

A UNIVERSITY INTERNATIONALIZATION STRATEGY: THE CASE OF DALIAN OCEAN UNIVERSITY (DOU)

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ABSTRACT

Internationalization has become a trend of development in higher education. It links to the international standards and addresses global development in sustainable ideas and international activities. Basing on the current situation of Dalian Ocean University (DOU), DOU is aiming at developing an internationalization strategy to improve the competition capacity in higher education and fisheries scientific research. By means of the comparison of similarities and differences between Icelandic universities and DOU, the aim was to try to achieve an internationalization strategy which is focusing on the four steps of creation of internationalization atmosphere, construction of teaching and research team, development of international education, promotion of the internationalization idea.

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1 INTRODUCTION

Internationalization is high on the agendas of national governments, international bodies and institutions of higher education. Higher education serves the politics and economy of the nation and it influences the development of a country. It is an important reference factor to evaluate the international status of a nation (Wit, 1998). With the increasing globalization and internationalization of education in the new century, the universities pay more attention to develop their own strategy of internationalization. Against the background of globalization, internationalization in higher education should be well prepared and ready to meet the requirements of societies, economy and labour markets (Qiang, 2003). These requirements include not only academic and professional knowledge, but also multilingualism, and social intercultural skills and attitudes.

The concept of internationalization in higher education is continually developing and rich in content. During the past two decades, the international activities in education have expanded from simple exchange students to a complicated and diversified business. Internationalization becomes more and more popular and features in different fields (Wit, 2011). So, what is internationalization, why and how should higher education institutions work toward internationalization? What kinds of strategies should be developed in universities in the future? How are sustainable internationalization plans made in higher education? All these questions should be cleared before the strategies have been made and implemented.

This project is based on the current situation of Dalian Ocean University (DOU), and aims at developing an internationalization strategy to improve the competitive capacity in international education and fisheries scientific research. Focusing on the international activities, this study will determine the weakness and shortcomings which are obstructing internationalization development in student exchange, international education, teachers training and international scientific research. To achieve the aims of this project, the research and analytical structure should be based on the understanding of internationalization in education, choosing the appropriate methodology, analysing the data and making the conclusion (Figure 1).

1.1 Internationalization in higher education

Internationalization in higher education focuses on the students, academic staff, research, teaching and management. Internationalization in higher education is a complicated and rich concept. It relates to history, culture, resources and policy. Experts and scholars study in internationalization give different definitions from various angles according to the different education, historical and cultural background. From the institute itself, internationalization can be defined as a process of bringing a dimension into teaching, scientific research and service functions (Knight, 1993). From the angle of social attributes and resources, internationalization in higher education should make efforts to reach the demands of global societies, economic, and labour markets. All international activities should reflect these requirements (Wende, 1997).

In the 21st century, many countries have been focusing on the globalization and internationalization, especially in higher education. International education has become broader and it covers from academic studies on multicultural and intercultural education. All the international activities focus on the mobility, exchange and cooperation in research, education, culture and academic activities (Wit & Editor, 2011).

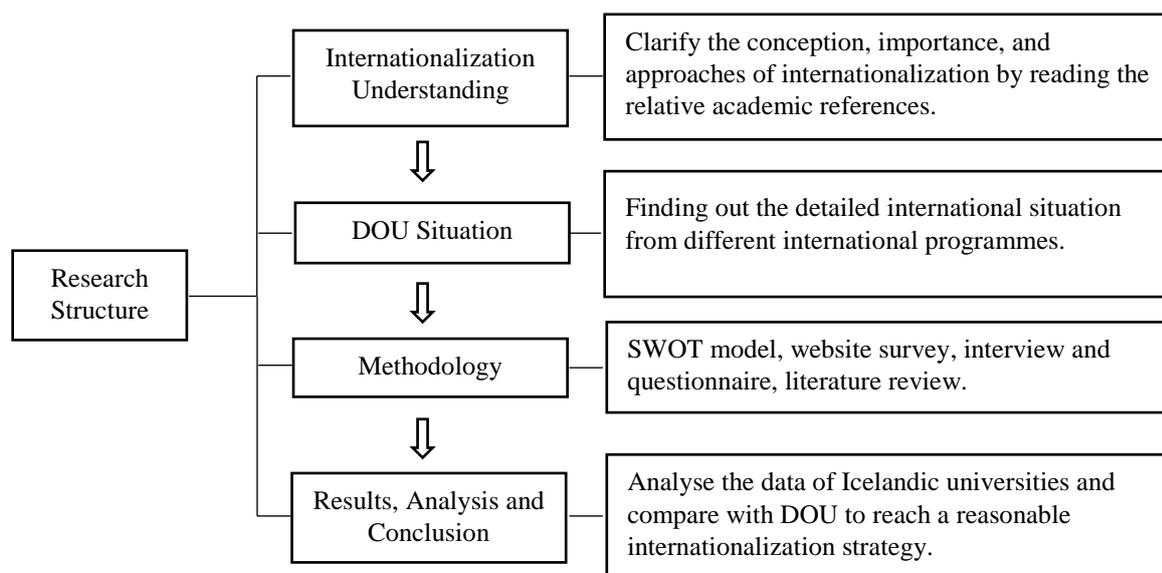


Figure 1: Project Research Structure

The concept of internationalization has become more comprehensive. It has replaced the isolated international activities to become a dynamic process, focusing on sustainability of all the dimension and the primary and universal functions of an institution of higher education, such as teaching, research and service to society (Maket & Mbaraka, 2012). It can be said that internationalization in higher education is not only the strategy which links to the international standard but also faces to the global to develop the higher education. Internationalization in higher education should be a sustainable idea which helps the institutes to organize students, teachers and staff to develop an awareness of internationalization and improve the skills to study abroad. It is also a comprehensive international activity which focuses on the mobility of students and faculty, innovation of projects and programmes, and development of academic, cultural, economic and political activities.

1.2 Importance of internationalization

There are many reasons to develop internationalization in education such as academic and professional requirements, education reform, and scientific research development. Modern universities know that internationalization can help to achieve a significant economic interest and gain better international reputation.

1.2.1 Rationales of Internationalization

There are four main rationales in developing internationalization in higher education, economic, academic, socio cultural and political (Zolfaghari, 2009). Economic rationale, that is a fundamental reason, which can affect the human resource development, strategic alliances, income generation/commercial trade, nation building, social/cultural development and mutual understanding at national level. It also helps to increase the international branding and profile, quality enhancement/international standards, income generation, student and staff development, strategic alliances and knowledge production at the institutional level (Knight, 2009). With the development of internationalization, the economic rationale is expanded to include the requirements of the modern, more global labour force needed, the competition of new technology and the development of marketing in higher education.

Academic rationale, that is the requirement of academic quality improvement of universities. By means of internationalization, higher education can achieve international standards in teaching, scientific research, student education and development strategy. Academic rationale can be at the core of internationalization development in higher education, which includes the aims and function of higher education (Qiang, 2003).

Socio-cultural rationale is a good way to promote the national culture by international education. As a symbol of a nation, many countries want to make the national culture more influential and diversified in globally by means of developing internationalization (Qiang, 2003). As a part of the wealth of nation, culture and language can be delivered, developed and recognized through international education. This is also an important impact factor to improve the international reputation and level of a nation.

Political rationale, development of internationalization in higher education is a good way to show the country to the whole world and strengthen and promote national identity (Pritam, 2008). By providing good education and setting up “two-win” international cooperation, this will be very helpful to recognize the country’s position and role as a nation in the world.

To understand the individual purpose to join the international activities, a survey about personal overseas experience was done in 2013. During the survey about the motivations of studying abroad, gaining the experience of new culture were the top reason chosen by nearly 33% of respondents. Followed by having fun and meeting new people and developing life skills in a non-classroom setting. The other 20% of respondents prefer the language studying and breaking up the academic routine (Lambert & Usher, 2013) (Figure 2).

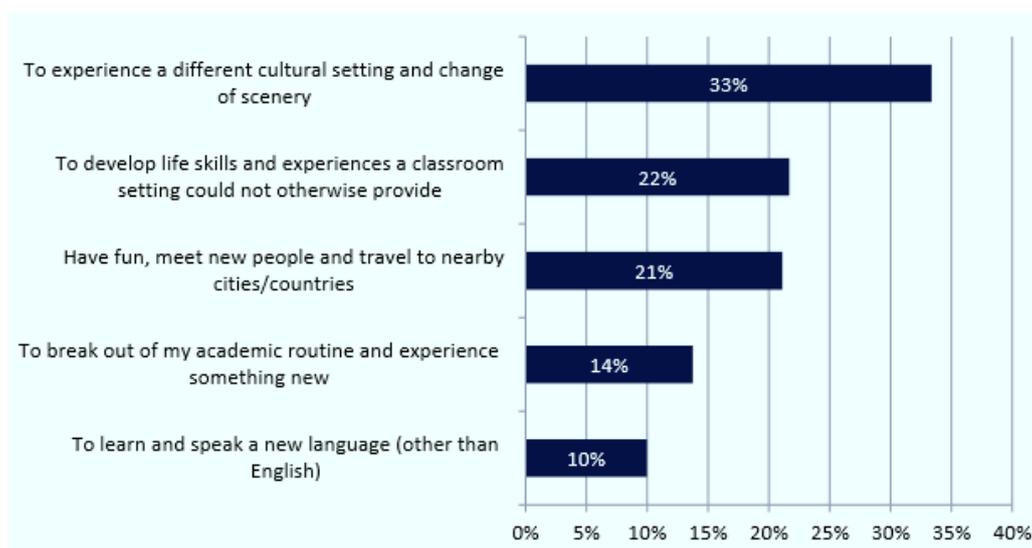


Figure 2: Reasons for Studying Abroad

1.2.2 Benefits of Internationalization

Internationalization brings different benefits to countries at different stages of development. Some developing countries get benefits in sustaining and growing science and scholarship through dynamic academic exchanges. They may also improve the capacity in social and economic activities by developing internationalization in higher education (Tahira & Masha, 2015). For developing countries, the benefits of internationalization include improving academic quality, broadening the horizon of students and staff, promoting the capability of

international competition of universities. For developed countries, the main benefits are revenue generation and brain gain. A report from IAU (International Association of Universities, 2012) indicates that the western developed countries gain the main financial benefits from the development of all kinds of international education and academic programmes.

There are also other key benefits of internationalization including joining the global education and labour markets, diversifying and enhancing the learning environment for the benefit of domestic students, the University, and the nation. Internationalization in higher education provides a platform for the people to become internationally knowledgeable and cross-culturally sensitive. It creates a chance to understand the global environment and sets up the connection with different cultures and social environments for the students (Vainio-Mattila, 2009).

What are the main benefits to individual during internationalization development? Through a survey of students who studied abroad, some questions focused on the main gain from international education. 71% of the answers are referred to cultural customs, norms, and traditions; 49% of the answers emphasized getting personal experiences by living in a new country; 34% of the answers were also learning history, politics, and current events (Lambert & Usher, 2013) (Figure 3).

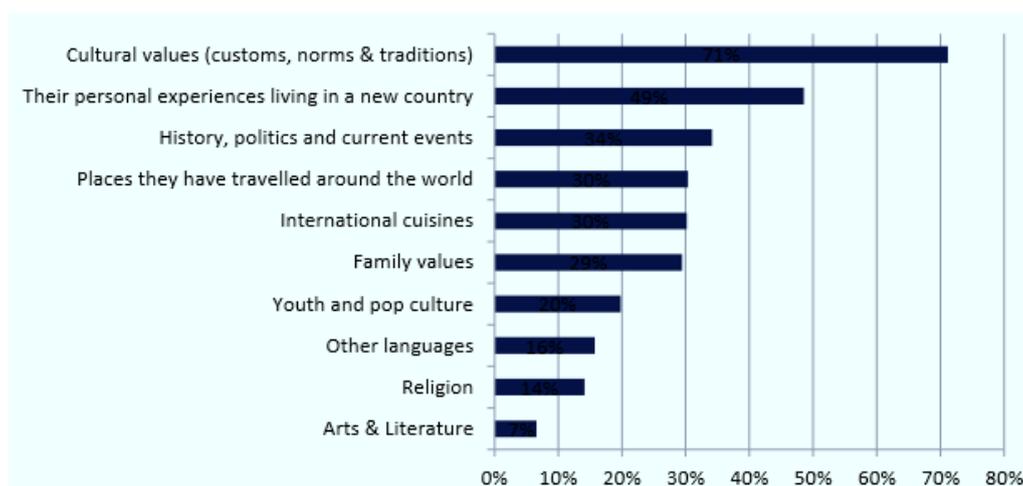


Figure 3: A Survey of Students Who Studied Abroad

In the book “The Wider Benefits of International Higher Education in the UK”, there are some description about personal development impacts from studying abroad during the three phases of before going, during and after the study period. Through the analysis of the three phases, two main benefits are included. One is the personal growth through overcoming the challenges during the study, the other is enriching the experience of working, living and communication (Mellors-Bourne & Humfrey, 2013). There are some examples of the interviewees from different counties as follows:

A South African interviewee undertook two internships with major firms in summer breaks during her Manchester business degree, which she believed had greatly helped her to progress very rapidly back in the finance sector in South Africa.

A Chinese graduate who studied microelectronics at Southampton and focused on his studies during term-time but undertook three internships with law firms on patent work. He has subsequently changed career to become a patent lawyer.

A Malaysian interviewee who studied at the London School of Fashion. In the placements, she had obtained with London designers during her BA course, as well as doing other work behind the scenes during the London, Paris and Milan fashion weeks. After her graduation, she became a lecturer in fashion in Shanghai and did freelance design work. She felt it was the work experiences allied to her course that placed her ahead of peers who also all had master's degrees.

A Nigerian scholar interviewee, worked for Oxfam while studying in the UK. After he went back, he was involved in a lot of civil society organisations and NGOs. He realized that volunteering was something that was needed for change in Nigeria. This social service awareness was picked up from the UK working with Oxfam at the time.

From the feedback of the interviewees, the benefits of individual in international education can be concluded as broadening the horizon, enriching the experiences of work and society, and gaining more opportunities in hunting jobs.

1.3 Approaches to internationalization

After the importance of internationalization in education has been cleared, it is very necessary to find the approaches to reach internationalization of higher education. There are various approaches to develop internationalization among different countries. Qiang (2003) asserts that several authors have used, over the decades, a similar typology of approaches as follow.

The activity approach, this is the development method to develop internationalization, which promotes activities such as curriculum, student exchange, technical assistance, and international students. The competency approach which emphasizes the development of skills, knowledge, attitudes and values in students and staff. In this approach, internationalization has changed from the isolated activities to overall and sustainable development. The echoes approach which emphasizes creating a culture or climate that values and supports international/intercultural perspectives and initiatives. The nation of culture and identification can be promoted step by step. The process approach which stresses integration or infusion of an international/intercultural dimension into teaching, research and service through a combination of a wide range of activities, policies and procedures (Qiang, 2003).

According to the different approaches, many universities find their way to develop internationalization. For example, MIT focuses on the teaching, scientific research, service and community. Tokyo University focuses on international education, scientific research, international cooperation and administration structure. The University of Edinburgh focuses on attracting the students and scholars to take part in the scientific research to increase their reputation in academic and political fields. Ohio State University focuses on double diploma programme, international industrial cooperation, and overseas branches (Feng & Liu, 2013). Most Chinese universities focus on student exchange, teacher training, foreign student education, and international research cooperation.

Additionally, there are also some evaluation indicators of internationalization (Table 1). Governments use different elements to evaluate internationalization level in higher education. The evaluation will be focused on if internationalization is included in the universities'

development mission, if the universities have a clear internationalization strategy, if the university have a special organization to manage this task, if internationalization can get support from government and serve to society, if the universities can give international courses and develop international scientific research, how many teachers and students participate the international activities, what kind of fund, reputation and economic interest can be gotten by means of internationalization. There are five common evaluation indicators which are widely used, such as strategy, organization structure, scientific research, students and teachers. (Feng, 2015) Some countries have their own emphasis due to the different definition of internationalization. From development to evaluation, governments are paying attention to internationalization in higher education.

Table 1: Internationalization indicators used by different governments (Feng, 2015)

Indicators	UN	USA	JAPAN	KOREA	AUSTRILLIA	UK	CHINA
Mission		√	√	√	√	√	
Strategy	√	√	√	√	√	√	√
Organization Structure	√	√	√	√	√	√	√
Support and Service	√		√		√	√	
Course and Teaching	√	√		√	√		√
Scientific research	√	√	√	√	√		√
Students	√	√		√	√	√	√
Teachers	√	√	√	√		√	√
Funds and Resource			√	√			
Reputation							√
Economic Interest						√	

1.4 Internationalization in Chinese higher education

In the 21st century, China's role in international education has been increasing. With the economics of development, China has joined the competition in international higher education. The position of countries in international education is changing quietly. China is participating in student and academic exchange, and international programmes' cooperation. These are all realities and his impact cannot be ignored (Wit, 2011).

But, before we study internationalization in Chinese higher education, we should clear the relationship between universities and government. As an academic entity, Chinese public higher education institutions play the role of providing higher education and conducting scientific research. At the same time, they are also government institutions required to be involved in the implementation of governmental policies, plans, goals, and aspirations (Fuhui, 2016). In the process of internationalization, Chinese higher education has been constantly regularized by various laws, regulations and rules related to education. Since China obtained a membership to WTO in 2001, a strong support towards internationalizing Chinese higher

education can always be read in various policy documents. A recent example is the National Program for Medium and Long Term Educational Reforms and Development 2010-2020 issued by the State Council (2010). The rapidly increasing number of Chinese exchange students at western universities is also a testimony to the welcoming and encouraging attitude of the Chinese government to higher education internationalization. So, we do understand that Chinese government has shown a strong supporting attitude and has four main roles: national strategy designer and program planner, major funding provider.

The Chinese government is encouraging internationalization in higher education under the national education strategy. Under this background, China has gained four remarkable achievements in internationalization of higher education. In 2016, there were 370,000 overseas students studying in China and 520,000 Chinese students studying abroad. In the same year, there are 410,000 Chinese teachers went abroad on the government scholarships, international programmes, and self-funding. About 100,000 foreign experts were recruited as the long-term or short-term specialists. There are three models of academic and scientific research cooperation. First, individual cooperation, which means the academic cooperation is conducted by individual researchers in different countries. Second, project collaboration, which means the cooperation is conducted by two parties based on a joint project. Third, college-college partnership, which is focusing on the colleges or universities to create the opportunities to develop the international cooperation in the common academic fields (Youming & Li, 2010). In the aspect of “Chinese-Foreign joint programme” which collaborate to educate students by Chinese and foreign partner university, in order to strengthen the management of this practice, Chinese government issued Interim Provisions for Chinese-Foreign Cooperation in Running Schools, in which great importance was attached to it as an essential form of Chinese education in its international exchanges and cooperation as well as a complement to Chinese education as a whole.

In 2016, Chinese Ministry of Education did an investigation on internationalization in higher education was conducted. This is a basic task to promote the international affairs in universities. Internationalization level become to an important evaluation of universities development. On the other hand, “One belt, one road” strategy was started by the Chinese government in 2013. It refers to the New Silk Road Economic Belt, which will link China with Europe through Central and Western Asia, and the 21st Century Maritime Silk Road, which will connect China with Southeast Asian countries, Africa and Europe. In this background, China start to implement the policy to exploit, utilize and protect ocean. Large amounts of people who have the background of international fisheries knowledge and skills will be needed in the future. At the same time, “One belt, one road” is also backed by a US\$50 billion investment fund and its framework includes an element focused on joint education programmes that has contributed to a growing network of more than 2,000 such links between Chinese institutions and foreign partners. In 2017, the Chinese government started the implementation of “Double First-Rate”, a strategy to build up world-class universities and first-class disciplines in China’s higher education. DOU has been selected in the world-class universities construction list in Liao Ning province and fisheries also be written in the first-class discipline construction list. According to the overall plan, internationalization will be one of four important indicators to be evaluated during the “Double First-Rate” construction in the coming five years.

2 ABOUT DOU

2.1 Introduction of DOU

Dalian Ocean University (DOU) originated from the Northeast Fishery Technology School which was founded in 1952, evolved into Dalian Fisheries Academy in 1958 and Dalian Fisheries University in 1978. In 2010, the present name, Dalian Ocean University, was approved by the Ministry of Education. After successful passing of the Qualified Assessment of Undergraduate Teaching conducted by the Ministry of Education in 1998, in 2008, DOU passed the Quality Assessment of Undergraduate Teaching with “Excellence”. Located in the beautiful coastal city of Dalian (Figure 4). DOU has developed into the most exclusive university with a wide diversity of disciplines in northern China which features aquaculture, oceanic science and technology. The disciplines include agriculture, engineering, science, management, arts, law, and economics.

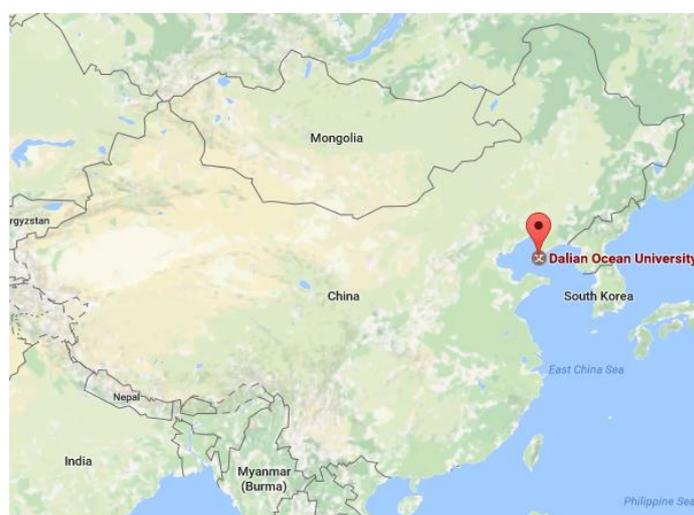


Figure 4: Location of DOU, China

DOU has a total student population of over 15,000. Full-time faculty members number more than 800, including 114 professors and 279 associate professors. The University has made great progress on international cooperation and communication. It has established long-term academic collaboration with more than forty universities and research institutes from foreign countries and regions including the USA, Australia, Japan, Norway, Korea, Russia, and Taiwan. This interaction has greatly promoted the international impact and reputation of DOU. Although DOU has long history in education, internationalization is still in the early stage. To reach the requirements of Ministry of Education, improving the international reputation and working the international markets in education, internationalization has become an urgent task to DOU.

The 13th five-year plan of DOU will be implemented from 2017. Internationalization has been written into this plan as a mission of promoting the capability of international education and teaching in DOU. In the next five years, DOU will enlarge the scale of foreign students' education in short term exchange and diploma student programmes, especially the post-graduate student education in fisheries. DOU will develop more English programmes for domestic students through establishing agreements with European countries and Tasmania of Australia. DOU also will strengthen the cooperation with fishery industries in the fields of internship, scientific research and service. Teachers' training will become the main task of internationalization development of DOU. DOU plans to recruit teachers who have overseas academic experience and provide opportunities and supports to teaches for studying abroad,

training and taking part in the international scientific research. Focusing on building the international teaching team, DOU supports teachers to join all kinds of international programmes in the level of CSC, State Oceanic Administration, Ministry of Agriculture and Liao Ning province, etc. The main target of developing international teaching team is promoting the capability of international education, strengthening DOU's teaching team and reaching the requirement of Chinese higher education and globalization.

2.2 Importance of internationalization in DOU

When we talk about the importance of internationalization, we must consider the stakeholders. The students, teachers and staff, DOU itself, government, families, partners and societies can all be stakeholders. Focusing on internationalization, students need more suitable opportunities to join international programmes. Teachers and staff need more opportunities to training abroad and improve themselves in teaching skills and scientific research abilities. DOU, itself need the development of internationalization in academic, education, management and service to strengthen competitiveness, international position and reputation. The government makes increasing demands in DOU in education, service to society, and economic development. Families are looking forward to hunting for a good job once their children graduate from DOU. The international partners are looking for a larger scale of cooperation in international student education. To reach all these requirements, it is necessary for DOU to develop internationalization.

During the 60-years of development, DOU has accumulated plenty of experience in education and scientific research, especially in the fields of fisheries, ocean science and technology. These would be the basic of developing internationalization in education. By learning advanced educational system, management mechanism, curriculum setting and others, China's higher education is closely connected with the outside world and has been progressed and internationalized greatly (Linhan & Danyan, 2013).

As internationalization progresses, the benefits from internationalization become clear to DOU. First, the teaching skills and scientific research capabilities of teachers will improve with more confidence and sense of pride. This will create an opportunity to recruit and teach more international students and provide lectures in English. The tuition fee is also an important part of revenue. Second, development of the international exchange and cooperation programme will attract more Chinese students. Third, the international scientific research cooperation will improve the academic level and strengthen the competitiveness of DOU, which will be the discipline development evaluation by the government. In conclusion, internationalization development will help DOU to gain more international reputation as well as attracting more talented scholars to work in DOU. In the coming 5-10 years, DOU should be able to offer a postgraduate programme in English, the numbers of foreign students should exceed 500, and DOU should rank among the top three in the ocean universities in China.

2.3 Current internationalization situation in DOU

2.3.1 Students Exchange Programmes

DOU has non-diploma exchange programmes with the universities from Japan, Korea, Russia, Australia and the province of Taiwan. About 50 students a year from DOU study in these programmes for 6-12 month. They are not required to pay a tuition fee. The lecture will be provided by the host university according to the agreements.

DOU has “Chinese-Foreign Joint Projects” with FESTFU of Russia and OTAGO Polytechnic of New Zealand. These projects are approved by the Chinese Ministry of Education. The students in these projects can get a diploma from both universities by they complete the all curriculum required. The students should bear all the tuition fee and living expense. To qualify with annual “University Entrance Examination”.

DOU also has “Transfer Credit Programmes” with the George Fox University of USA and University of Huddersfield in the UK. The students are selected from DOU who have finished the first 2-years of study. The students also can get the diploma from both universities after they complete all requirements. Students should bear all the tuition fee and living expense. The students have to face the risk to extend the study period overseas due to the transferring of credit.

2.3.2 Foreign Students Education Programmes

DOU has foreign student education in diploma programmes and short term programmes. Most of the students come from Russia, Japan and Korea and all the courses are taught in Chinese except the master lectures. In the bachelor level diploma programmes, the students study at DOU for 2.5 years and study in the home university for another 2.5 years according the agreement between the two universities. The students can get a diploma from both parts. In the master level diploma programmes, the student should study in DOU for 2-3 years. The course can be taught in English or Chinese, the supervisor will play an important part in the education. In the short term programmes, the students join a class on Chinese language and Chinese culture for several weeks or half a year. The students in short term programmes can only get some credits without a diploma during the study in DOU.

2.3.3 Teacher Training Programmes

DOU is struggling to provide more opportunities for teachers to study or train abroad. Currently, there are 3 ways for teachers to train overseas, UNU-FTP, government scholarship and international partner opportunities. Some teachers in the fields of aquaculture, fisheries management, fisheries food processing and fisheries technology have been selected to participate in UNU-FTP since 2002. Chinese SCS provides some scholarship programmes for teachers such as visiting scholar programme, university international cooperation programme, local government international cooperation programme and foreign language education programme. DOU also tries to find opportunities for teachers in abroad through training agreements with international partners. To support teachers who go for training abroad, DOU keeps their position for them and may receive the salary while training abroad.

2.3.4 Scientific Research Programmes

International scientific research cooperation is the most complicated programme. DOU encourages teachers to go abroad to attend international conferences or visit some institutes for a short period funds of a scientific research project which is approved by the government. DOU also invites some international experts to Dalian to conduct the research in China. All this is done are individual behaviors, DOU still need a stable cooperation platform and an evaluation system to improve the international scientific research cooperation.

3 METHODOLOGY

To answer the research questions and reach a reasonable plan for the internationalization of DOU, a website survey was conducted, and interview was conducted with some staff who are working in the Icelandic universities. Trying to achieve an internationalization strategy which is suitable for DOU was done by means of SWOT analysis and comparison between Icelandic universities experience and DOU.

3.1 Website survey

The University of Iceland (UI), University of Akureyri (UA), Reykjavik University (RU) and UNU-FTP have been successful in different international education and cooperation fields. They all pay attention to international education. UI and UA have extensive experience in exchange students and foreign students' education, while RU has more experience in international scientific research and teacher's training, RU also has an innovation and fisheries programme which is like more advanced than at DOU. UNU has a database in the alumni and publish a recorder twice a year to keep in touch. This can be a model in the international education. So, these four universities have been chosen and interviews carried out. Data on the different international programmes has been collected and compared. The data has been analyzed against background of different culture and politics, trying to find the similarities and differences between DOU and Icelandic universities regarding internationalization in education. Using this comparative approach, making a preliminary plan in the development of international education in DOU.

3.2 Interview and questionnaire

Seven interviews were conducted with the following individuals. Runar Gunnarsson, Project manager of international relations in UA; Harpa Sif Arnarsdottir, International coordinator in UI; Gudlaug Matthildur Jakobsdottir, Head of international exchange office in RU; Kristjan Kristjansson, Director of research service in RU; Mr. Einar Hreinsson, Director of teaching affairs in RU; Ms. Mary Frances Davidson in UNU-FTP and members of Innovation and fisheries programme at the RU. All these interviewees are experts with plenty of experience in international affairs. The interviews were conducted with a questionnaire (Appendix 1) with emphasis on different parts according to the interviewee's working responsibilities.

The five main topics of the questionnaire were identified from literatures review on internationalization in higher education. These five topics can be the key factors in developing internationalization. All the questions were chosen and organized according to rules in the book of "InterViews: Learning the Craft of Qualitative Research Interviewing" (Brinkmann & Kvale, 2014). It is based on the experience from DOU's, literature review, website survey. Target questions were aimed to supplement the data about internationalization useful in this project. The questionnaire was used to complement other data collection. It focused on key factors which affect the development of internationalization in education according to the literature review.

Second, it is necessary to make notes and recorder during the interview. According to the context, structured and unstructured interview can be used together. One question can lead to a number of follow-up questions depending on the response. This tend to be more like conversations than interviews.

Third, faced with lack of organisation of data, a summary and comparison in tables has been done (Appendix 2). All the data have been summarized into three tables with different items. In student exchange programme (Table App2-1), the data has been summarized in items of programme development, incoming and outgoing students, benefits, students tracing work, etc. In foreign student education programme (Table App2-2), the market development, benefits, tuition fee and students tracing work became to be the main items. In teacher training programme (Table App2-3), the summary is focused on training plan, benefits, funding and supports.

3.3 SWOT- the Harvard policy model

The Harvard policy model was developed as part of the business policy course taught at the Harvard Business School since the 1920s. The main purpose of the Harvard model is to help a firm develop the best fit between itself and its environment, that is, to develop the best strategy for the firm (Ryszard, 2016). Central to this model is attention to the internal strengths and weaknesses of the company and the values of senior management, to the external threats and opportunities of the social obligations of the firm. The systematic assessment of strengths, weaknesses, opportunities, and threats - or SWOT analysis - is the primary strength of the Harvard model (Figure 5).

In this project, it is necessary to clarify the internal strengths and weaknesses, and the external threats and opportunities of DOU. This is the key to develop internationalization by understanding DOU itself. A SWOT analysis carried out on the DOU's current situation, such as student exchange, foreign student education, teacher's training and international cooperative research. Information about DOU was collected from the daily annual reports, governmental internationalization publishes and communication meeting. By means of this assessments, the key success factors and distinctive competences can be identified. And the approaches of DOU internationalization strategy will be formulated. At the same time, information collected during interviews about the international experience of Icelandic universities will be used to evaluate and modify the strategy.

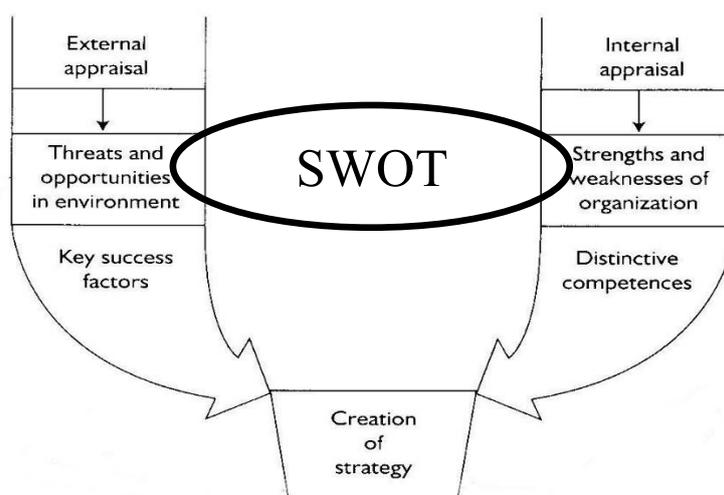


Figure 5: The Harvard Policy Model (1965)

In this project, the information from interview can be the primary data, the information from literature, website and SWOT analysis can be secondary data. The quantitative and qualitative data should be analysed by analytical approach to reach a clear result. To achieve the strategy of internationalization in education, the national policy about higher education should be understood firstly. It is also necessary to analyse the activities, methods and motivations of internationalization in different universities. The comparison in different international programmes between Icelandic universities and DOU is essential. From the comparison, the similarities and differences can be found. This will be helpful to DOU to understand itself and its international situation of internationalization in higher education.

4 RESULT AND ANALYSIS

4.1 Internationalization policy in Chinese higher education

China has a clear and well accumulated policy in how to promote international exchanges and cooperation, introducing quality education resources abroad, upgrading exchange and cooperation.

Reform and development of higher education in China calls the opening to the outside world, carrying out education exchanges and collaboration at multiple levels and in a broad scope, and raising education to international level. To reach the goal of opening up the Chinese economy and society to the world, China needs large numbers of people imbued with global vision, well-versed in international rules, and capable of participating in international affairs and competitions.

It is necessary to establish cooperation with renowned schools, education institutions, research institutes and companies outside China. Multiple approaches should be pursued to utilize quality education resources from abroad. Effort should be made to attract more world-class experts and scholars to teaching, research and managerial jobs in China. Outstanding Chinese students shall be attracted to serve the nation after they have finished their studies in other countries and regions.

Increased support must be provided for exchanges of students and teachers, mutual recognition of academic credits, and mutual or joint conferment of academic degrees between Chinese and foreign universities. Collaboration between Chinese universities and their partners abroad should focus on building platforms for collaborative teaching and research projects, promoting collaborative high-level research in basic or high technology. More international students should be admitted for studies in China. Foundation courses should be given to international students before they start college education in China. More disciplines should be taught in English in Chinese universities and the quality of education for those studying in China should be improved.

4.2 SWOT of DOU

SWOT analysis of the internal strengths and weaknesses, and the external threats and opportunities are discussed below.

4.2.1 *Strength*

DOU has a long history and experience in fisheries research and education. About 25 teachers have undertaken 6-month training at the UNU-PTP since 2000. DOU has teaching experience in Chinese language and culture for foreign students. Each year about 10 teachers study abroad through the visiting scholar programme, university international cooperation programme, local government international cooperation programme and foreign language education programme. The discipline of fisheries was ranked the third in an evaluation on education and scientific research by the Chinese Ministry of Education in 2015. DOU made of to the “Double rate” construction list of Liao Ning province in 2017.

4.2.2 *Weakness*

DOU has few lectures who can lecture in English, and most of the international programmes target undergraduate students. Only a small number of foreign students’ study at DOU. DOU does not have a long-term plan for teachers international training and research cooperation. There are few international cooperation programmes related to fisheries and ocean science. There are not enough exchange programmes for students in English speaking countries.

4.2.3 *Opportunity*

The “One Belt, one Road” policy provides a good opportunity to develop international education in universities. Internationalization in higher education has been written into the “next 5-year Plan” of DOU. “Chinese-Foreign Cooperative Educational Projects” with OTAGO Polytechnic in New Zealand provides a good opportunity to improve teaching skills in English. In 2016, two postgraduate students studied at DOU in diploma programmes. In recent years, DOU has recruited more than 200 teachers who are highly educated and could lecture in English. The Chinese Ministry of Education is encouraging international education and the number of foreign students in China is increasing year by year.

4.2.4 *Threats*

Some facilities such as student residences and canteens for foreign students are too old to attract young students. DOU provides limited financial support to teachers training abroad. More and more universities are paying attention to the international education. A competition in higher education is increasing. Foreign students prefer to the universities which can offer courses in English.

4.3 **Experience of Icelandic universities with internationalization**

4.3.1 *Summary of Results*

The interview conducted in this strong focused on aspects of student exchange programmes, foreign student education programmes, teacher training programmes and international research cooperation. Interviews are also useful to complement other means of collection information such as website survey and SWOT analysis of DOU (Appendix2).

In student exchange programmes, Icelandic universities establish relationships with overseas partners through an international office. Good quality exchange that creates value and good contacts with partners are the key to develop student exchange programmes. For incoming

students, Icelandic universities offer flexible lectures according to the student's language level and academic background. All the lectures are organized by the schools. All the Icelandic universities develop the exchange activities based on agreements with foreign institutes. All incoming students are selected and recommended by their home universities. The students are expected to have some knowledge background or have finished at least 60 ECTS at their home universities. All the courses are arranged by Icelandic universities. Different courses are provided by different universities depending on their ability to give lectures in English. Commanding English is necessary for the non-native English speakers with the requirement in TOEFL, IELTS or others available certificate. The international service will be provided by Icelandic universities in different ways.

For outgoing students, all Icelandic universities have same purpose to send students abroad to improve their study abilities to get to know different cultures, societies, language, future communication and overseas experience. Partner universities do not collect tuition fee from exchange students. Some grants can be applied for, when the exchange is within European countries. Before the students go abroad, they should submit an application to the international office, and all the courses has been chosen must be approved by the schools. International office contacts partners to confirm the exchange procedure. The international office and schools will evaluate and approve the applicants. The main difficulty, the exchange students face is usually how to choose the courses and get credit for them to meet the requirements of their home school. The credit will be approved and transferred depending on requirements in the Icelandic universities. When students finish their exchange, outgoing students submit a written feedback. A survey from incoming students and report from partner will be done besides the transcript recorder in some universities.

The benefits of student's exchange can be described in terms of benefits to the students and to the universities. For students, this is a good opportunity to increase their language skills, improve the personal life experience, academic and professional prospect, accumulate the experience and knowledge for future development. For universities, it is an international student environment that enriches the study community for teachers, staff and students at the host university. Local students get a taste of the international community without going abroad by meeting international students and teachers might teach in English.

In foreign student education programme, English or Icelandic is the common requirement for applications. All the Icelandic universities can give English lectures in graduate programmes. All teaching and research activities are organized by schools which admit foreign students. Public Icelandic universities have not a special strategy or marketing to recruit more foreign students. The main reason is that the public universities has no right to collect tuition fees from foreign students and no shortage of Icelandic students. The private university, RU operates a School of Energy, developed by energy industry entirely in English. In this programme, 95% of students are foreigners. The foreign students pay the tuition fees similar to what is concern in the EU. There is also a suggestion to make a teaching group by different nationalities teachers who have the knowledge and common sense of different culture to give the lecture to foreign students.

In the teacher training programmes, all Icelandic universities are engaging in finding opportunities for their staff to train abroad. Short term international education activities are available. The teachers can apply for grants from different government organizations. About the benefit. All Icelandic universities consider that it is important to meet with other colleague to see how things are conducted in their countries, see different educational culture, etc. It is

good for development of teaching methods. It broadens the perspective of the teachers and gives them further ideas how to improve their own teaching, when they meet other colleague and share ideas. When coming back to the home institutions, the teachers are normally inspired by new ideas and collaboration and that affects the students in a positive way. Routine evaluation of teaching is also important. This is done through questionnaires, self-evaluation by teachers, experts from other universities joining the class.

In the international research programmes, RU has a special research services which monitor opportunities for obtaining external research funds and provide assistance in applying for these funds, developing budgets, and lending other administrative support. The “Annual Assessment of Research Activity at Reykjavik University” is an efficient evaluation system to improve the international research cooperation. And this is carried out each autumn. The main objective of the evaluation is to examine the quality of the research and research activities of all academic staff with research duties over a period of 5 years. The outcome of the evaluation is used to decide the distributing of government research funds between the schools in the year following the period evaluated. The evaluation is carried out by four distinguished external scientists. The panel is selected by the RU research council in collaboration with the RU schools. Each school is asked to recommend at least 5 experts as potential candidates. All RU researchers who publish using Reykjavik University as their affiliation are obliged to submit a research report annually and be evaluated. The evaluation panel is asked to assign the following rating to each member of academic staff of each school:

- 0 -None or insignificant research activity.
- 1 -Little but nontrivial research activity.
- 2-Contributes to the international research community.
- 3 -Considerable and active participant in the international research community, with a clear contribution and impact.
- 4-Significant and active participant in the international research community, with a substantial contribution and impact.

In addition to assigning the scores, the panel writes short comments about each researcher on his/her strength and weaknesses, progress in research, etc.

In the cooperation with industry, the innovation and fisheries programme are a diploma programme of RU in Westman Islands. This programme is focusing on the connection among education, industry and innovation through practical training and internship. Experts from the fisheries industries are invited to give lectures to the students. These classes are directly connected with what the students have learnt from school and helps them understand how to put these theories into practice. Students have to complete a series of assignments which are focused on problems from actual production in companies and try to suggest some innovative ideas for firm processing. From the courses and assignments, students and companies can both get benefit. The students will be at an advantage to find a satisfactory job when they graduate from this programme. On this way, universities can provide a direct service to the society and industry. This programme pays particular attention to innovation in fisheries. They are pursuing how to apply theory into practice and cultivate the practical talents in the students.

4.3.2 UNU-FTP Graduate Tracing System

UNU-FTP as a special international fisheries training programme; it has a complete graduates’ tracing system. They realize that the graduate tracing system is a good supplement to develop

the programme. Mary Frances Davidson, the programme administrator, mentioned that it is necessary to build alumni and keep contact with all the graduates through the internet. All the promotion information, feedbacks, suggestion, evaluation from the graduates is collected, analysed and published on time. All the information from graduates will be updated during the programme development. The tracing system is not only a long term and sustainable graduates' database, but also an effective way to reflect on the situation of the running programme. This tracing system is also an interactive approach to investigate the training result from the graduate's part and improve the UNU-FTP.

Trainees who are non-native English speakers should concentrate and organize themselves around ideas rather than focusing only on the English language during the training. The trainees should read more English articles and practice English in brief sentences in their academic fields. Faced by internationalization, all the countries should pay attention to how to balance "brain gain" and "brain drain". During internationalization development, she suggests that the teacher and staff should try to use English in all kinds of fields including academic study since English will play a great role in developing the international affairs.

5 CONCLUSION

5.1 Overview of the challenge

The main problems of internationalization at DOU have emerged by analysis. DOU needs more teachers who has overseas academic experience and capabilities to give lectures in English. A teaching and research team in international education is necessary. DOU still needs more international exchange and cooperation programmes to improve the international education level. All these factors are the keys to the development of internationalization in DOU (Figure 6).

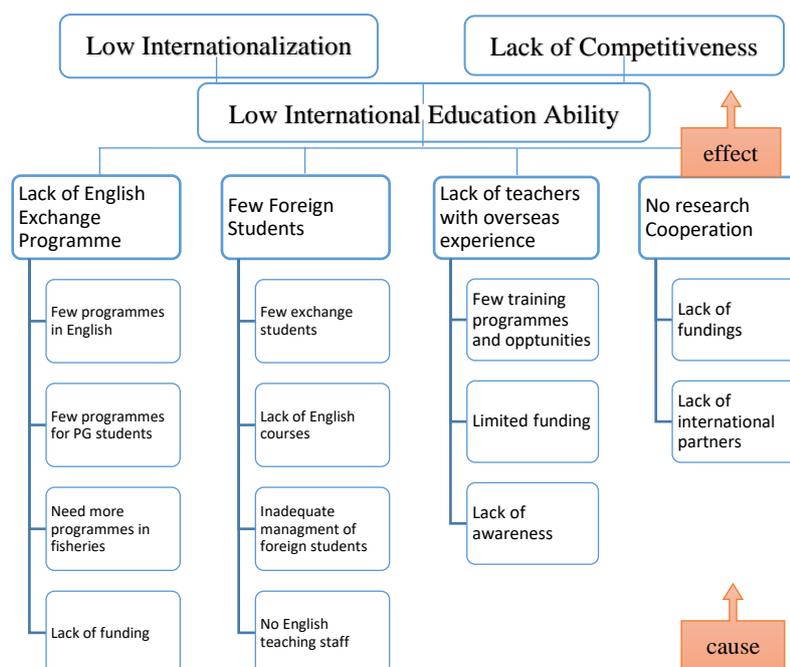


Figure 6: Overview of Challenges of Internationalization at DOU

5.2 Creation of internationalization strategy

Following the Harvard Policy Model and based on a SWOT analysis of DOU, the key success factors and distinctive competences has been identified (Figure 7 and Figure 8). The factors in “impact” and “importance” are selected according to my experience from international office of DOU. It becomes clear that the main goal of DOU’s internationalization in education is constructing teaching and research teams in the discipline of fisheries to develop the international education in English and increase the number of foreign students. Furthermore, DOU should engage in industrial cooperation with the discipline of fisheries and higher education. It is necessary to go deeper into analyzing the similarities and differences in English course organization, teachers training and foreign student management among the universities. To find a suitable way to develop the international education ability in DOU.

Key success factors

	Low impact	High impact
High importance	Facilities, Cooperative educational projects	Internal planning, Recruiting, funding, Courses in English
Low importance	More universities focusing on international education, Internal requirements	National policy, Increasing number of foreign students in China, Increasing competition

Figure 7: Key Success Factors of DOU

Distinctive competences

	Low impact	High impact
High importance	Fisheries education, Few programmes in fisheries	Training programmes, Few foreign students education at DOU
Low importance	PG student programmes, Scientific research	Chinese language education

Figure 8: Distinctive competences of DOU

On the other hand, the comparison and analysis are focused on the formulation of a strategy of internationalization in education. Based on the current situation at DOU, the interviews, and analysis has been done on the Icelandic universities, an internationalization strategy of DOU is proposed in the four steps described as follows:

Step One – Creation of an atmosphere of internationalization

In the experience of Icelandic universities, they do believe that the international environment can enrich the study community both for teachers, staff and students at the host university.

The creation of an atmosphere of internationalization can be promoted by a foreign language lecture, a foreign teacher or student, an international visitor, etc. Internationalization atmosphere is a special campus culture, and it can stimulate the teachers and students to take part in kinds of international activities consciously. To create a favorable internationalization atmosphere, DOU should publish existing international programmes which are run by means of campus presentations, website publishing, printing pamphlets, etc. It is also necessary to invite foreign experts to give reports or lectures in the classes, organize the students or teachers who have joined the international programmes to give an introduction of overseas experience.

DOU should encourage teachers with overseas experience to broaden the students' horizon. The international office should provide a chance for students to communicate with foreign teachers and foreign students by organizing an English corner, association, special festival party, etc. It is also a good way to enhance internationalization atmosphere through holding an international conference, culture celebration, short term summer camps, etc. An internationalization atmosphere is the basic requirement to develop international affairs which focus on the key success factors and distinctive competences of DOU. It is necessary to keep this atmosphere to be continual and sustainable to cultivate the international awareness of students and staff step by step. Taking the construction of "Double First-Rate" as an opportunity to announce the importance of internationalization in higher education development in the future.

Step Two – Creation of teaching and research team

Icelandic universities agree that international teaching and scientific research teams are the key to develop internationalization. They all encourage teachers to go abroad to gain more experience in teaching and research by means of different kinds of funding. Especially, RU has many foreign teachers and has developed an efficient international scientific research evaluation system which can be a model to DOU.

The priority disciplines in DOU are fisheries and ocean science. The construction of teaching and scientific research team should focus on the discipline of fisheries and develop a bilingual education system for Chinese students in fisheries and ocean science. This is the internal success factor and starting point to develop internationalization.

First, DOU should make a detailed plan on how to conduct teachers to go abroad and develop the international research. The plan should aim at the long-term internationalization development. This plan should include the selection of teacher, overseas training requirements, arrangements for returning, assessment of training, and evaluation of scientific research. Indicators of assessment of teachers performs should include overseas experience, international scientific research achievements, capability of teaching in English, and experience of teaching foreigners.

Second, DOU should help and encourage teachers to apply for funds for training or studying abroad. Compared with the Icelandic universities experience, the support resource can be from DOU's special funds, China Scholarship Council (CSC), international cooperation programme in DOU. International office can invite an officer from CSC to give detailed introduction and answer questions from interested teachers. To get financial support from the industries is also a good way to help teachers go abroad by providing a technical service to the industries. During setting up the relationship with foreign partners, the teachers training, and scientific research cooperation parts should be mentioned in the agreements.

Third, DOU should recruit the new teachers with overseas experience according to the development requirements of main disciplines. At the same time, DOU shall invite or employ some foreign experts or professors to give lectures to students and training classes to teachers. In 2015, thirteen international scientific research departments were approved by Chinese Ministry of Education. This provided opportunities for universities to cooperate with international partners in scientific research. DOU should also make an efficient assessment system according to the RU experience. The international elements should be reflected in the research work.

Step Three – Development of international education

Icelandic universities pay more attention than DOU to promote self-abilities and service during the international exchange studies. According to the SWOT analysis of DOU and Chinese government policy in higher education, DOU should find its own way to develop the foreign diploma student education.

DOU should develop international education with the construction of teaching and research team. This is an active and efficient way to promote the capability of teaching and research. Based on the SWOT analysis and Icelandic universities experience, DOU should complete more detailed parts in exchange student education and foreign student education. In the case of incoming exchange students, DOU should provide a flexible teaching schedule which can be chosen by the incoming students before they come to China, including course arrangements, examinations, studies feedback, etc. The social activities and practice is an important part in exchange students' study, such as culture festival, Chinese speech contest and sports meetings. DOU should formulate a guide of exchange students' which should include the relevant laws about foreigners, campus behavior, and information about the study and examination. A good service system is the good label of international education. DOU shall improve the service through organizing volunteers to help incoming students to manage daily life, arranging special staff to take the charge of foreign students.

DOU should modify the rules for outgoing students to be more flexible. The schools should take more responsibility in the assessment and evaluation and selection of outgoing students. International office should keep contact with the partner and exchange students to trace their overseas study and organize exchange experience meetings. It is very important to keep contact with graduate students to show how the overseas experience affect the students' life and DOU's international education achievements. DOU should set up a special scholarship to encourage and support more students to participate in international exchange.

Foreign diploma student education is a good way to make international education and teaching team construction. This part is different with Icelandic universities' experience. Chinese government encourages the universities to admit more foreign students, the tuition fee can be decided by universities. First, DOU should its competitiveness by providing lectures in English, good living conditions and service, adequate and new knowledge and scientific research. Secondly, DOU should make a special teaching outline and plan for foreign diploma students in the different schools and publish the course and teaching schedule online. The information about supervisors should be opened to foreign students for master's degree. DOU should provide more opportunities for foreign students to get scholarships from different governments. Thirdly, DOU should set up a good graduates tracing system which is based on the alumni. These tracing systems should focus on the sustainable connection with gradates and developing a fund which supports the development of internationalization and student education. Making this system as a platform of communication and international experience.

Step Four – Promoting the idea of internationalization

The idea of internationalization is the soul of developing international affairs in higher education, it is also at the core of every internationalization strategy. Icelandic universities understand this well due to the location of the country. All the Icelandic universities are formulating internationalization plan. The first three steps are to promote each other, the step

four will be the main clue to connect with all these parts to create sustainable strategy. Based on the Chinese policy, Icelandic universities experience and a literature review, DOU should develop its' own internationalization idea.

Internationalization is the responsibility of DOU as a whole. Internationalization is not only duty of the international office, all students, teachers, researchers and members of staff have the opportunity to achieve the competence and benefits from international cooperation and participate in international activities. Internationalization plans should be written into DOU's long term development mission. All the members of DOU should realize the importance of developing internationalization.

Internationalization should aim at sustainability and innovation. Developing high-quality international programmes and providing high-level education are the basic requirements to implement a sustainable internationalization strategy. The target of Chinese higher education should synchronize with the development of world higher education. DOU should pay attention to the “brain gain” and try to avoid “brain drain” during the development. Internationalization should start from the discipline of fisheries and ocean science and expand to other fields focusing on the requirement of society and global responsibilities.

Development and innovation are both important in internationalization. Against the background of international education development in China, DOU should develop the international affairs creatively according to own characteristics and international experience. Besides the traditional international programmes, DOU can attempt new approaches to develop internationalization such as “college-enterprise collaboration” international education model to cultivate the applied and innovative talents, “Chinese-foreign joint training and research” programmes to improve the capacity of teaching and research.

Internationalization is a key to survive future competition in higher education. Internationalization is already a trend in Chinese higher education. DOU has the unique feature of fisheries, but more and more universities has started to develop the discipline of fisheries and ocean science. The competition in Chinese higher education will become more and more serious in the near future. So, internationalization becomes more important while providing the high-quality education. This will be a key factor of success during the competition. The development of “Double First-Rate”, internationalization in fisheries and ocean science can be a characteristic to be promoted in scientific research, social service and cooperation with industries.

5.3 Future Plan

To develop a university internationalization strategy, DOU should keep their eyes on globalization. It should be understood that internationalization level of DOU will take time, all international programmes will not be enlarged and lack of the innovation programme in DOU after 5-10 years if everything carries on as it has until now. Based on the Chinese higher education, DOU needs to focus on the four steps above and implement the four steps plan concurrently. Fisheries and ocean science is the main discipline of DOU, internationalization should start from this and extend later to other disciplines and affairs.

Internationalization strategy focuses on the current situation of DOU to become the theory to develop internationalization. Before implementing the strategy, this plan should be evaluated by DOU to modify it to be more valuable and feasible through the process show in Figure 9. All the theory about internationalization will be practiced and modified during the development of educational activities in DOU to reach a practical significant strategy.



Figure 9: Estimation processing of Internationalization Strategy, DOU

LIST OF REFERENCES

- Mellors-Bourne, R., & Humfrey, C. (2013). *The Wider Benefits of International Higher Education in the UK*. Cambridge: Prepared by the Careers Research & Advisory Centre (CRAC).
- Brinkmann, S., & Kvale, S. (2014). *InterViews*. London: SAGE Publications.
- Feng, J. (2015). Comparison and Analysis on the Evaluation Indicators of Higher Education Internationalization. *Shanghai Journal of Education Evaluation* 2: 32-38.
- Feng, Z., & Liu, N. (2013). Features Analysis of World-Class Universities Strategy for Internationalization. *Journal of Education* 34(6): 1-7.
- Fuhui, L. (2016). The Internationalization of Higher Education in China: The Role of Government. *Journal of International Education Research* 12: 47-52.
- International Association of Universities (2012). Affirming academic values in internationalization of higher education: A call for action. [December 2016] <<https://www.insidehighered.com/blogs/globalhighered/affirming-academic-values-internationalization-higher-education-call-action>>
- Knight, J. (1993). Internationalization: management strategies and issues. *International Education Magazine* 9: 21-22.
- Knight, J. (2009). *Higher Education in Turmoil*. Rotterdam: The Changing World of Internationalization.
- Lambert, J., & Usher, A. (2013). *The Pros and Cons of Internationalization: How Domestic Students Experience the Globalizing Campus*. Toronto: Higher Education Strategy Associates.
- Linhan, C., & Danyan, H. (2013). Internationalization of Chinese Higher Education. *Higher Education Studies* 3(1): 92-105.
- Maket, L., & Mbaraka, R. (2012). Internationalization of Higher Education: Rationale, Collaborations and its Implications. *International Journal of Academic Research in Progressive Education and Development* 1(4): 365-372.
- Pritam, B. (2008). *Internationalization of Higher Education*. NUEPA New Delhi: A Trajectory for Professional Development of Teachers.
- Qiang, Z. (2003). Internationalization of Higher Education: towards a conceptual framework. *Policy Futures in Education* 1(2): 248-270.
- Ryszard, B. (2016). *Strategic Management: Formulation and Implementation*. [December 2016] <<http://www.introduction-to-management.24xls.com/en316>>
- Tahira, J., & Masha, A. (2015). Internationalization of Higher Education: Potential Benefits and Costs. *International Journal of Evaluation and Research in Education (IJERE)* 4(4): 196-199.
- Vainio-Mattila, A. (2009). Internationalizing Curriculum: A new kind of education. *New Directions for Teaching and Learning* 118: 95-103.
- Wende, V. d. (1997). Missing links: The relationship between national policies for internationalisation and those for higher education in general. In Kalvermark T., van der Wende M. C. (Eds.), *National policies for the internationalisation of higher education in Europe (pp. 10-31)*. Stockholm, Sweden: Hogskoleverket Studies, National Agency for Higher Education.
- Wit, H. d. (1998, July). *Rationales for Internationalisation of Higher Education (I)*. Millennium [December 2016] <https://www.researchgate.net/profile/Hans_De_Wit/publication/277187753_Rationales_for_Internationalisation_of_Higer_Education/links/56b24cd408ae5ec4ed4b374d.pdf>

- Wit, H. d. (2011). *Trends, Issues and Challenges in Internationalisation of Higher Education*. Amsterdam: Centre for Applied Research on Economics and Management.
- Wit, H. d., & Editor, G. (2011). Globalisation and Internationalisation of Higher Education. *Universitat oberta de Catalunya* 8(2): 241-248.
- Youming, G., & Li, H. (2010). *Study on the Characteristics and strategies of the Internationalization of Chinese Universities*. Beijing: People's Publishing House of China.
- Zolfaghari, A. (2009). Internationalization of higher education: challenges, strategies, policies and programs. *US-China Education Review* 6(5): 1-9.

APPENDIX 1**Questionnaire****Part A: Student exchange programme**

1. How to develop an incoming or outgoing student exchange programme?
2. What the benefit to the student and university?
3. What is the procedure to select the outgoing student and requirement to incoming student?
4. How to give the lectures to incoming student and what requirement to outgoing student in study?
5. What is the tuition fee and hostel fee to the exchange students?
6. Is there any grant or fund to the exchange student?
7. Do you have any tracing work after the student finish the exchange programme?

Part B: Foreign student education programme

1. How to enlarge the market of foreign student education?
2. What the benefit to you in foreign student education?
3. How to arrange the English course for foreign student?
4. How organize the teaching team for foreign student education?
5. How to make the foreign student education to be sustainable?
6. What is the tuition fee and hostel fee?
7. Is there any grand or fund to the foreign student?
8. Do you have tracing system to the graduate students?

Part C: Teacher training programme

1. Do you have a plan or strategy to provide the opportunity for teachers training?
2. What kinds of training programme you have in incoming and outgoing teachers?
3. What is your opinion about encouraging the teacher to study or train abroad?
4. Do the teachers get any funds during studying or training abroad?
5. What is the importance of teacher training or studying abroad to internationalization development of your university?

Part D: Scientific research cooperation

1. How to develop the international scientific research cooperation in your university?
2. Do the teachers get any funds or support from the university or government to do the international scientific research?
3. Does the international scientific research will connect with local industry? If does, how to run it?

Part E: International programme

1. Do you have any other international programme in education?
2. Can you give some comments or suggestion in developing internationalization in higher education?

APPENDIX 2

In this section, the data collection information from visiting websites is provided as follows in tables:

Table App2-1 Incoming Exchange Students

Universities	Entrance requirement	Course	Language	Services
UI	There must be an agreement between your home university and the University of Iceland in your field of study. Students must have completed 60 ECTS credits or equivalent at their home university prior to their exchange studies.	The Course Catalogue provides practical information on matters such as applications, registration, studies, examinations and various services, as well as students' rights and obligations.	Students who are non-native English speakers must fulfil minimum English language requirements. Minimum score TOEFL 79, IELTS 6.5	Student Registration, Student and Career Counselling, Service Desk, Accommodation, Mentor system, Healthcare and insurance, Emergency Services.
RU	All grades stated are based on the Icelandic grading system. Applications from students who do not meet the minimum grade point requirements will be considered provided they have strong support and a good academic reference from their home institution. Students must have finished the equivalent of at least 60ECTS at undergraduate level.	All courses offered by the four departments and includes course descriptions, content, learning outcomes, assessment, faculty, language of instruction and reading material	Students who are non-native English speakers must fulfill minimum English language requirements. TOEFL: 577 (PBT) or 91 (iBT) or above OR IELTS: 6.5 or above.	Visa and health insurance, Housing Cost of living
UA	All students wishing to apply for exchange studies at the University of Akureyri must begin the process by applying at their home university. We request to receive information about selected students at our partner institutions for our online nomination database which should be done by the international coordinator at the home university. After the coordinator has filled in the nomination form we will e-mail the students with detailed application instructions.	The University of Akureyri offers four courses every academic year that aim to introduce the Icelandic language, community and nature for international students at the university. These courses are only available to student registered for a full study and to exchange students.	Students who are non-native English speakers must provide the English language exam or skill certificate.	Credit System, Student Housing, FAQs, Buddy system – Facebook, Arrival Form.

Table App2-2 Outgoing Exchange Students

Universities	Purpose	Study requirement	Grant
UI	A chance to get to know a new country, culture, language and people, as well as increasing study options. Rewarding on educational, social and personal levels. Increases a student's ability to adapt to diverse circumstances and multicultural communication skills.	All courses taken at the guest institution need to be part of the program at the University and must program and get it approved by the representative of or's international division.	The exchange students are tuition fees at the guest institution canceled but students pay an annual registration fee at the University of Iceland. If it is an exchange through Nordplus and Erasmus programs are travel and accommodation grants available.
RU	Studying abroad can add value, making you a more employable "global graduate".	Courses at the host school must be selected in accordance with your current studies. Once you have made your course selection you must send the names and descriptions of the courses to the project coordinator at RU for approval.	Students who choose to take a semester abroad, at one of our partner universities, continue to pay tuition fees to RU during the exchange.
UA	Increased language skills. Experience of a new school system. Knowledge of customs and conventions of other nations. Experience that is of use in industry later on.	Completed 60 ECTS credits. Go abroad in full collaboration with his/her university faculty. The student contacts the International Office and expresses his/her interest in study exchange. The student selects a school. The student submits his/her selection of courses and the period of study exchange to the international student representative/department head/faculty dean, as applicable. The student applies to the school with the assistance of the University's International Office. The student applies for grants, if they are available.	Erasmus, Nordplus, North2North.

Table App2-3 Foreign Students Education Programme

Universities	Requirements	Course
UI	International students can complete a BA degree in Icelandic as a second language to acquire the basic knowledge and the theoretical skills to continue academic studies in Icelandic. Featured graduate programmes always taught in English	Undergraduate Diplomas-Language Graduate Diplomas: Applied Inter American Studies Environment and Natural Resources Food Science Inter American Studies International Gender Studies
RU	Undergraduate: Completed a matriculation examination, or another comparable education, other degrees will be considered on an individual basis. Graduate: All applicants are required to have completed, or be in the final year of, a bachelor's degree to apply for our graduate programmes.	Graduate programmes taught in English. School of Business School of Computer Science School of Law School of Science and Engineering
UA	Students need to demonstrate knowledge of the language of instruction, which is either Icelandic or English depending on the programme.	All Bachelor's degrees are taught in Icelandic. The only programme available and taught entirely in English is the Polar Law programme (Master's degree).

Table App2-4 Teacher Training Programme

Universities	Incoming International Staff	Outgoing Staff	Funding
UI	The University of Iceland will host International Staff Training Days 10-12 May 2017. The Staff Training Days are designed for employees in international relations and marketing and communications. The Staff Days are organised by the International Office in collaboration with the Division of Marketing and Public Relations. The programme includes sessions and interactive workshops on specific themes. It is partly divided into separate sessions and some sessions are shared by all participants.	University of Iceland staff can apply to attend International Weeks or to visit other universities. Information on available International Weeks and visits are updated regularly. Staff can apply for Erasmus+ grants to attend such events.	Erasmus+ grants
UNU-FTP	Each year, the UNU-FTP offers a 6-month training course in Iceland. The 6-month training course runs from September to February, and is divided into three parts; the introductory course, the specialization line, and the individual research project.		UNU
RU		The staff of RU can apply to attend international exchange programme for weeks to visit other foreign universities according to the exchange agreements.	Erasmus+ grants

In this section, the data collection information from interviews is provided in the following tables:

Table App2-5 Interview of student Exchange Programme

Items	UI	UA	RU
Programme Development	The International Office receives requests/enquires regarding possible partnerships, either from a school or faculty within UI or from an institution abroad. The International Office assesses the basis for the partnership in collaboration with the relevant staff members in terms of course offerings, compatibility, quality, added value and potential success of the partnership.	There should be a balance of exchange between the institution and that should be one of the aims. Quality of exchange with good students that are well prepared for the exchange is a key to a good collaboration between universities. Good contact between coordinators in both institutions is also very important and so is the flow of information about courses in English, application procedure and forms as other practical matters as housing, orientation, travel etc.	International Office is responsible for the exchange programme, international admissions, developing international partnerships and providing pre-arrival and support services to all international students at RU. The exchange programme is run by the International Office, and RU has agreements with 160 universities around the world.
Incoming Student	The selection process of incoming students takes place at the partner institution but after they are nominated UI make sure they have the necessary language proficiency, study level for the selected courses and are nominated correctly according to our exchange agreements. Incoming exchange students simply select from a list of courses taught in English from our study programs. They take courses alongside other full-time students, UI does not offer courses that are only for exchange students.	An incoming exchange student should be in an exchange programme such as Nordplus, Erasmus, North2North, or through a bilateral agreement between the University of Akureyri and the student's home institution. Free movers are not accepted. The partner university needs to nominate the student as an exchange student. UNAK focus a lot on continuous evaluation system that includes a lot of tasks, essays, home exams etc. but not necessarily a big final exam. Each teacher has his own way of teaching and organizing the course and so the variation of teaching and giving lecture is mixed.	AU needs sign an agreement with partner to accept the incoming student. The applicants should send the relative materials to RU. The school has the decision to accept or not. The incoming student study with other students in master level. They can cross the department to choose course.
Outgoing Student	Outgoing students must submit a signed application, learning agreement, statement of purpose and transcript of records when they apply for exchange studies. UI processes applications and select applicants based on their academic performance, level of studies, the quality of applications and relevance of the planned mobility activity to the student's study program at the University of Iceland.	The outgoing students are selected by their application on becoming an exchange student and interest in going abroad. The requirement for outgoing students is that they pass the courses that they have selected to take the partner institution and will get evaluated into their study degree at the home university. They also give a report when they come back regarding the student exchange as well as a presentation during the international day of UNAK.	For outgoing students, the department has the right to decide who can be an exchange student according to the application information. The outgoing students should find course by themselves and should be evaluated by the department. This is the most difficult for them.
Benefits	Students that participate in exchange studies report varied benefits from their participation, both in terms of personal growth and in terms of academic and professional prospects. They also directly impact classes at the University, teachers report that students that go abroad	The advantages for the students are: increasing language skills, experience of new school system, knowledge of customs and convention of other nations, experience that is of use in industry or work later on. For the university the benefit is an international student environment that enriches the study community both for teachers, staff and students at	The students get to experience life in another country. Exchange allows you to experience what it is like to live and learn in another country. Exchange provides an opportunity to immerse themselves in another language and develop their

	and then return to the classroom have increased enthusiasm for their studies. This makes them add valuable insights into class discussions and often they use the experience to formulate thesis and research topics that prove to be very interesting and unique.	the host university. Local students get a taste of international community without going abroad by meeting international students and teachers might teach in English. This helps the university to fulfil its standards on being a global phenomenon but not just a local school.	skills in a foreign study environment. Exchange enables you to add to the knowledge that you are learning in home country by trying new specialisations and learning in a different cultural context.
Tuition Fee	There is no tuition fee for exchange students at the University of Iceland. The same goes for our outgoing students, they be no fees at our partner institutions (except in very rare cases).	There is no tuition fee for exchange student if there is already an agreement between the universities. Exchange student need to pay about 10-20 EUR to participate in the student union for social activities, but it is optional.	No tuition fee according to the agreements.
Students Tracing Work	students submit a transcript of records after the exchange as well as a final report.	Student need to file in a confirmation of exchange stay with the host university approving that as well as a transcript of record showing courses, credits and grades. Also, the student needs to file in a report about the stay and possibly also make a presentation about the exchange at the International Day of UNAK.	A feedback and report from outgoing in writing is necessary. A survey from incoming students and report from partner will be done.

Table App2-6 Interview of Foreign Student Education Programme

Items	UI	UA	RU
Market Development	Currently the University of Iceland is not actively marketing itself to foreign students, apart from a very few international programs. Since the University of Iceland can legally not charge tuition and is public funded it is a political and matter what type of policy the University adapts in regard to marketing to foreign students. The University aims to be international and diverse but further steps towards recruiting international students in higher numbers is depended on support from Icelandic authorities and their future strategy towards higher education in Iceland.	the University of Akureyri does not have a special strategy or marketing to recruit more foreign students as UNAK is only able to charge registration fee (500 EUR) but not tuition fee or international fee according to law. UNAK is also a small university that does not have great capacity to grow and the Ministry of Education in Iceland has not made any such policy of recruiting foreign students into the Icelandic higher education system.	RU has English course. School of Energy developed by energy industry. They manage to do the strategy in international education. 95% of students are foreigner in this school. Other foreign students in RU are recommended by teachers.
Benefits	Diversity in the student population is very important to the quality of class room discussion and group projects. It is also beneficial in a lot of ways for the University to have a diverse community with in itself, e.g. it encourages openness to other cultures and hopefully increases tolerance amongst staff and students.	For the university the benefit is an international student environment that enriches the study community both for teachers, staff and students at the host university. Local students get a taste of international community without going abroad by meeting international students and teachers might teach in English.	This can help RU to get outside view and information.
Tuition Fee	there is not tuition fee for foreign students, there is however a nominal application fee of 50 euros and then they pay the same annual registration	The University of Akureyri is a state university and is only allowed to charge a registration fee of 75.000	The tuition fees are same as EU standard.

	fee that Icelandic students pay, currently 75.000 ISK per academic year, 600 euros approx. Housing cost varies.	ISK (approx. 550 EUR) per academic year.	
Student Tracing Work	UI hope to monitor the former students better by setting up alumni for international students.	UNAK keeps records of all graduates and there is an alumni society called “Góðvinir HA” which supports the university with gifts and grants and that helps UNAK keep track of graduates.	Alumni is important. This is a good way to trace the foreign students after they graduate.

Table App2-7 Interview of Teacher Training Programme

Items	UI	UA	RU
Training Plan	UI has exchange agreements for students from the School of Education to train abroad. UI also participate in Teacher exchanges through the Erasmus+ program and Nordplus program.	The University of Akureyri offers teacher the possibility to go on a teacher exchange or training exchange through Erasmus+ to participate in workshops, job shadowing, seminars etc. Teachers are also supported in teaching by our Centre for Teaching and Learning (located at UNAK) that works with teachers in developing new teaching methods, technology and to adapt to new technology.	In the Outgoing programme, the teachers can join the grant system form EU for 2 weeks training. RU is planning to do some effort to send teachers out of EU. In the Incoming programme, the teaching training is depending on the school if they can accept.
Benefits	It is very important that teachers continue to gain experiences abroad throughout their carrier. It has been very important and influential in the development of UI. Many actions we have taken to improve our services to international staff and students has been the result of staff visits and guest lecturing at universities abroad.	It is very important to meet with other colleague to see how things are conducted in their countries, see different educational culture, other language etc. It is very good for the development of teaching methods. It broadens the perspective of the teachers and gives them further ideas how to improve in teaching. Also, to meet other colleague and share ideas. When coming back to the home institution the teachers are normally inspired by new ideas and collaboration and that affects the students in a positive way.	Teachers training abroad is good to the university and encourage the students to study abroad.
Funding or Grant	they can apply for Erasmus funding and Nordplus funding, they can also get support from their faculty in some cases.	Teachers can get funding through Erasmus+ and possible other funding from labour unions.	Erasmus+ grants
Other Suggestion	It is important to have a clear and detailed strategy in internationalization that is developed with the participation of as many staff members as possible at each University.		Keeping contact with the students who has graduated. It is important to hire the teachers with overseas background.