



ACE Africa Centers of Excellence



**1st Africa China World Bank Education Partnership
Forum: *Higher Education, Science and Technology***

Beijing and Shanghai, July 10-15, 2017

VENUE:

University of Chinese Academy of
Sciences, Huairou Campus, Beijing,
People's Republic of China

Shanghai Jiao Tong University,
Shanghai, People's Republic of China

BACKGROUND

Sub-Saharan Africa has experienced remarkable growth over the last fifteen years. Recent rapid economic transformation and foreign investment including Chinese investments have boosted demand for greater technological skills and applied research in these areas. However, there is a significant gap between demand and supply of skills required for the labor market of African countries' transforming economies. A coordinated regional approach can build upon existing academic and training institutions in the region to collectively produce skilled workforce, especially in priority sectors where demand for skills is the greatest.

The World Bank finances and supports a significant portfolio of higher education, science and technology, as well as skills and Technical Vocational Education and Training (TVET) development projects in Africa. PASET¹, which is a unique Africa led initiative, was launched in 2013 with support from the World Bank and partner countries including Korea and China. By now, PASET has a full-fledged governance structure and emerging initiatives including regional scholarship and innovation fund (RSIF), the regional skills centers of excellence, capacity building in institutional benchmarking and planning of human resources. Additionally, two ongoing World Bank regional projects in higher education aim to produce science and technology talent and skills for the continent: The Western, and Eastern and Southern Africa Higher Education Centers of Excellence Projects (ACE I and II) is committed to strengthening 46 competitively selected centers, housed in 37 universities across 16 African countries, to deliver quality, market-relevant post-graduate education, and build collaborative research capacity in five regional priority areas: industry, agriculture, health, education and applied statistics. Funding of each center is tied to agreed results and is only disbursed for their achievement, ensuring stronger ownership and impact. Under ACE II alone, over the course of next five years (2017-2022), these centers plan to collectively enroll over 3,500 graduate students, including 700 PhD students; publish 1,500 journal articles; and launch over 300 partnerships and research collaborations with private sector and other academic institutions both in and outside the region.

China has been emerging from its own set of socio-economic challenges. Over the last two decades, the country has witnessed some of the best cases of innovation in advancing science and technology through higher education as key contributing factors to rapid education, social and economic development. Significant advances have been made in frontier science and technology by the Chinese institutions and private sector such as agriculture, renewable energy, ICT, as well as railway technology. Africa could potentially benefit from learning the approaches, methods and strategies of innovating higher and TVET education for development of science and technology in China to accelerate their economic growth and improve cost-efficiency of relevant reforms. Moreover, China has now become a prominent development and strategic partner for Africa. The country was

¹ Partnership for Applied Sciences, Engineering and Technology (PASET), which seeks to build the technical and scientific skilled labor force for priority sectors from the technical/vocational level to higher education and research to support the structural transformation of Africa

the single largest infrastructure financier in eleven African countries between 2009 and 2012. In December 2015, at the China-Africa Summit, China pledged US\$ 60 billion in development assistance to Africa promising the nations to help industrialize, and aiding in technology, equipment, professional and skilled personnel, and capital needed to help put Africa on a sustainable development path.

Tripartite partnership on education between China, Africa, and the World Bank is progressing well with support from the Chinese government and the World Bank. Several Chinese institutions have built partnership with African institutions financed by the World Bank projects. For example, the University of Addis Ababa center for the railway technology, is cultivating partnership with the Southwest Jiao Tong University and Shanghai Jiao Tong University in China; East China Normal University is partnering with the Nelson Mandela Academic Institute of Science and Technology in Tanzania. These partnerships have turned out to be mutually beneficial. There is need for scaling up partnerships among more Chinese universities and their African counterparts.

Hence a Forum on China-Africa-World Bank Education Partnership is being proposed as a potentially sustainable mechanism to maintain the tripartite dialogue and partnership. The 1st of the series will focus on science and technology in higher education. A 2nd one will focus on TVET and skills development in 2018. The format of the forum includes high level dialogues, workshops, and field visits to relevant academic and industrial facilities, private companies which are already active in Africa or interested in supporting Africa human resource development.

The 1st forum on higher education science and technology will not only expose the Africa delegation to the state of art of higher education science and technology in China but also help build bridges between Africa and China at multiple levels, paving the road for more sustained partnership. It will advance the Chinese government strategy on human resource development in Africa and improve the performance of the MOE and MOA and private company projects in Africa. Results and outputs from the 1st education forum in July 2017 will provide timely input to the design of the education and training panel in the 3rd Invest in Africa Forum to be held in Senegal in September 25-26, organized by the Senegal Government, Ministry of Finance China, the China Development Bank and the World Bank.

OBJECTIVES

The China-Africa-World Bank 1st Education Partnership Forum will be on Higher Education and Science and Technology. It is an initiative to strengthen the tripartite relationship as well as to forge new partnerships between leading universities, science and technology research institutes, and private sector of the two regions. Key partners of the forum include the University of Chinese Academy of Sciences, and Shanghai Jiao Tong University. Key objectives of this forum are:

- To learn about the frontier of science and technology in agriculture, renewable energy, ICT, health, railway, education, and other sectors in China
- To share lessons and practical approaches in teaching, learning, research, innovation and technology transfer, for developing technical and scientific capability in higher education
- To share policy and practices in university governance and management
- To form new partnerships and explore creative modalities of collaboration at different levels between the government agencies, education and training institutions and the private sector

PROGRAM PLAN: Date, Time, Event, and Location

Monday, July 10		
08:00 – 08:30	Registration	
08:30 – 09:30	Opening Ceremony: <ul style="list-style-type: none"> • President Chunli Bai or Vice President Jie Zhang (CAS/UCAS) • Representative of the Chinese Ministry of Education (TBD) • Yong Wang, Deputy Director, Chinese Ministry of Finance • Geng Wang, Director, Chinese Ministry of Agriculture • Xiaoyan Liang, Lead Education Specialist and Team Leader, the World Bank • Dr. Aminata Sall Diallo, Advisor to Minister of Ministry of Higher Education and Research, Senegal and Executive Director for PASET 	No. 1 lecture hall, UCAS International Conference Center (UICC)
09:30 – 10:30	Keynote Speech: Management of Higher Education, Science Technology and Innovation in China: policies, institutions and innovative practices <ul style="list-style-type: none"> • By Dr. Yueliang Wu, UCAS Vice President 	
10:30 – 11:00	Coffee break and Group Photo	
11:00 – 12:00	Keynote speech: Status of Higher Education Science and Technology in Africa <ul style="list-style-type: none"> • Dr. Mohammed Salifu, Executive Secretary, Ghana National Council for Higher Education 	No. 1 lecture hall, UCAS International Conference Center (UICC)
12:00 – 13:00	Lunch	
13:30 – 14:30	An Opening Academy—CAS’ International Cooperation and Exchange <ul style="list-style-type: none"> • By Dr. Jinghua Cao, Director, Bureau of International Cooperation, CAS 	
14:30 – 15:00	Coffee break	No. 1 lecture hall, UICC
15:00 – 16:00	UCAS’ Practice and Innovation in Industry Linkage <ul style="list-style-type: none"> • By Dr. Gang Su, UCAS Vice President 	
16:00 – 18:00	UCAS Campus Tour: <ul style="list-style-type: none"> • Grandview Terrace • CAS graduate education exhibition • Museum of Development of Nuclear Power and Man-made Satellite Lab visit 	UCAS Campus

18:00 – 20:00	Dinner and Networking	Banquet hall, UICC
Tuesday, July 11 (Parallel Thematic Sessions)		
08:30 – 12:00	Theme 1: Climate Change and Agriculture <ul style="list-style-type: none"> • By Dr. Dahe Qin, CAS Academician & HU Chunsheng, Professor • By Prof. Bobe Bedadi Woreka, Haramaya University, Climate Smart Agriculture and Biodiversity Conservation • Discussion and exchanges 	No. 2 lecture hall, UICC
	Theme 2: Health and Life Sciences <ul style="list-style-type: none"> • By Dr. Zhiming Yuan, Director of WIV, CAS • By Dr. Debo Adeyewa, Vice Chancellor, Redeemer University • By Dr. Abebaw Fekadu, Center Leader for Clinic Drug Development Center, Addis Ababa University • Discussion and exchanges 	No. 3 lecture hall, UICC
	Theme 3: Renewable Energy, Extractive and Other Industries <ul style="list-style-type: none"> • By Dr. Suojiang Zhang, CAS Academician • By Prof. Etienne Ntagwirumugara, University of Rwanda, Energy for Sustainable Development • Discussion and exchanges 	No. 4 lecture hall, UICC
	Theme 4: ICT, Statistics and Education <ul style="list-style-type: none"> • ICT and Higher Education by Dr. Songlin Feng, Former President of Shanghai Advanced Research Institute (SARI), Member of the Africa PASET Consultative Advisory Group • By Prof. Ousmane Thiare on Africa ICT, statistics or education Centre d'Excellence Africain en Mathématiques, Informatique et TIC (CEA-MITIC), University of Gaston Berger • By Junhao Zhang on ICT for Teacher Education, Shanghai Normal University • Discussion and exchanges 	No. 5 lecture hall, UICC
12:00 – 13:00	Lunch	Center restaurant
13:00 – 13:30	Reconvening to depart for the field visit	
13:30 – 17:00	Visit to the Lenovo Group Headquarters and Sugon	Lenovo building
18:00 – 20:00	Dinner and networking	Center restaurant
Wednesday, July 12		
08:30 – 09:30	Presentation: Curriculum Development for Science Education <ul style="list-style-type: none"> • By Dr. Yuanxun Zhang, CAS Academician 	No. 1 lecture hall, UICC
09:30 – 10:30	Presentation: University's Management of Research, Innovation and Commercialization of Research Output: Policies and Practices <ul style="list-style-type: none"> • By Dr. Desheng Wu, CAS Academician 	No. 1 lecture hall, UICC
10:30-11:00	Coffee break	

11:00 – 12:00	Presentation: Higher Education Quality Assurance in Africa <ul style="list-style-type: none"> By Prof. Abubakar Adamu Rasheed, Executive Secretary, Nigeria National Council of Higher Education 	No. 1 lecture hall, UICC
12:00 – 13:00	Lunch	Center restaurant
13:00 – 13:30	Reconvening to depart for the field visit	
13:30 – 18:00	Visit to Industry Park and Chinese Academy of Agricultural Sciences	UICC
18:00 – 19:00	Dinner	Center restaurant
19:00 – 21:00	Closing ceremony, signing of MOUs, and Chinese Art performance: Brief remarks by: <ul style="list-style-type: none"> Representative from UCAS Hyacinthe Gbaye, Senior Economist, The World Bank Africa represented by Dr. Alexandre Lyambabaje, Executive Secretary, IUCEA 	School Hall
Thursday, July 13		
10:30 – 12:30	Arrival in Shanghai	Pudong Airport
12:30 – 13:30	Lunch	Dazhiju Restaurant
14:00 – 14:30	Opening Ceremony Brief remarks by: <ul style="list-style-type: none"> Dr. Zhongqin Lin, President of SJTU Representative from Shanghai Education Commission Xiaoyan Liang, Lead Education Specialist and Team Leader, the World Bank Africa delegation, represented by Dr. Rose Awuor Mwonya, Vice Chancellor Egerton University, Kenya 	SJTU, New Admin Bldg. B418
14:30 – 15:30	Presentation: Chinese Higher Education Development and Modern University Governance <ul style="list-style-type: none"> By Dr. Zhen Huang, Vice President, SJTU 	
15:30 - 16:00	Presentation: Africa University Governance and Management <ul style="list-style-type: none"> By Dr. Karoli Nicholas Njau, Vice Chancellor, Nelson Mandela Institute of Science and Technology 	
16:00 – 16:15	Coffee break	
16:15 – 17:00	Presentation: Benchmarking of Chinese and African Universities <ul style="list-style-type: none"> By Dr. Jingwen Mu, Director, Shanghai Ranking Consultancy 	
17:00 – 17:30	Graduate Tracer Studies of Chinese Universities <ul style="list-style-type: none"> By Dr. Boqing Wang, Founder and CEO of Mycos 	
17:30 – 18:00	Discussion	

18:30 – 20:00	Welcome Dinner and Networking	Liuyuan Restaurant
Friday, July 14		
08:30 – 09:15	Presentation: Innovative Engineering Education in China and SJTU • By Dr. Jiabin Zhu, Institute of Higher Education	SJTU, New Admin Bldg. B418
09:15 – 09:45	Case Presentations on Innovative Engineering Education: 1. SJTU-UM Joint Institute • By Dr. Peisen Huang, Dean of Joint Institute 2. SJTU-Paris Tech Elite Engineering Institute • By Dr. Jin Yu, Dean of the Elite Engineering Institute	
09:45 – 10:00	Discussion	
10:00 – 10:15	Coffee Break	
10:15 – 10:45	Presentation: Internationalization of Higher Education and Impact • By Prof. Yansong Li, President, Shanghai International Studies University	
10:45 – 11:00	Discussion	
11:00 – 11:30	SJTU Campus Tour: • SJTU Museum of History & Achievements	
12:00 – 13:30	Lunch	University Cafe
13:30 – 14:00	Reconvening for tour of Zizhu Science Park	
14:00 – 14:45	Presentation: Research Innovation and Commercialization • By Prof. Ruzhu Wang, Professor of Power and Energy	Zizhu Science Park
14:45 – 15:00	Discussion	
15:00 – 16:00	Zizhu Science Park tour	
16:30 – 17:30	SJTU Lab Tour : • SJTU Robotics Institute • Sino-Italian Green Energy Building	SJTU Campus
18:30 – 20:00	Closing Dinner and networking Farewell remarks by Africa delegation, represented by Dr. Sylvia Shayo Temu, Director of Higher Education Tanzania and member of ACEII Regional Steering Committee	
Saturday, July 15		
10:00 – 16:00	<ul style="list-style-type: none"> • Option 1: Field Trip to Chongming Island for Project on Environmental Protection. Participants will visit the modern farm on the island which is an ecological demonstration site. • Option 2*: Field Trip to Shanghai Normal University for a special program on math and science teacher training. Details of the program below. 	

	<ul style="list-style-type: none"> • Option 3: Free time. For your convenience, SJTU will arrange shuttle bus from hotel to downtown area. 	
Departure on Saturday evening July 15 or Sunday July 16		

***Detailed Plan for the Visit to Shanghai Normal University, July 15 (Option 2)**

TIME	ACTIVITY
10:30	Welcome Address
	<p>Chair: Prof. Minxuan Zhang, Director of Research Institution for International and Comparative Education (RIICE), Shanghai Normal University.</p> <p>Brief remarks by:</p> <ul style="list-style-type: none"> • President, Shanghai Normal University • Dean, Faculty of Education, Shanghai Normal University <p>Brief video on international cooperation in education</p>
11:00	Coffee break with group photo
11:20	Campus visits
	<ul style="list-style-type: none"> • The Research Institution for International and Comparative Education • The University Museum and Wenyuan Building
12:00	Lunch break
13:30	Keynote: teacher Professional Development in China
	Prof. Minxuan Zhang, Director of Research Institution for International and Comparative Education (RIICE), Shanghai Normal University.
14:00	Discussion and Reflections
14:20	Keynote: Mathematics Education as Foundation for STEM skills
	Dr. Xingfeng Huang, Research Institution for International and Comparative Education (RIICE), Shanghai Normal University.
14:45	Coffee Break
15:00	Sharing Experiences from Africa
	<p>Chair: Dr. Xiaoyan Liang, Lead Education Specialist, The World Bank</p> <ul style="list-style-type: none"> • Presentation by: Dr. Lakhan Yadav, Center Leader, Africa Centre of Excellence for Innovative Teaching and Learning Mathematics and Science, University of Rwanda- College of Education • Remarks by other participating centers of excellence
15:40	Discussion on Cooperation Plan

PROFILE: UNIVERSITY OF CHINESE ACADEMY OF SCIENCES (UCAS)



Located in Beijing, UCAS boasts of many firsts in the People's Republic of China: The first doctorate in science, the first doctorate in engineering, the first female student awarded a doctoral degree, and the first research student awarded double doctoral degrees in China, all graduating from this university. In June 2012, UCAS started enrolling undergraduate students, and now there are 664 registered undergraduate students studying in this university.



UCAS is run by the Chinese Academy of Sciences (CAS), which was established in 1949 and is China's highest academic institution in natural sciences, the highest level consultancy institution, research and development center in science and technology, and the most important training base for advanced scientific talents. UCAS boasts of a team of highly qualified faculty consisting of distinguished professors from CAS institutes who are strong at both teaching and research. UCAS also provides first-class research condition for students to carry out their scientific research. Up to the end of 2016, UCAS has 442 full-time teachers, 2,599 professors, 11,721 supervisors, including 283 CAS Members (Academicians²) and 6,432 doctoral supervisors, who are from 3 national research centers (or labs), 77 national key labs, 189 CAS key labs, 30 national engineering research centers (or labs) and various national frontier scientific research projects.

UCAS has 4 campuses located respectively on Yuquanlu, Zhongguancun, Olympic Village and Yanqihu, all equipped with libraries and teaching and research facilities. In addition, UCAS and its students have full access to the collections and electronic literature database of the National Scientific Library, CAS. Students can also tap into the libraries of all institutes or the branches of CAS for the literatures of their specific field. UCAS boasts cultural and educational ambience. UCAS not only pays attention to helping students lay a solid foundation for the future scientific research, but also to developing their spirit of innovation, character of down-to-earth and sense of social responsibility.

² Highest grade of academicians, with highest level of research and teaching credentials, nominated and then elected to guide and lead the Chinese Academy of Sciences

PROFILE: SHANGHAI JIAO TONG UNIVERSITY (SJTU)



Shanghai Jiao Tong University is one of the oldest institutions of higher learning in China and enjoys world-renowned reputation. By December 2016, with a history of over 120 years, SJTU had 28 schools/departments, 21 research institutes and 13 affiliated hospitals. It had by then 16,195 undergraduate students and 30,270 postgraduate students (14,374 master degree candidates and 6,719 doctorate degree candidates). The university faculty includes 2,835 full-time teachers (among which 891 are professors), 22 members of the Chinese Academy of Sciences and 24 members of the Chinese Academy of Engineering.



Today SJTU has 64 undergraduate programs covering 9 major disciplines: Economics, Law, Literature, Science, Engineering, Agriculture, Medicine, Management and Arts. SJTU has 6 National Experimental Teaching Demonstration Centers, 3 national demonstration centers of virtual simulation experiment teaching and 10 Shanghai Municipal Experiment Teaching Demonstration Centers.

SJTU enjoys an increasingly high scientific research level and technology innovation level. Up to 2016, SJTU led the country for 7 consecutive years in terms of both the project number and the total amount granted by the National Natural Science Foundation of China. The total number of domestic SCI-cited papers reaches 26,749, ranking first in China. With profound cultural background, an age-old tradition on education, strenuous development history, and great achievements made since the reform and opening-up, SJTU has attracted wide attention both inside and outside China.