

Cross-border Education

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Introduction

The Kuroshio Science Symposium is stepping forward to its first decade. With the continuous efforts by the governmental institutions and the linked universities in the Symposium, scholars share their findings that could solve problems in fishing industry, agriculture, the ecosystem, etc. This is a good time to explore new projects that would bring all the members closer together. To anchor the cross-border education theme of the 8th symposium and to strengthen the link among the institutions, the idea of forming the Kuroshio League seems to be natural and right. Like all other alliances, the purpose of the League is to facilitate resource sharing between institutions for the benefit of citizens, business, industry, and students. Therefore, it is essential to review examples around the world and see what approach the Kuroshio Science Symposium could take as the next step.

Case in point: International Commission on the Protection of the Rhine

The Commission started with a conference. Does that sound familiar? Some facts about the Rhine:

- Third largest river in Europe run through 9 countries
- 58 million people in the catchment area
- Drinking water supply for 30 million people

In order to face the ever-increasing problem of pollution, the first conference of the “International Commission for the Protection of the Rhine against Pollution” was held in 1950. The Commission acts as a platform for the member countries to exchange critical information. In addition, it also provides a forum for discussion of issues related to the pollution and restoration of the Rhine. In 1963, Switzerland, France, Luxembourg, Germany, and the Netherlands signed the Berne Convention and the International Commission on the Protection of the Rhine against Pollution was officially established. The Convention on the Protection of the Rhine (the “Convention”) was signed at Berne, Switzerland on 12 April 1999. According to its Preamble, the goal of the Convention is to increase multilateral cooperation in the

sustainable development of the Rhine’s ecosystem.

In January 2001, the Convention adopted “Rhine 2020,” a sustainable development program that plans detailed objectives and measures for a Rhine protection policy. The Salmon 2020 is one of the core parts of the Rhine 2020 program and aims at creating an almost stable wild salmon population in the Rhine ecosystem by 2020.

The Rhine case is inspiring as it proves that an unofficial organization that aims to improve people’s lives can eventually take on a crucial role. That is what the Kuroshio Science Symposium is trying to achieve as well. The following table provided by Professor Akira Tominaga compares the Rhine River with the Kuroshio area. If nine countries can work together on one project, there is no reason why three countries bordering an ocean current could not do something that benefits them all.

However, the success of the Rhine project is based on three major factors, the first being a clear mission. Undeniably, creating a sustainable ecosystem is the objective of all contract parties in the Convention. This goal synchronizes all the habitants’ wishes to have a better living environment. The second factor is creating a legal formality. Under the current contract, member countries are bound to contribute personnel, funding, and information to the Convention. Last but not least is the sharing of information and benefits. The reason the project can last decades is because crucial data can be shared among the members for further strategy adjusting; consequently, the project has the potential to successfully create a sustainable environment for the public.

A famous Chinese saying is the following: “It takes 10 years to grow a tree and a 100 years to bring up a generation of good men,” emphasizing the fact that education is a long-term plan and is the key to forming a culture. Reviewing the issues and resources in the Kuroshio region, it is not surprising that cross-border education comes as one of the new topics in the symposium.

Cross-Border Education

UNESCO-APQN Toolkit defines the term as follows:

Table 1: Comparison of the Rhine River with the Kuroshio Current

	The Rhine River* ¹	The Kuroshio Current
Nations	9 countries	3 countries
The flow rate	2,200 m ³ /second	40,000,000 m ³ /second**
Inhabitants	~58,000,000	~250,000,000
Representative fish	Salmon	Bonito
Major pollution & problems	Pesticides from an industry, 1986	Air pollution, Acid rain, Overfishing, Eutrophication, Oil pollution***
Chemicals	Lead, Ammonium, Phosphorous	Land-based pollution: dioxins, PCBs, Cadmium, Mercury, Lead****
Recovered Invertebrates *****	Bryozoa, Insects, Molluscs, Crustaceans, Leeches, Turbellaria, Fresh-water Porifera	Not applicable

*Ben van de Wetering. Activities of the International Commission for the Protection of the Rhine. (www.iksr.org). Erik Mostert. International co-operation on Rhine water quality 1945-2008: An example to follow? Physics and Chemistry of the Earth 34: 142-149. 2008. **Wataru Ito. Net Transport of the Kuroshio/Kuroshio Extension and its Seasonal Variation. 伊藤渉. 黒潮・黒潮続流の正味流量及びその季節変動について. 気候時報, 特別号, 75: S19-S-31, 2008. ***Kuroshio Current large marine ecosystem. Retrieved from <http://www.eoearth.org/view/article/154058> (The Encyclopedia of Earth. Edited by Mark McGinley, Nov. 21, 2008). ****Ministry of the Environment. Present Status of Marine Pollution in the Sea around Japan. October 2009. *****In connection with the increase of oxygen content these invertebrates were recovered at 2000 compared to those in 1970s.

“Cross-border education is the delivery in one country of education that directly originates, in whole or in part, from another country.” Currently, educational resources open to students and faculties from other countries are not unknown to institutions of higher education. This trend can be observed in student mobility projects carried out among universities around the world.

anchors the trend of cross-border education: student mobility projects. By moving among schools, cities, or countries, students build up cultural adaptation abilities and communication skills in addition to academic knowledge. Moreover, this is the reason students are now adopting the concepts of learning outside their classrooms and their home countries.

Student Mobility Trend in Higher Education

Augustine of Hippo once said, “The world is a book, and those who do not travel only read one page.” This sentence

As we can see from the Fig. 1, the trend can be easily observed in Taiwan. In universities, the number of short-term study students, including exchange students, language learning students, and other non-degree seeking students, has been

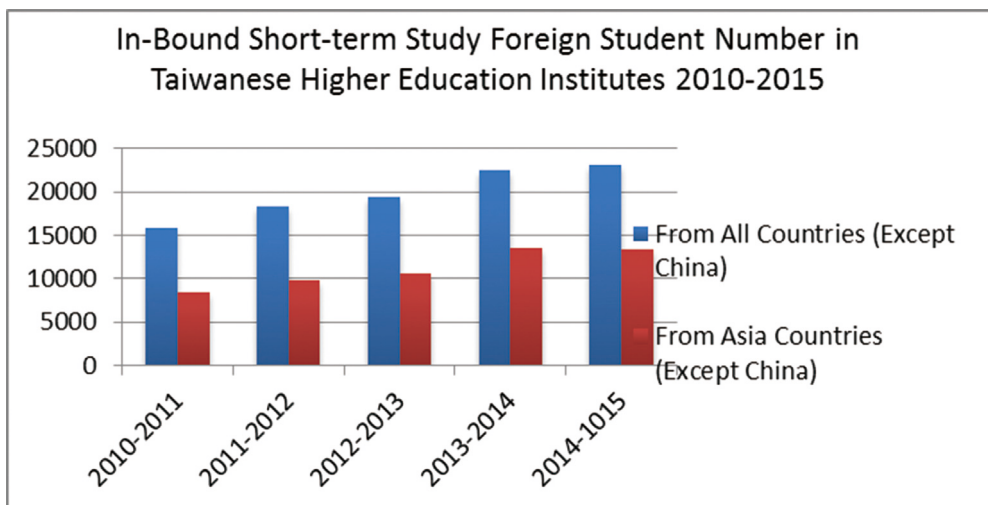


Fig. 1: In-Bound Short-term Study Foreign Student Number in Taiwanese Higher Education Institutes 2010-2015 (Source: Ministry of Education, Taiwan)

increasing over the past five years.

It is obvious that institutions of higher education are welcoming students as well as providing more opportunities for students to take part in such mobility projects. Thus, partnership with other institutions is essential. Even governments put efforts into cross-border education in order to build strong alliances. This is not only as such an alliance provides more resources to the students but also because institutional alliances help facilitate brainstorming and the flow of knowledge.

Let's review a few examples and see what other institutions have accomplished. Listed below are two major examples of international organizations that focus on cross-border education projects.

Cross-border Education System Example

First, in Asia, **University Mobility in Asia and the Pacific (UMAP)** aims to facilitate the understanding among countries in the Asian-Pacific region by promoting mobility of university students and staff. In 2013, there were 19 official member countries (514 member universities), including Japan (91), Philippines (20) and Taiwan (113). Under UMAP, universities carry out several projects that facilitate linkage among the members. The main project that focuses on student mobility is **USCO, UMAP Student Connection Online**. **Three programs compose USCO:**

- **Program A (UME) - Multilateral Student Exchange Program**
- **Program B (UBE) - Bilateral Student Exchange Program**
- **Program C - Super short-term program**

Students of the UMAP members can attend various academic programs provided by member universities and some programs even provide a scholarship. Students can transfer the credits from host universities back to home universities under the UCTS credit points scheme (UMAP Credit Transfer Scheme). UCTS have numerical values (1 to 60), and are allocated to course units to measure student workloads required to finish the course. Sixty credit points represent the full-time student workload for a full academic year.

In Europe, the **Erasmus Program** (European Community Action Scheme for the Mobility of University Students) is a European Union (EU) student exchange program established in 1987. The aim of Erasmus is to encourage and support the academic mobility of higher education students and teachers. In January 2014, a new program, Erasmus + or Erasmus Plus, combined all the EU's current schemes for education, training, youth and sport. The ECTS (European Credit Transfer and Accumulation System) also provides a common ground for the students and universities to calculate the credits that students

earned from host universities and transfer them back to their home universities.

In the above examples, countries opened educational resources to students. In order to set up a friendly and effective program, countries implemented a unified credit transfer scheme where students can take courses at any partner university and redeem the credits at their home university. Thus greater student mobility in the region can be achieved.

Prospections on Forming a Cross-border Education League

In the past, symposiums, professors and experts were researching from different angles to solve problems such as overfishing, water pollution and acid rain. The solutions required governmental support such as funding and regulation setting. However, now, through the power of cross-border education, projects such as exchanges, internships, and joint research will all be able to facilitate the process of problem solving.

For example, the problem of overfishing can be addressed by providing fishers with an alternative income, one that is still related to the ocean. Cultivating algae is a solution that has been proposed in previous studies. However, with no further academic involvement, fishers would not know which kind of algae to cultivate and what skills they should acquire. Hence, students and faculties in the league can play important roles in exchanging, researching and spreading the latest concepts to improve the life of the region.

Conclusion

In the Kuroshio region, countries share the same current that brings abundant natural resources. Yet, if a certain point of the current is negatively affected, all the countries in the region will suffer. Issues unique to the Kuroshio region could be targeted successfully if there was an organization dedicated to them. To make a difference, the author believes that the best way is through education and alliance.

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- UNESCO-APQN Toolkit:
<http://unesdoc.unesco.org/images/0014/001464/146428e.pdf>