



Analysis and the need for change of the PhD third cycle in the AQUA-TNET domain.

As stated in previous WP2 reports, the work done within the framework of this project focussed on increasing the quality of the PhD training period, irrespective of local customs and traditions in the administrative organisation the PhD study. There is obviously a great diversity in habits and customs across Europe which should be nurtured as long as they do not prohibit the possibility for a further increase in quality of the PhD training.

It is clear that in the future a lot more focus will be needed on the learning outcomes of the PhD study. In general these learning outcomes are poorly defined at the university level and hence there is also a lack of tuning in that sense across Europe. Although this statement is not a plea for strong harmonisation across Europe, the lack of tuning prohibits that progress is being made for instance at the mobility level (interuniversity and intersector mobility) in the taught as well as in the research phase. The organisation of the PhD study in ECTS in the taught as well as in the research phase would greatly help the mobility of PhD students, which ultimately could contribute to the quality of the study. It needs to be said that this tuning is extremely difficult to organise, and might need some financial incentives (e.g. EC grant for mobility) to gain larger momentum.

The increased emphasis on the taught phase will require some adjustments. As in some European countries the PhD study is in principal limited to 3 years, it is believed that the combination of the taught phase with the research phase within a 3 year period is poorly manageable, if one does not want to jeopardise some of the learning outcomes of the research phase. With respect to the latter, the increasing and justified emphasis on peer-reviewed articles produced by the PhD candidate on the basis of executed research requires a 4 year study period if that needs to be combined with a taught phase especially in the AQUA-TNET domain, where experiments can last long and can sometimes be restricted to certain time windows.

The research groups in the AQUA-TNET domain are sometimes small. Hence it is unlikely that every university will be able to develop and maintain courses at the PhD level as part of the taught phase. It is more feasible and desirable to organise that at the European level (see section 10 of the WP2 Final Report) especially for courses dedicated to the AQUA-TNET domain.

The variety in socio-economic status of the PhD student across Europe is bewildering. In view of the fact that PhD student often contribute significantly to the advanced research, it is advisable to review this aspect across Europe as it might contribute to the socio-economic mobility and hence the attractiveness of a scientific career.

Finally it could be of interest to better map the societal requirements and skills of post-docs in the AQUA-TNET domain, so that the PhD programme can be better tuned in the sense.