

In October 2008, seven partner universities from Europe and Japan embarked on the internationalisation and mobility programme; INTERFACES. **Engel Vrieling** outlines the major achievements and perspectives that lie ahead

A bridge to the East

The INTERFACES consortium comprised the Universities of Groningen (leading EU party), Uppsala, Heidelberg, Bochum, Osaka (leading Japanese party), Kyoto and Tohoku, and aims to establish long-lasting collaborations in education and research. For the establishment of this co-operation, funds of the Industrialised Countries Instrument – Education Co-operation Programme (ICI-ECP) of the European Union and the Japan Student Service Organisation (JASSO) were successfully acquired to enhance student and staff mobility.

The focus of the INTERFACES programme is on natural sciences, a field that progresses rapidly to a fully internationalised academic community, in which education and research increasingly is directed towards the emerging and globally recognised societal challenges (such as energy, food, water and health). Along this transition in knowledge economies, there is a growing demand to prepare the future generation of leaders in science, government, and industry, who are well-trained and have upper-level competences to determine the future success.

In natural science, the quality of international communication and dissemination, as well as intensity of institutional co-operation are key drivers to act in the very forefront of both fundamental and applied research. Simultaneously, this forefront science fuels the pipeline for innovative and sustainable applications. For this reason, in INTERFACES it is a specific goal to enhance internationalisation in education, science and business to intensify international and intercultural awareness as well as to intensify the competence development of early stage researchers.

Alignment

The consortium has embarked on aligning the educational programmes at master's level between Europe and Japan. Even in Europe – irrespective of the Bologna Decree to introduce the bachelor/master's system – such an alignment requires substantial effort to agree when it comes to optimising mobility and credit portability. Based on the experiences gained in various existing bilateral scientific collaborations, the consortium has been able to circumvent bottlenecks to simply operate as flexibly as possible. By individually designing the anticipated study programme and/or thesis research during the internships, the preferences of the students to



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visit one of the partner institutions abroad are met, whilst adapting to current formal institutional exam regulations.

A profound achievement of the initial phase of INTERFACES is that a successful and active framework has been established that has so far facilitated exchange of well over 50 students and more than 60 faculty members over a four-year funding period. Noteworthy is that the majority of staff mobility came from Japanese scientists and administrators to adopt the best elements of the European higher education system in view of internationalisation and credit transfer.

Student and supervisor questionnaires show that services and support provided at both the sending and receiving universities are highly appreciated. In addition, the students identified the following important elements that improved their professional competences: i) deepening of theoretical knowledge and experimental skills; ii) ability to independently deal with complex problems; iii) integrating the multidisciplinary and international aspects in science; and iv) awareness of and respect to cultural differences.

Student supervisors unanimously agreed that the students have improved their talents to act more

Partners:

EU: University of Groningen (co-ordination EU side), The Netherlands; University of Uppsala (Sweden); Ruhr-University Bochum (Germany); Karl Rupprechts University Heidelberg (Germany).

Japan: Osaka University (co-ordination Japanese side), Kyoto University, and Tohoku University.

independently, an absolute prerequisite to establish a leading position in academia (e.g. natural science), government or industry.

Preparative courses

Encountered difficulties by students are limited, and predominantly are caused by the language barrier between Europe and Japan. For this reason preparative language and cultural courses are available for students who aim to visit a counterpart.

In time, internationalisation also will become firmly embedded in the European and Japanese education systems, most probably resulting in fully 'English-taught' bachelor and master's programmes. The INTERFACES consortium now is at the onset of such a transition and will build on the following key aspects: i) a bottom-up approach, embarking on already existing research collaborations between tenured scientists at the seven partner universities; ii) the high level of transparency and trust between the partners; and iii) the flexibility to individually tailor student mobility to meet applicable exam regulations.

These success factors also allowed the consortium to overcome a major set-back due to the natural disaster near Fukushima in 2011. Yet, it is also apparent that new scientific collaborations do emerge, typically expanding to the various fields outside natural science. This expansion at the same time raises the level of multidisciplinary to even higher standards throughout the participating universities.

Strengthen and intensify

Beyond the funding period, INTERFACES will continue as a much broader mobility activity, aiming to further strengthen and intensify the established ties between the seven partner universities. The consortium strongly believes in the chosen direction and already has sustained the collaboration in both education and research by solid bilateral agreements. Actually all partner universities remain involved and continue in supporting inbound and outbound students, as well as stimulating faculty staff to explore new directions and means for collaborative efforts in education and research.

However, to sustain the fruitful alliances and to ensure a stable intercontinental mobility, every network depends on a strong commitment and endurance of the scientists, their institutions,



Major achievements of the INTERFACES consortium:

- Bilateral agreements between all European and Japanese partner universities;
- Intensified collaboration for internationalisation in education and research;
- Reinforcement of scientific collaborations;
- Improved competence development of (under)graduate students; and
- 'An excellent experience'.

industry, and even government. Inevitably, substantial funding needs to be available to consolidate the efforts and to ensure that students and faculty easily pass the intercontinental bridge between Europe and Japan.

The ultimate goal is firm and is targeted to incorporate joint and/or double degree study programmes, preferably further enhancing research collaborations if not expanding the consortium with new partners. This certainly fits the EU ambition to cross continents by supporting mobility programmes with industrialised countries such as Australia, Canada, USA, New Zealand, Korea, and Japan, who are expected to become fully integrated in 'Erasmus for All' under the next EU framework programme, Horizon 2020.

As part of that, the INTERFACE strategy stands to train excellent and independent professionals, who are creative, ambitious, collaborative, and well aware of social and cultural differences between Europe and Japan. In the end, leading scientists in academia, government, and industry will share a mutual interest to come to sustainable and innovative solutions to solve the grand societal challenges of the near future.

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browse www.sci.osaka-u.ac.jp/ITP/ICIECP_INTERFACES/Program_outline.html