc.

Jaume: problem-based learning improves participation, as does the use of small group work, e.g. preparing case studies. The University of Barcelona provides laboratory-based, field-based and workplace-based skills training. Students give presentations and critically review each other's presentations. Other formats include games and debates.

Caterina: Methods used include practical exercises/games (e.g. to learn about the characteristics sought by employers), review and presentation exercises.

Belgin: Students have discussions with supervisors, e.g. about preparation of the thesis for publication.

Sonia: Students presentations include the thesis and group work. Presentations are made during online meetings.

Elena: Active participation is initially resisted but is ultimately generally popular. Her MSc students organise a conference (including setting up the submission and review process, presentations, producing the proceeding, etc).

Tasso: It is important to take into account the role of workplace placements, presentation and discussion with other students and tutors, and involvement in scientific publications. The diversity of individual abilities and individual backgrounds is an issue for skills training.

Margaret: It is important for students to have hands on experience (especially for a "real" task such as organising an actual conference), and to experience teamwork (give marks for team performance or get the students to distribute the marks). It is important (if difficult) for the trainer to stand back and let the students get on with it.

Cristina: For overseas students, it is important to practice presentation of work in English.

Ioannis: (undergraduate) students give individual presentations in tutorial groups and there is student participation in marking of tutorial presentations. Students are allowed to revise their essays after tutorial discussions. Statistical training is based on working with datasets. There is use of videoconferencing.

Elisabeth: Students are given tasks such as small projects and presentation. There is a 3 month thesis with a workplace placement, and oral plus written presentation.

Discussion of training guidelines etc

Graham: the UK research councils have encouraged provision of courses for postgraduates, both through Research Masters degrees or (more recently), provision of courses within PhD programmes. Within the PhD, courses are still not completely compulsory - for example students based mainly overseas may not take all the courses although most complete induction courses. There are both 3-year and 4-year PhDs and it is not compulsory to have an MSc before doing a PhD.

Jaume – The Spanish model is now for a Masters degree of 1-2 years before starting a PhD. This is replacing the old model with compulsory PhD courses. The old 5-year BScs are also now being replaced by shorter BScs(?)

Catarina: in the Netherlands, skills courses for PhD students are optional. However, within graduate schools, most students do courses. PhD degrees generally last for 4 years.

Belgin: Completion of an MSc is compulsory before the PhD. Language competence is compulsory for entry into the MSc. MScs last 1-2 years and students must obtain 21 credits. MSc students give one presentation. PhD students do a further 2 years of courses (21 credits) before the 3 years of research. They give two presentations, and have oral and written exams before starting their research.

Sonia: the old 5-year BSc degree has changed to 3-year BSc and then 2-year MSc (1 year of courses, one of research). An issue is that registration for a Masters degree is expensive so students are now effectively paying more for the same training over 5 years. Until now, there have been no PhD courses. PhDs are usually 3+1 years, up to a maximum of 5 years. PhD courses will be introduced.

Elena: MScs can be 1 or 2 years (a 1-year course can be 60 or 75 credits). To do a PhD (which is at least 3 years), in theory an MSc is needed. However, this has no legal basis so it is not universally applied. PhD students should attend at least 3 courses, although these are often subject-based courses rather than skills-based. Universities in Greece differ in relation to entry requirements. The University of Crete sets exams for admission to MScs and PhDs.

Elisabeth: The BSc is 3 years (180 credits), there is a 2 year MSc (1 year courses + 1 year thesis = 60 + 60 credits). PhDs last 3-4 years, including some compulsory courses on generic skills.

Summary of generic issues identified during discussions:

- There remains a mismatch between the BSc-MSc-PhD degree structures in different European countries and although these structures are currently changing in several countries, they are not necessarily converging.
- Related issues include the comparability of credit ratings of degree programmes in different countries and recognition of foreign degrees, even degrees from within Europe (e.g. some Spanish universities still do not recognize UK and French BScs)
- There is an issue of basic terminology – the terms “course”, “programme”, “module” etc, have different meanings in different countries.
- Universities differ in the breadth of skills training offered at MSc level – there seems to be a general core provision of training in statistics, presentational skills and scientific methodology but other types of courses (e.g. “effective behaviour in professional surroundings”) may be less widely available.
- The nature and extent of provision of generic skills training within PhDs remains highly variable. The quality of ad-hoc training may be related to the number of students a supervisor supervises. However, rules on maximum numbers of students supervised are not always applied and in any case it is necessary to take into account variation in the proportion of time supervisors spend on supervision and variability in ability to supervise!
- There is a consensus that participatory, informal, problem-based, role-playing/game based-approach can be very effective.
- Teaching in small classes is more effective.
- Common courses for students from different subjects/disciplines can be less effective, e.g. due to the need to use examples drawn from other disciplines. On the other hand, it is good to expose students to material from other disciplines.
- Some of the best generic skills teaching may be delivered ad hoc, e.g. by PhD supervisors
- The move to deliver generic skills training within specific courses rather than through ad-hoc on-the-job learning helps to reduce the variability in quality of skills training but may also result in loss of both the best and the worst skills training!
- Balance/prioritization of generic skills training is necessary, taking into account that skills training is often resource-limited (staff, funding), and student workload must be managed.
- Skills training can be delivered during induction courses, through courses provided throughout the degree programme, or “on the job”.
- Workplace experience is important.
- Mechanisms for monitoring/quality control are needed, including the opportunity for students to provide feedback.
- Uptake of courses depends on whether they are compulsory or optional and whether they are credit-rated.
- Students also need to be given feedback on their performance even if the course is not formally examined.
- How can delivery be tailored to individual needs when students come from a range of backgrounds and/or have a range of abilities/previous training? E-learning provides such flexibility (e.g. allowing students to select different entry points or choose different modules).
- It is also useful to survey student needs ahead of delivering a course (especially if there is scope to modify the course accordingly!).
- Although postgraduates tend to be highly motivated, students are increasingly focused on proximal targets (what is assessed for their degree).
- Students with different native languages may need additional language training. There is also an issue of low literacy levels among home students.

Questionnaire design, the survey and analysis

There was discussion of whether we need one or more questionnaire for each target group (students, academics, employers, graduates). In any case the first one will focus on basic issues, leaving the option of a more detailed questionnaire later on for certain specific skills.

Design will take into account the basic questions which we want to answer:

- Which skills are most valued?
- What are the gaps in training?
- Which skills are taught most/least effectively?
- Which delivery approaches work best?
- Are there country differences?
- What are the differences in perception between groups (student, graduate, employer, academic)?

Thus questions will include:

For each skill category (at the level most relevant to the respondent, i.e. BSc, MSc, PhD):

- *Is it important (1-10)?*
- *Is it taught (at each level – pre-university, BSc, MSc, PhD, lifelong)?*
- *If taught, is it effective?*

Generic questions

- *What methods of delivery are good?*
- *What is the involvement of industry in training?*
- *What quality control and progress monitoring mechanisms are in place?*

To facilitate analysis, as far as possible the questions will not be open-ended. Yes/no or scales of 1-3, 1-5 or 1-10 will be used. To facilitate comparison, all skills will be listed on a single page of the questionnaire. The draft questionnaire is appended.

The project will use Survey Monkey. However, all WP4 and 7 participants will, in addition:

- Ask their colleagues, students, graduates, and any relevant employers with which they have contact, to complete the questionnaires (either on paper or on the website);
- Distribute the questionnaire at relevant meetings and workshops.
- Ask other Aquatnet partners
- Ask colleagues and contacts from other aquaculture and fisheries projects

Prior to large-scale distribution, the survey will be trialled on a small number of respondents and, if necessary, updated.

WP4 will request assistance with data entry for those questionnaires completed off-line. The notional target for each core partner is to complete 50-100 questionnaires. All questionnaires returned and data entered by Christmas 2009 at the latest.

Entries should be checked for quality (e.g. spoof entries) and to avoid duplicates. We need to explore the security features of Survey Monkey.

Analysis will be carried out early in 2010, involving tabulation of basic findings and if possible modelling of responses (Aberdeen will coordinate this).

Additional methods of data collection

A small number of in depth interviews with “key persons” is proposed.

We also need to explore the literature (e.g. Crebert et al 2004 Higher Education Research and Development)

Further questionnaires have not been ruled out, time permitting!