

# A Working Framework for Internationalization of Universities in China

—Based on Practice of Northwestern Polytechnical University

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**Abstract:** The paper addresses the essence of internationalization for universities in 21<sup>st</sup> century. Internationalization and global strategies of several world-class universities are examined and reviewed. It is found that each university needs to find its own way of internationalization fitting itself. Northwestern Polytechnical University, one of the first-class universities in China, is further investigated as the case study of internationalization. The framework of implementing and improving the internationalization is studied accordingly. Proposals are made on the “bottom-up” and “top-down” approach aligned, and international education and research integrated and immersed. The work priorities for Chinese universities to enhance internationalization are suggested, including strategic partners selection, endorsement to faculty and students, and international infrastructure and resources, etc.

## 1. Introduction

The connections among different nations and societies fostered by rapid advancement of communication technologies in the late 20th century and the economic growth across the globe, have had a profound impact on social, economic and intellectual exchange and development. Such connections fulfil and accelerate the knowledge and information exchange and sharing among countries and regions, enhance people communication and cooperation, and help communities to tackle common global challenges that can be met only through internationalization.

In Higher Education, the internationalization specified by International Association of Universities (IAU) refers to the process of integrating an international, intercultural or global dimension into the purpose, functions and delivery of post-secondary education, to enhance the quality of education and research for all students and staff, and make a meaningful contribution to human society <sup>[1]</sup>.

China takes the internationalization as one of the five fundamental functions that universities should have, together with talent development, scientific research, social service, and cultural heritage and innovation. Meanwhile, more and more Chinese universities are aware that internationalization is not only a significant goal or function, but also is a valuable process helping to achieve the excellence of all aspects. Through the effective working framework, universities encourage students to represent and hear different voices of nations, people and cultures of the world, and to grow as responsible and capable global citizens to serve the society in a better way, and promote the global reputation of universities by enhancing the research cooperation, finding solutions together for the most important problems and challenges, and benefiting the local and global communities.

## 2. Internationalization in Universities

In USA, in order to cope with challenges and pressures caused by financial crisis at the end of last century, American universities promoted the cooperation with other countries and explored the international education markets more actively, which brought considerable revenues to them. Entering 21<sup>st</sup> century, USA recognized its oversight of the changing world, lack of talents with global awareness and competence, and missing the understanding and appreciation of culture diversity, hence, took initiatives to develop American youth into global citizens.

Susan Hockfield, 16<sup>th</sup> President of Massachusetts Institute of Technology, addressed that “By preparing our students to work, lead, and thrive in cultures around the globe, we equip them with crucial skills for tackling the world’s great challenges”. MIT “encourages the Institute to respond with a bold course — developing the resources needed to deepen international learning at MIT, and make international education a core component of an MIT education” [2]. MIT made its commitments to provide impactful international opportunities to every undergraduate who wants one. For instance, MIT’s global classroom model provides more students opportunities to study, work and research abroad by engaging peers and faculty around the world in hands-on, practical problem solving.

MIT’s international strategy is made to develop and support specific initiatives that will expand and strengthen MIT’s global engagement. It has established governance practices and communications plans, and streamlined approaches to ensure the necessary resources to administer and support MIT’s international objectives. Furthermore, it has formed faculty working groups, each with a different regional focus, to strengthen existing partnerships and facilitate new ones. By doing so, MIT is able to provide its students and faculty with high-quality opportunities to learn about and engage with the world, and attract the best faculty and students to MIT from around the world [3].

In China, Tsinghua University emphasizes the “going out” strategy to expand its footprint into other countries and regions. It collaborates with University of Washington to set up Global Innovation Exchange (GIX) in USA, also has established the China-Italy Design Innovation Hub with Politecnico di Milano in Milan. According to the Global Strategy, it has also founded Tsinghua Southeast Asia Center and Tsinghua Latin America Center to promote the academic research, talent training and culture exchange. Next to it, Tsinghua University created the Global Competence Center to prepare students for the world, with the capability to learn, work and live with others from different culture origins, to embrace opportunities and challenges in the future [4].

Being international is an intrinsic element of the spirit of The Hong Kong University of Science and Technology (HKUST), which is clearly phrased in its strategy plan 2021-2028. HKUST believes that humanity’s advancement is generated through the nurturing of individuals through holistic education, original research, and knowledge transfer into the wider society, and the fostering of an international community. HKUST makes its international talent strategy, as the essential composition of its global strategy. 52% faculty of HKUST from 24 countries are not originally from China, and 80% of them graduated from the top-class universities in the world, including Harvard University, Cambridge University and MIT, etc.

## 3. Working Framework for Internationalization

### 3.1. Process: “Bottom-up” and “Top-down” Aligned

Universities experience different pressures, have different needs and exist in different contexts. Northwestern Polytechnical University (NPU), one of the Double First-class Universities in China, explicitly identified the internationalization as the crucial part of its strategy. This top-town decision has made some vital international programs and activities into the strategic priorities of the university. NPU management and administration value and maintain an open, ongoing dialogue with the faculty regarding areas of international interest, watch for new ideas around a certain area or global region, and facilitate the development of related efforts into a larger strategy as appropriate. The top-down process helps the bottom-up initiatives and efforts to stay focus on

related fields of research and add good promises for more long-term international partnerships. The important coordinating role played by the Management and administration, to leverage the connections and resources among different programs and projects across the university, can never be ignored. Meanwhile, the bottom-up initiatives and activities driven by the schools, departments and faculty actually take up the communication and cooperation in the research and education domain, and uplift the internationalization of the university. The information of international activities driven by schools, departments and faculty needs to be regularly shared and circulated. While, university should examine ways to improve the coordination of individual school and department international activities with the international strategies. In short, faculty-initiated projects need the endorsement from the management and administration in order to achieve success on a larger scale, and the management and administration themselves often provide the impetus and guidance for new international activities.

### **3.2. Approach: Being Integral to Education**

International engagements in universities need to be well integrated with education, research and service wherever possible. In view of education, one example from NPU is that the university sets the goal in “NPU 14th Five-Year Plan” to develop and open 100 general courses to students. These general courses are classified into 5 categories, including Aesthetics and Art, Civilization and Classics, Management and Leadership, Global Perspectives, Ethics and Sustainability, Writing and Communication, which can play important roles in improving students’ global competence, helping students to understand the knowledge of world’s history, geography, economy and society, differences of political systems and cultures of different countries, and the importance of interdependency and cooperation of all mankind, helping students to have good awareness of upholding integrity and complying with social and professional ethics, and to keep abreast of global issues including, but not limited to, environment, energy, health and safety.

Apart from general courses, NPU has also set up the International Summer School since 2018, which has invited scholars from world-class universities across the world to give various lectures all in English. Only in this summer, the school has invited 144 scholars from 34 countries to deliver 144 international courses to 3,300 students, including 230 students from other domestic, oversea universities and international organizations enrolled. Those who are eager for more extensive and immersive international programs can spend a few weeks abroad in an on-site learning, practice and research setting at NPU partners’ universities with the financial support from the university.

In order to further expand and promote international education resources, Queen Mary University of London Engineering School, NPU, as a Joint Educational Institution (JEI), was established by NPU in partnership with Queen Mary University of London (QMUL). The JEI aims to develop students with global competencies and professional expertise by integrating advanced education philosophy, concept and teaching methodology with NPU. Since the first student enrolment in 2017, 80% undergraduates from the JEI have entered world-class universities for their further-degree study successfully. Initiatives for establishing new JEIs are being planned and implemented by NPU. In Sept, 2023, NPU signed the framework agreement with Moscow Aviation Institute for Cooperation in Running Schools, which is not only regarded as a new case of JEI, also indicates that the JTI’s value and contributions to improve the quality and reputation of the university, especially through international education, are highly recognized by NPU.

Moving to the next stage, NPU has announced its decision to have NPU-complementary campus in Kazakhstan at the China-Central Asia Summit in May, 2023. NPU commits to set up its branch in collaboration with Al-Farabi Kazakh National University, which is the first complementary oversea campus for NPU. These efforts are believed to leverage the international education resources that NPU has with the local education needs in Kazakhstan, and to promote the education cooperation between two countries <sup>[5]</sup>.

These efforts will result in increased demand for foreign language classes and trainings. NPU prepares itself to satisfy the need in various ways. Language courses offered help students to express both in their native language and foreign language(s), to exchange professional ideas with

peers from different backgrounds, to understand and appreciate different cultures through languages. Additionally, some schools of NPU have taken their own initiatives to cooperate with external service providers to supply students with high-quality IELTS trainings, etc., which support students to get IELTS qualification in order to apply for more international programs, and to cope with global issues through proficiency of English writing, listening and speaking.

### **3.3. Approach: Being Immersive to Research**

In view of research, NPU has formed its partnership with many “targeted” international universities to further enhance the research cooperation, especially in areas of NPU strength, including aeronautics, astronautics, and marine technology engineering, etc. Meanwhile, NPU seeks for research partners who share the common interests of tackling global challenges and solve the critical problems in the scientific and technological domains, including carbon neutralization, artificial intelligence, public health, energy crisis, etc.

It is also crucial for students to raise their awareness about how their studies and research intersect with global opportunities and issues. The university offers students research programs to identify and pursue global areas of interest, to increase their professional experience in an industrial or research environment abroad, and offers students the opportunity to do a master of engineering thesis under the supervision of both NPU faculty and company engineers.

At the university level, NPU promotes the cooperation among countries and regions along the Belt and Road. In 2017, NPU initiated and co-founded the Belt and Road Aerospace Innovation Alliance (BRAIA), together with Chinese Society of Astronautics (CSA). The alliance consists of 74 member units from 22 countries by 2022, which builds a platform for scholars and students to cooperate on various research topics. This multilateral working mechanism also supports research cooperation in a more efficient and effective way. NPU sets the “BRAIA Seed Funding Program” to deepen the international research cooperation among universities by connecting scholars and leveraging resources<sup>[6]</sup>. Some research projects have been subsidized by the national government, and national-level joint research labs are also being fostered based on fruitful research cooperation.

At the school or department level, NPU scholars work with international partners to enhance the academic reputation and global impact. From year 2017 to 2023, NPU scholars have published 11,702 international papers in joint efforts with its international partners. More importantly, the quality of these papers, in terms of average 17.9 citations per paper, is well above the level of average 9.6 citations per paper for total papers published during the same period in NPU. This also turns to be a common phenomenon for many other Chinese universities.

## **4. Conclusion and Suggestions**

There is no “one size fits all” model for internationalization. Each university should find its own way of internationalizing. The internationalization with different goals should be implemented via various paths. Universities should proactively develop strategic relationships at the university, school and departmental levels with select “targeted” international universities, apart from traditionally responsive and opportunistic partnership, which is important to advancing knowledge and promoting cross cultural and political understanding.

For Chinese universities like NPU, the first priority is to identify strategic partners and global opportunities in a systematic approach, and to stay focus on common interests with the partners. The strategic partnership can better ensure the long-lasting cooperation in all aspects despite of changing world, and provide opportunities for deeper and more substantial research collaborations, and for visits and exchanges of undergraduates, graduate students, faculty and administrators.

The second priority is to prepare faculty and students better ready for the world, in terms of language learning, culture awareness, global views, professional capability to address challenges and problems of the human society, with the support to faculty dedicated to international programs, undergraduates having at least once oversea experience, and projects or programs collaborating with international partners, etc.

The third priority is to strengthen the administrative process, infrastructure and resources, including streamlining the decision-making process for international initiatives and activities, facilitating cutting-edge research by adding space and equipment, increasing the number and quality of interdisciplinary courses on global issues. Last but not the least, it is meaningful to develop the multilateral cooperation platforms to enhance the internationalization. University alliances can play very important roles for it.

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