

## **Cross-Border Education In the Kuroshio Region**

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### **ABSTRACT**

Nowadays, countries around the world are being pressed by significant challenges and opportunities that transform the landscape of Higher Education Institutions (HEIs) worldwide. Some of these challenges are internationalization and globalization that has led to rapid technological changes and unprecedented mobility of labor and capital. Academic mobility or cross-border education is one key element of internationalization. Cross border education can play an important role in facilitating country-level lessons, good practice experiences and the understanding of programs or issues related to the Kuroshio Current. The term Kuroshio, from the publication of Kochi University entitled *Kuroshio Science*, is a Japanese word that means “black current,” which describes the bluish-black color of the water where this current traverses. This ocean current flows north from along the eastern coast of the Philippines, turns right off the southern coast of Taiwan and then runs eastward along the Pacific coast of Japan, forming a triangle between these three countries, thus the term Kuroshio triangle. The cross border education in the Kuroshio Region offers numerous opportunities for collaboration to help build its human capital development and to understand the phenomena affecting the region. This paper discusses the experience of Bicol University and Kochi University in the pursuit of cross-border education in the Kuroshio Region.

**Keywords:** Cross-border education, Kuroshio Region, globalization, internationalization, academic mobility

### **Introduction**

Universities all over the world are facing significant new challenges and some fascinating opportunities that seem to influence changes in the landscape of higher education worldwide. Internationalization is changing the world of higher education, and globalization is changing the world of internationalization.

Globalization is the driving force for a revolution in education and the economy and can be defined as “... the flow of technology, economy, knowledge, people, values, ideas ... across borders. Globalization affects each country in a different way due to a nation’s individual history, traditions, culture and priorities” (Knight 1999). The emergence of a knowledge economy and technological developments has contributed significantly to the globalization process. Knowledge-based production has become the distinguishing characteristic of globalized economies, and the quantity of knowledge embedded in the goods produced and exported has

increased considerably in the 1990s (Varghese, 2013).

Thus, the governments of different countries are forced to invest in education to produce a highly competitive and educated workforce as well as knowledge, which has become a crucial factor of production and an engine of economic growth in the globalized knowledge economy of a country. Knowledge nowadays is increasingly becoming a commodity that propels the productivity and economic growth of a country. Through the incorporation of knowledge-based concepts, competition is not only among countries and governments nor about businesses and enterprises but among institutions and universities not only within the country but across borders.

The internationalization of higher education institutions is an inevitable consequence of globalization and a knowledge-based economy that has led to an increasing demand for quality and highly-skilled graduates who can compete in a global economy. It is defined as the “... process of integrating an international, intercultural, and global

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dimension into the purpose, functions (teaching, research, and service), and delivery of higher education at the institutional and national levels” (Knight 2008).

Internationalization is one of the major forces impacting and shaping higher education as it changes to meet the challenges of the 21st century. One of the key elements of internationalization is academic mobility/cross-border education. Cross border education refers to the ‘movement of people, knowledge, programs, providers, policies, ideas, curricula, projects, research and services across national or regional jurisdictional borders’ (Knight, 2007).

### Cross Border Education

As the global tertiary community expands through internationalization and globalization, it is thus necessary for SUCs/HEIs in a developing country like the Philippines to transform and enhance its higher educational services, prepare individuals and the institution for the challenges of a global economy that is increasingly characterized by a highly competitive workforce.

Quality education is essential for creating a sustainable human resource base in achieving economic growth and national competitiveness. Knowledge economies require people with theoretical knowledge to promote research activities, with professional skills to develop production, and with technical skills to produce and support production.

Employment opportunities have expanded globally. Skill requirements are high and have attracted workforce from various countries resulting in the migration of the highly skilled workforce to meet the skill requirements of the expanding knowledge economies of developed countries. The more competent a graduate of an institution with students from other countries is, the more he/she is able to work in an international environment, thanks to current trends in globalization and internationalization.

One widely advocated strategy by higher education leaders worldwide in seeking ways to effectively utilize available resources in raising the quality and efficiency of education is greater regional cooperation and cross border

collaboration among higher educational institutions. UNESCO and the OECD, in their Guidelines for Quality Provision in Cross-Border Higher Education, state that: 'Cross-border higher education includes higher education that takes place when students follow a course or programme of study that has been produced, and is continuing to be maintained, in a country different from the one in which they are residing. Cross-border higher education may include higher education by private and/or for-profit providers.' Cross border education can play an important role in facilitating country-level lessons, good practice experiences and understanding of programs or issues held in common.

According to J. Knight (2002) as cited by N. Varghese in 2011, cross border education under GATS framework can be delivered through one of the four modes. The modes of cross border education are as follows:

- a. cross-border supply, where services are transmitted across borders (e.g. distance education programs);
- b. consumption abroad, where the consumers (students) cross the border to pursue studies (e. g. exchange programmes and joint degree programmes);
- c. those featuring the commercial presence of the provider, where service suppliers cross borders to deliver the services on-site (e.g. branch campuses or twinning and franchising arrangements); and
- d. those that rely on the presence of individual persons, where an individual crosses borders to provide the service (e.g. staff/faculty/researcher mobility from one country to another as an employee of a foreign university, as part of an academic partnership).

Furthermore, Table 1 shows a framework to understand the nature of cross-border education and illustrates two significant trends – the vertical shift downwards from student mobility to programme and provider mobility and horizontal shift from left to right signifying substantial change in orientation from development cooperation to competitive commerce, in other words, from aid to trade.

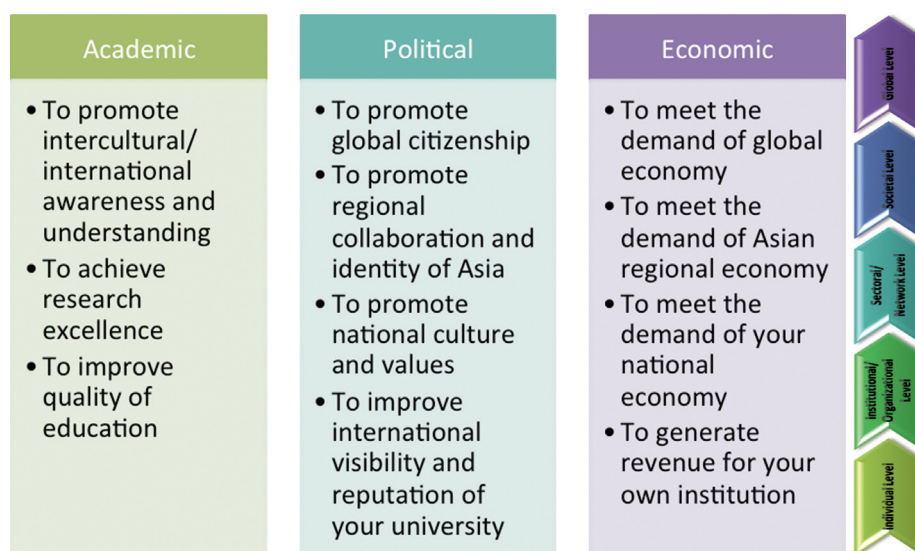
**Table 1. Framework for cross-border higher education.**

Category	Forms and conditions of mobility		
	Development	Educational	Commercial
	Cooperation	Linkages	Trade
<b>People</b> Students Professors/scholars Researchers/ Experts/consultants	Semester/year abroad Full degrees Field/research work Internships Sabbaticals Consulting		
<b>Programmes</b> Course, programme sub-degree, degree, post graduate	Twinning Franchised Articulated/validated Joint/double award Online/distance		
<b>Providers</b> Institutions Consortia Companies	Branch campus Virtual university Merger/acquisition Independent institutions		
<b>Projects</b> Academic projects Services	Research Curriculum Technical assistance Educational services		

Source: OECD, CROSS-BORDER TERTIARY EDUCATION

One of the favorable impacts of cross-border education is the capacity development of the nations through sharing of resources that promote learning, empower people, build social capital and create connections among different countries. Figure 1, illustrates favorable impacts of cross-border education.

The cross-border mobility of students to advance their studies used to be the traditional form of cross-border flows in higher education. Cross-border education has become a source of future labor supply in the developed world since a majority of those who enter as students in the developed countries would like to stay there after their studies (Varghese, 2013).



**Fig.1. Favorable Impacts of Cross-border Education**

Source: [http://www.inter.mua.go.th/main2/files/asia-europe/5%20march%201300%20Dr\\_%20Kazuo%20Kurida.ppt](http://www.inter.mua.go.th/main2/files/asia-europe/5%20march%201300%20Dr_%20Kazuo%20Kurida.ppt)

## Cross border Education in Kuroshio Region

The term Kuroshio, from the publication of Kochi University, the Kuroshio Science, is a Japanese word which means “black current” which describes the bluish-black color of the water where this current traverses(Fig.2.). This ocean current flows north from along the eastern coast of Philippines, turns right off the southern coast of Taiwan and then runs eastward along the Pacific coast of Japan, forming a triangle between these three countries, thus the term Kuroshio triangle. It is acknowledged to be one of the largest currents in the world. It spans to a width of more than 100 km and its flow rate of about 7kph carries 20-50 million liters of seawater per second. The Kuroshio Current has been referred to as Typhoon Alley because of the severe tropical storms that follow its warm-water energy path striking the Triangle.

The Kuroshio Region is rich in marine resources and a diversified ocean ecosystem. However, due to the impact of climate change and the impact of different economic developments, the way of life of the people living in the Kuroshio Region, especially those living in coastal areas and who depend upon terrestrial and marine resources, have tremendously been influenced.

Kochi University established its Graduate School of Kuroshio Science in 2004. To make Kuroshio Science a success, Kochi University initiated the Alliance of Higher Education Institutions in two other countries, the Philippines and Taiwan. Recently, Malaysia and Indonesia also joined this collaboration. Bicol University in the Philippines came into this alliance in 2006 and both universities are now conducting a wide range of intensive studies, focusing particularly on surveys of the coastal environment and marine ecosystem of the Kuroshio Current.

Recognizing the significance of the terrestrial ecosystem to marine ecology and resources, the idea of an ecosystem approach to achieve total development was explored during the 4th conference series held at Kochi University, Japan in March 2011 with a theme of “Effects of Recent Societal Changes on the Natural Environment in the S-Shaped Zone: Modifications to Marine and Land-based Ecosystems”(Fig.3.). Two other schools of higher education, Universiti Malaysia Sarawak and Universitas Tanjungpura, West Kalimantan, Indonesia were also invited to this event and their participation paved the way for the expansion of the “Kuroshio Triangle” to the above mentioned “S-Shaped Zone.” The new framework provides a link between the forests in the highlands, the human ecosystem and the marine ecosystem, all of which are traditionally studied separately.

Last year’s symposia co-hosted by Tanjungpura University and Universiti Malaysia Sarawak put emphasis on enhancing management through “Harmony between People



Fig.2. Kuroshio Current.

and Environment”. More recently, given the urgent need to establish a sustainable society in the region, young minds of scientists, researchers, planners, managers, and educators from borderless regions have worked together on information exchange, and on achieving strong cooperation and collaboration among institutions to create a holistic body of knowledge and information for the benefit of both people and the environment. Similarly, scientific findings and results are



Fig.3. Kuroshio Triangle and S-Shaped Zone.

being transformed into concrete outcomes that benefit all the stakeholders within the Kuroshio sphere of influence. It is a fact that no one has the monopoly of all things.

The cross border education in the Kuroshio Region offers numerous opportunities for collaboration to help build human capital development. Kochi University and Bicol University have a Memorandum of Agreement on Academic Cooperation between the two universities. Both universities agreed to develop collaborative activities in academic areas such as the following: (1) exchange of faculty, researchers and other research and administrative staff; (2) exchange of students; (3) conduct of collaborative research projects; (4) conduct of lectures and organizing symposia; (5) exchange of academic information and material, and (6) promotion of other academic cooperation and mutual aid agreements.

Since 2007, Kochi University has invited staff and students of Bicol University to actively promote exchange of personnel and scientific information. Professor Victor Soliman of BU and Professor Raul Bradecina of PSU conducted their PhD studies at Kochi University. Mr. Alex Camaya and Mr. Jonnel Corral stayed and conducted their study at Kochi under the JASSO and JENESYS programs, respectively. In return, over 30 professors, students and administrative officers from Kochi University have visited Bicol University. Ms. Chika Kihara of the GSKS conducted her study at the BU Tabaco Campus in 2010 and Dr. Victor S. Soliman finished his doctoral studies in Fish Ecology and Management. In addition, Alex Camaya is now in Kochi University for his PhD studies on algae and Mr. Renan Bobiles has also been accepted for a PhD program and is planning to work with marine biotechnology.

Bicol University has been an active partner of Kochi University in an interdisciplinary approach adopted by the Kuroshio Project that addresses challenges that cannot be resolved by just one field study. It is for this reason that the International Collaborative Office was established at BU Tabaco Campus in 2008 and has been used as the base for these joint studies. The office has its own staff and accommodations where about a dozen researchers can live, work and collaborate.

Since 2007, a yearly Kuroshio International Conference has been organized in order to exchange scientific information and better understand the impacts of the Kuroshio from ecological, environmental, and social perspectives in the countries of the Kuroshio Region. In each conference, various institutions present results of their different studies which basically aim at finding ways to conserve the environment of the ocean ecosystem. In addition, the conference convenes enthusiasts of the Kuroshio studies and promotes collaborative work, which, in the long run brings about a common view of sustainable management of a shared ecosystem.

Along this line, Bicol University has hosted two Kuroshio International Conferences. The 3rd symposium was hosted by Bicol University Tabaco Campus, Albay, Philippines with the theme, “Benefits and Balance along the Kuroshio Current: Marine Biodiversity and Resource Management” (March 2010). This symposium concretized the creation of a scientific network among the three universities and formally established the “Kuroshio Triangle”. The 6<sup>th</sup> conference was held at Bicol University Tabaco Campus, Albay, Philippines with the theme “Management and conservation towards sustainability in the Kuroshio Region”. Again, the main concern was in regard to resource management and conservation. The 7<sup>th</sup> conference, co-hosted by Tanjungpura University and Universiti Malaysia Sarawak had the theme “Enhancing management through Harmony between People and Environment”. Again, the issue at hand was resource management but this time the emphasis is given to the harmony between resource users and the resources.

## Challenges and Way Forward

1. The benefits from cross border education far outweigh the cost. Nonetheless, the participating universities must be able to provide the budget to support the international mobility of researchers and students.
2. The Philippines Higher Education quality assurance criterion for excellence has already recognized the international mobility of students and faculty as an indicator of a high standard of quality. Thus meaningful programs for international exchange like Kuroshio Science must be developed. Other areas such as product innovation, health research and technology development must also be explored.
3. Language barriers must be overcome and so Bicol University is already actively offering *nihongo* classes in its language center. We hope that faculty from Kochi University can come and teach the Japanese language course in Bicol University. The BU language center has been given a challenge to offer ASEAN languages.
4. More students from Kochi University should come to Bicol University. Perhaps we can develop a program course where part of the studies can be done at Bicol University and part in Kochi University and award a double badge degree.
5. Investment to put in place technology aided learning systems must be prioritized. For a university with meager resources and committed to keep cost of education affordable, the university administration must be able to lobby for government funding to finance this capital intensive infrastructure. Beyond the hardware, the innovation of faculty and students to contribute in



developing internally generated software might be a good option but it must be able to overcome challenges of compatibility with the systems used by partner institutions.

6. The need to make available modernized laboratory facilities cannot be overemphasized. It will widen the opportunity for local researchers as well as attract international researchers to the countries in question.
7. Policies must be put in place to ease entry of foreign students to avail of cross border education opportunities in the host country while ensuring that such arrangements protect legitimate students.

## Opportunities Ahead

Higher education has long been an agent of change, and has served as a think tank. International cooperation among educational institutions may be able to use the resources of the world to address these issues, seek solutions, and improve responses to eradicate poverty, promote health care, and bring peace to the world. Through cross border education we can plan to make changes in the right direction through cooperation, mutual trust, and friendship.

As president of Bicol University I would like to thank Kochi University for being a very good big brother and an accommodating development partner, for sharing your dreams, your vision, friendship, cooperation, and support. Rest assured that Bicol University will continuously commit to the deepening and expanding relationship and cooperation within the Kuroshio Region to make a difference in the lives of the people.

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