

Research on the Sino-foreign Cooperative Education in the Environment of ‘One Belt One Road’

-Based on the cooperation between China and Russian Federation

Wenjing Ke

Overseas Education College
Xiamen University
Xiamen, China
winniekewj@163.com

Abstract—Globalization and ‘One Belt One Road’ initiative both stimulate the cooperation of education between China and different countries. The sino-foreign cooperative education is a product. This paper aims to analyze the development about sino-foreign cooperative education between China and Russian Federation. With the introduction about the two countries’ situation and superiority, this paper explores their talents needs in this initiative and concludes that imbalance and quality are the confronting problems of the sino-foreign cooperative education between the countries. Because the circumstance of ‘One Belt One Road’ requires talents to be more international and competitive, the sino-foreign cooperative education is one of the effective methods to improve the talents groups with their cultural inter-communication abilities.

Keywords—‘One Belt One Road’; sino-foreign cooperative education; China; Russian Federation

I. GLOBALIZATION AND ‘ONE BELT ONE ROAD’

Since the widespread of information between different countries, the increase of communication lead globalization to become one of the hot issues of economic and social development in the world, also a challenge in academic and cultural communication. With the definition of ‘globalization’ about changing our current social conditions, Steger [1] highlights the core of globalization is changing the human contact forms. In other words, globalization refers to the transformation about our society, to supports countries to share with their ideas, resources and achievement in various sectors. ‘One Belt One Road’ initiative, put forward by China to cooperate with other neighbor countries based on the ‘Silk Road’ routines, is receiving much attention from many countries because of its new concept of inter-communication to the world. As a new form in globalization, ‘One Belt One Road’ initiative reinforces the increase in economy collaboration, trade contacts and resource sharing between the partner countries. With the concept of achieving mutual benefit and double win situation, education is the vital factor to implement and sustain this initiative.

Both globalization and ‘One Belt One Road’ initiative encourage shifting our living conditions to adapt to a more open and cooperative environment. The characteristics of globalization also affect the trend of international education.

Beyond all doubt, language plays a crucial role. The development of globalization increases opportunities to communicate around the world. As Fantini’s [2] description, intercultural competence is the ability to interact effectively and appropriately with others who have different language and cultural background. That means globalization lead to the cultivation of international talents who may be more adaptive to this environment with more complex abilities. What’s more, the educational cooperation must go hand on hand with ideas of ‘One Belt One Road’ and globalization in the new trend.

This paper aims to focus on the recent situation of sino-foreign education cooperation between China and Russian Federation. Firstly, the cooperation between China and Russia has a long history in the past few years with a good foundation of sino-foreign educational cooperation, which is one of the strategies to train international talents with more complex abilities and secondly, the relationship and cooperation between these two countries require an update to promote ‘One Belt One Road’ Initiative. This cooperation may improve their quality of education and cultivate international human resources to acclimate the new environment.

II. THE COOPERATIVE INFORMATION BETWEEN RUSSIAN FEDERATION AND CHINA

A. Data collected from Global Competitiveness Report[3][4]

In the Global Competitiveness Report, there is a gradual improvement in the rank of Russian Federation from 53 to 43 in these three years. In the year of 2017, Russia has ranked 43 in the 138 countries. The evaluation of this competitiveness report is decided by data collected from twelve pillars in detail, and Russian Federation has performed better in the pillars of ‘market size’, ‘higher education and training’ and ‘labor market efficiency’. For example, the rank of ‘higher education and training’ is 32 with the value of 5.1, the ‘Market size’ is No. 6 and the ‘labor market efficiency’ has ranked 49. All these three pillars have respectable scores and values. Every pillar has several sub-items to assess in a more concrete way. The ‘market size’, the sub-items like ‘domestic market size index’, ‘foreign market size index’ and ‘GDP’ are ranked in top ten position of the world. With an overall rising trend in higher education, Russian Federation especially plays well in the

'tertiary education enrollment rate' in the rank of 18. This country thinks highly of the development of higher education. In general, Russia is a competitive country with dominant position in market size and advantage in education, and also an important cooperative partner of China in different parts like trade and education.

China retains the 28th rank for the third year. Especially in the pillar of 'market size', China takes the first position in this competitive report. Moreover, in the sub-items like 'domestic market size index', 'foreign market size index' and 'GDP', China has ranked the first with value of 7.0. In addition, China also ranks higher in 'macroeconomic' pillar. In this report, China has a noticeable improvement in 'higher education' from the rank of 68 to 54. In the sub-item evaluation, 'the quality of math and science education', 'quality of the education system' and 'extent of staff training' are all top 50. With a competitive condition in market, China pays more attention to optimize education in these years for a further development, and the communication with Russia is essential.

B. Data collected from Linkedin [5]

Russian Federation is the key region in energy industry. The number of qualified human resources, so-called talents, in energy industry could be accounted for a much higher proportion in Russia than other countries. This report combined talents in Russian Federation and in Central Asia as a group to compare with talents in Southeast Asia. In Fig. 1, four degrees differentiates these human resources when the proportion of talents in Russia and Central Asia with bachelor degree is similar with those with master degree. In contrast, the undergraduate talents in Southeast Asia is up to 76% but much less in the proportion with master degree. Russia and Central Asia have more well educated graduates and a balance between talents with different degrees. What is more, seven of the top ten colleges, which have advantages and fames in energy industry, belong to Russian Federation. Therefore, more talents from Russia and Central Asia are choosing to study in the locality rather than study abroad. However, there is a big gap between their language abilities. For instance, in energy industry, Russia and Central Asia only have 50.2% talents with language ability of English when Southeast Asia has a more general proportion of 84.1%. Comparably, Southeast Asia may have more than 14.4% people in energy industry speaking Chinese when Russia and Central Asia have less than one percent. In the new competitive world, the talents in Russia may confront with more challenges when language ability is the first to affect, even though the energy industry is developing well in this country by its national power and sufficient educational support.

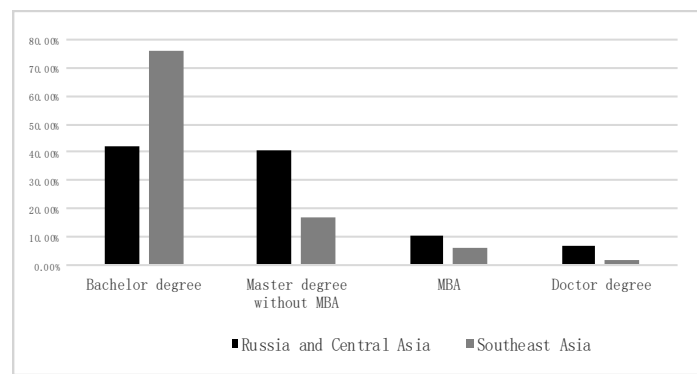


Fig. 1 Proportion of talents in energy industry with different degrees in Russia and Central Asia versus in Southeast Asia

C. Current cooperation with China

Russia is known to be a high competitive country with better infrastructure construction such as railway, airline and internet. After 2014, the infrastructure construction turns to develop domains like energy, electricity and communication. In the context of 'One Belt One Road', Russia and China also enhance the cooperation with each other. Initially, agriculture, forestry, animal husbandry and fishery were the main domains but later, the cooperation turns to reinforce transport infrastructure, further enhanced the collaboration in the domains like energy development. Different projects and cooperation agreement signed by these two countries after the year of 2015 are also the representation of following this initiative.

With a data shown above, the strong market size of these two countries must be the foundation of their cooperation. Russian Federation is stronger in education when China is also improving. The competitive report offers the possibility of educational cooperation between these two countries. Otherwise, Russian Federation emphasized the importance of education development. With a new interactive space of new normal education, Russia encourages the cooperative relationship between university and primary or middle school, between university and university, between university and society, and jointly cultivate talents and graduates.

Both of these countries are stronger in the world with solid national strength, so more cooperation is look forward in this new environment. However, the cooperation need a change. Firstly, as a traditional power in energy industry, the language ability development is in demand for Russian Federation to cultivate their talents. Secondly, in China, the lack of professionals in energy industry especially new energy industry becomes an essential problem in the development. The solution must be the cultivation of more talents in education [6]. Educational cooperation is a good choice for both of them to develop new international talents mutually when China may support with language resources to improve students' ability, and Russian Federation can share new ideas and traditional strategies.

III. THE CURRENT EDUCATION COOPERATION BETWEEN CHINA AND RUSSIAN FEDERATION

A. Overseas students studying in China

Overseas students from Russia to China have been increasing gradually. Obviously, from Table 1, it is clear that in recent 3 years, there are more than 15000 students came to China for further study. Besides those who chose to study in China for degrees, there are nearly 10 thousand students each year studying in China with no degrees. In recent years, the number of students studying in China for different degrees is increasing tremendously. However, the data shows that students study not for the degrees are decreasing. It can be seen that, after the 'One Belt One Road' initiative, more and more Russians raise their awareness about Chinese education and the quality of Chinese higher education also gains more trust than before. China is not only a country for foreign students to learn language of Chinese. Actually, China is improving in education to supply qualified and superior education resources, to integrate with the world and to enhance the educational competitiveness for the future.

TABLE I NUMBER OF STUDENTS FROM RUSSIA TO STUDY IN CHINA

	Year 2013	Year 2014	Year 2015
Bachelor	3494	3635	3793
Master	1517	1834	2140
Doctor	163	213	265
with degree in total	5250	5764	6283
With no degree	10668	11438	9914
In total	15918	17202	16197

Data from brief statistic of foreign students studying in China [7] [8] [9]

B. Information about sino-foreign cooperative education [10]

In sino-foreign cooperative education, the cooperation between China and Russian Federation could be divided into two parts, such as cooperative education projects and cooperative education institutions. Until now, there are 118 projects and 4 institutions established in cooperation between these two countries. Among these projects, 115 are for bachelor degree and the rest are for master degree. All of these institutions implement for bachelor degree, however, Shenzhen MSU-BIT University is also available for master and doctor degree, in addition, JSNU-SPbPU Institute of Engineering is supported for foreign master degree. Details about these four institutions present in the Table 2 below. All of these institutions began after the year of 2016.

TABLE II INFORMATION ABOUT EDUCATION COOPERATIVE INSTITUTIONS BETWEEN CHINA AND RUSSINA FEDERATION

Cooperative institution	Cooperative college in China	Cooperative college in Russian Federation
JSNU-SPbPU Institute of Engineering, Jiangsu Normal University	Jiangsu Normal University	Peter the Great Saint-Petersburg Polytechnic University, Russia
Shenzhen MSU-BIT University	Beijing Institute of Technology	Lomonosov Moscow State University, Russia
Zhongyuan-Petersburg Aviation College, Zhongyuan University of Technology	Zhongyuan University of Technology	Saint Petersburg State University of Aerospace Instrumentation, Russia
Moscow Institute of Arts, WNU	Weinan Normal University	Moscow State Pedagogical University, Russia

Data from Chinese-Foreign Cooperation in Running Schools

C. Some Problems towards sino-foreign cooperative education

1) The imbalance.

The problems of sino-foreign cooperative education imbalance could elaborate in three ways. The most apparent one is the imbalance of region. These cooperative colleges locate separately in seventeen provinces in China, however, 11 of these provinces only own one project or institution. Most cooperative colleges are located in Heilongjiang Province, Jilin Province and Henan Province. On the one hand, the main advantage of these three provinces are their geographical location with Russia, on the other hand, the centralization in location is also a problem for the holistic development of sino-

foreign cooperative education. Secondly, the imbalance focuses on the disparity between cooperative projects and institutions. Obviously, the number of cooperative institutions is much fewer than projects. The development of projects is more mature when the institutions are all new in this area. However, the investment and support for institutions are in demand because cooperative institutions may explicitly exhibit the standard, condition and status of the educational cooperation level. The developmental distance between projects and institutions may also affect the ecological stability of sino-foreign cooperative education. Finally yet importantly, the imbalance is about degree layers. In both projects and institutions, the education levels classified with undergraduate degree, master degree and doctor degree. However, no matter

the projects or institutions, pay more attention to the bachelors' development. In other words, the current educational cooperation relates closely to general human resources development rather than elite education or professional education. This imbalance may also influence the long-term development of the sino-foreign cooperative education.

2) The quality.

In the research of educational cooperation between these two countries, the specific contradictions and problems still exist. For instance, except for the secure risk for overseas students should be concerned, the weakness of basic language skills and the imbalance of subjects' choice also affect the procedure of their cooperation [11]. In the subjects' selection of sino-foreign cooperative education, engineering course will be the most popular one following with subjects such as art, science, economy and management. In the cooperation, the subject setting may pay more attention to the application of modern technology, language, commerce and trade and so on. However, fewer cooperative projects may choose to set the subjects such as history, literature and agriculture. The cooperation is based on the relationship between professional development and labor market needs. In other words, the need in the current market is always one of the directions to improve talents in the schools. However, the convergence of talents development, the overlap of subjects setting and the similarity of training objectives may all lead to a same teaching mode lack of creativity.

The quality of cooperation is also reflected by the operation of colleges, that means, the fame of colleges also influence the environment for cooperation project. For instance, these new cooperative institutions may also influence the quality and stability of schools running. Otherwise, more research about educational cooperation especially sino-foreign education is concentrated on three topics like 'current situation and developmental strategies', 'macroscopical policy' and 'teaching methods and practices'. The topic about 'talents development' is not included [12]. Globalisation is the new trend in sino-foreign education cooperation. That means, internationalization of the talents development in the new environment, the international talents cultivation should be more specific professional. The advantage of sino-foreign education cooperation may increase the communication between several universities, may absorb advanced educational ideas and resources, may improve the curriculum systems, may foster more competitive students and implement the talents development mode with the idea of 'international + localisation'.

D. Suggestion

The sino-foreign cooperative education is the method to improve international education, and meeting market demand is the first step. 'One Belt One Road' also stimulates the activity degree of the cooperative education between China and neighbor countries. With the rapid growth of sino-foreign cooperative projects and institutions, Russia has been the third country with the largest number of educational cooperation with China. The cooperation in the future does not mean to a replication of other university or school. In contrast, the cooperation must have the objective to give service for economic and social development based on education and talents training [13].

Within the 'One Belt One Road' initiative, Russia has more opportunity to collaborate with China. Because of the environment change, both cooperative developmental programs and talents needs are updating. As we can see, new educational cooperation between Russian Cooperation and China is directed to the cooperation documents signed by Ministries of Education of two countries within 'One Belt One Road' [14]. Under the stimulus of this new environment, the education cooperation and the talents training are required to be more specific and dynamic for the future. For instance, cultivating talents of energy industry may confront with new challenges like connecting with renewal resources, energy collection, storage and delivery. What is more, the initiative of 'One Belt One Road' may push talents to be familiar with different situation in different countries. The abilities of these talents may be pointed to social skills, technological skills, management skills, language ability, and communicative ability and so on. To enhance the cooperation between two countries, sino-foreign cooperative education may support to foster high quality international talents, to optimize the talents cultivation mode, and to adjust the structure of supply and demand of talents.

The mode of talents development in sino-foreign cooperative education may include concepts, objectives and specifications, discipline and subject settings, curriculum system, teaching content, teaching methods and strategies, teaching environment and conditions, talents development evaluation and other factors. Nowadays, the interactive mode of these factors is the new requirement. In other words, the sino-foreign cooperative education is one of the effective methods to improve the talents groups with international vision and competitiveness under the circumstance of 'One Belt One Road', which emphasizes the cultural inter-communication. Multi-models are not only to change the distance between institutions and programs, but also to facilitate the institutions and subjects and to improve the quality of cooperation.

IV. CONCLUSION

As the development of communication and cooperation between different countries, globalization is also the current topic in education. Sino-foreign education cooperation could be one of the collaborative strategies to cultivate high adaptive talents with better resources from different countries for the future. Developing International talents may be the direction of sino-foreign education cooperation. What is more, the characteristic of sino-foreign cooperative education relates to a specific purpose, a further development may be the optimization of the talents cultivation mode, the adjustment of talents supply and demand structure and mutually exchange with each other.

"The Belt and Road" environment, enhance the mobility of international students along the cross-border for learning purpose. Cross-border education will become a new development trend, and even cross-border education consortium may establish in diversified way. In China, the policy may always focus on the cooperation, districted education cooperation and globalization education cooperation.

To take advantage of sino-foreign cooperative education, the core is to absorb high-qualified education resource, to improve the pedagogy and to update a creative and international group of teaching and management. The cooperation of countries in education may support the cooperative education to learn from others' strong points to offset one's weakness. On behalf of 'One Belt One Road', the cooperation aims the mutual benefit between China and its neighboring countries in the education sector that support the holistic further development of the country.

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