

INTERFACES

Groningen Graduate School of Science in the Netherlands is bridging European-Japanese education and science, as research co-ordinator E.G. Vrieling explains

Natural sciences progresses as an international arena, in which communication, dissemination, and collaboration are key aspects in forefront fundamental research that drives the pipeline for innovative applications. For the coming decades, internationalisation in education, science and business becomes increasingly important to face emerging societal challenges (e.g. energy, food, water, health) that will be experienced globally. Therefore, we must prepare to intensify the international and intercultural awareness as well as competence development of our future leaders in science, government, and industry. A first step is to align educational programmes, which in Europe has been achieved since the Bologna Decree by the introduction of the bachelor/master's system and stimulation of student mobility by acknowledgement of exchange activities as part of local study programmes or in firmly established joint and double degree programmes. The EU scope is to cross continents by supporting mobility programmes with industrialised countries such as Australia, Canada, US, Korea, and Japan, becoming fully integrated in Erasmus for All in the next EU framework programme Horizon 2020.

INTERFACES is a mobility programme in natural sciences that aims to strengthen the EU-Japanese collaborations in education and research by supporting internships of exchange students and international teaching activities of faculty staff. The ultimate goal is to firmly incorporate joint study programmes and research collaborations in the four EU (Groningen, Uppsala, Heidelberg, and Bochum) and the three Japanese (Osaka, Kyoto, and Tohoku) universities. The strategy is to develop excellent and independent scientists, who are creative, ambitious, collaborative, and as well as are aware of social and cultural differences. With support of the EACEA (EU) and JASSO (Japan), the consortium just completed the first three-year period to establish a successful framework in which respectively more than 50 students and more than 60 faculty members have been mobile.

Key to the success of INTERFACES are:

- A bottom-up approach, embarking on already existing research collaborations between tenured scientists at the seven partner universities;
- The high level of transparency and trust between the partners; and
- 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 in exchange due to the natural disaster near Fukushima in 2011.

The INTERFACES programme metaphorically is best considered a construction site, for instance to build a bridge by establishing a strategy and framework (1st stage), implementing the

construction plan (2nd stage), and consolidating the established structure by reinforcements (3rd stage and beyond). INTERFACES started from various active one-to-one alliances in research ('single strands') that were successfully transformed to a network in the area of natural sciences ('a bridge of intertwined strands').

In the course of its first stage the study programmes, the crediting systems and grading criteria were at best aligned, allowing credit portability. Simultaneously, student and faculty mobility gradually increased, further reinforcing the alliance between the partner universities. In other words, the consortium has just reached the end of stage 1, establishing a quite stable bridge; in fact, it is ready now to fully implement internationalisation. 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, industry, and even government. Inevitably, substantial funding needs to be available for the implementation and consolidation stages to ensure that students and faculty easily pass the current bridge between Europe and Japan.

In summary, INTERFACES has demonstrated its value for the partner universities and has set the stage to consolidate the bilateral agreements, even expanding beyond natural sciences. With exploiting the experiences of INTERFACES, students and faculties can expect to more easily cross the bridge between Europe and Japan to fully profit from intercultural and international competence development. 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; no doubt, we are in it together!

Logos below (from left to right) Funding agency EACEA/European Union; Funding agency JASSO; University of Groningen; Osaka University



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