

# Jing Shi Wisdom & Learning

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**Be in awe of education, for it shapes the soul of human,  
Be cautious to technologies, for its adoption has to be effective,  
Be entangled with 'wisdom', for uncertainty tends to be increasing,  
Be serious to academics, for academic research needs evidence.**

-Dean Ronghuai Huang, delivered at the closing ceremony of the Second US-China Smart Education Conference on March 20, 2017



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# 2017 Annual Review Meeting of SLIBNU

On February 1ST, 2017 Annual Review Meeting of SLIBNU was held at Jingshi Hotel. Co-Dean Ronghuai Huang, Vice Dean Mingquan Zhou, Vice Dean Changjie Chen (remote online) and Dr. Haijun Zeng attended the meeting and delivered speeches. Tingwen Chang, Director of International Cooperation Center and Design and Learning Laboratory, Yuan Gao, Director of Open Educational Resources Laboratory, Yongzhong Wang, ICT Instruction Research Center, Yanli Jiao, Director of the Smart City and Learning Environment Laboratory, Teng Wang, Director of Educational Robot Engineering Center, and Jingjing Jin, Director of Project Incubation Office reviewed and reported their works in 2017 respectively and expressed their outlook for 2018. Hongyan Jiang delivered a research report as a representative.



Group Photo of 2017 Annual Review Meeting of SLIBNU



Group Photo of 2017 Annual Academic Achievement Awards of SLIBNU

## 2017 Top Ten Touching Stories(excerpts)

### Tingwen Chang

His fluent English, earnest working attitude and tolerance to subordinates become the key for International Communication Center to develop rapidly. The Open Educational Resources Lab and Design & Learning Lab are well managed shows his great strong leadership.

### Yanli Jiao

When her members leaving the team for various reasons, she holds the whole team and cooperates with part-time experts, post-doctors and graduate students, applying PI+PM model to guarantee the steady progress of programs and the achievements to be released on time.



Yanli Jiao(on the left) Tingwen Chang(on the right) and Co-Dean Ronghuai Huang

### Yuan Gao

42 countries, 117 international experts, arranging 5 seminars within 1 week, all these achievements witness her hard work on international academic net. She is our ambassador cooperating with Belt & Road Countries.

### Yuling Gong

Each calling, every mail, continuous meetings, Gong keeps in touch with nearly 200 sections, 400 managers within several months for acquiring their ideas, mining pain points, expanding resources and seeking for cooperation. Her efforts lay a solid foundation for the success of the US-China Smart Education Conference.

### Hui Zhang

No matter what kind of tasks presented, she always nodes with smile, developing her advantages on language and research without stint.

### Xiaojing Lu

From communication and coordination to text compiling, 2 sections, 9 programs, she grins and bears. Every overtime weekend witnesses her endeavor and growth. She is our writer and our model in providing academic support.

### Junfeng Yang

Constantly shutting from Hangzhou and Beijing, burning the nightly oil for heaps of times, coming to the rescue whenever there are big events for SLIBNU. He has stringent and principled work style and active work attitude. English writings and articles are nothing difficult for him.

### Dianyun Li

Maybe you never encountered him, for he is the earliest to come and last to leave. It is his quiet contribution making the SLIBNU still clean and bright in its third year. 0 loss of goods, 0 accidents, he is the guardian of SLIBNU.



Yuling Gong(on the left) Yuan Gao (on the right) and Vice Dean Mingquan Zhou



Hui Zhang(on the left) Xiaojing Lu(on the right) and Prof. Rongxia Zhuang



Junfeng Yang



Dianyun Li



# 2018 Academic Week on Smart Learning and Innovative Design was successfully held in BNU

## Introduction

On January 3-7, Smart Learning & Innovative Design Week was held in the Jingshi Academic Hall. It was held by BNU, organized by Smart Learning Institute of Beijing Normal University (SLIBNU), and co-organized by Graduate School of Beijing Normal University (GSBNU), Faculty of Education of Beijing Normal University (FEBNU) and Eternity, supported by Beijing Design Society (BDS). Smart Learning & Innovative Design Week focused on the cultivation of designing, computing and innovative thinking for future digital citizens. The events included The Second Design, Computing and Innovative Thinking Summit, exhibitions of enterprise design products and excellent student products, Design & Learning Experience Workshop, Design & Learning Products Report and Assessment, and related seminars, etc. On the first day of the events, more than 200 domestic and overseas representatives were attracted. It was lived online all over the world all the time and more than 2000 people online participant in unit time. The exhibition of the products designed by universities and enterprises also attracted more than 800 participants.



site of activity



Mr. Mingyuan Gu

Famous educational experts Mingyuan Gu addressed the opening ceremony. He noted that we have entered to a new era where informationization, network and AI develop fast. Though education cannot changes rapidly with the development of information technology like other industries, such as financial industry, it is sure to be influenced by informationization . Education circles are supposed to handle the relationships among instruments, skills and atmosphere, that is to say, the relationships between tools, instruments applications and changing ideas.

## The world's first academic monograph on the application of VR, AR and MR -Virtual, Augmented and Mixed Realities in Education published

The book was co-edited by Co-Dean Dejian Liu, Co-Dean Ronghuai Huang, Prof. Chris Dede and a dozen or so top experts and scholars from China, U.S., Germany and Britain. It is the first English monograph which collects the knowledge about advanced technology applications in education and will offer some suggestions and guides for the global development and practices of VR+ Education.



Group Photo of Experts

## Experts in innovative design gathered at the Academic Week



Weizu Song, Deputy Secretary General of China Industrial Design Association(CIDA)



Xudong Zhu, Minister of Faculty of Education, BNU



Ming Wang, Vice Dean of GSBNU, BNU



Dejian Liu, Co-Dean of Smart Learning Institute, BNU



Ronghuai Huang, Co-Dean of Smart Learning Institute, BNU



Li Xiong, CEO of NetDragon



## The Second Design, Computing & Innovative Thinking Summit Was Successfully Held

The Second Design, Computing & Innovative Thinking Summit was successfully held during the Academic Week. The Summit invited more than 10 domestic and foreign experts on design, computing and innovative thinking to give excellent speeches.

### Glimpses of Experts' Speeches (excerpts)



Guan Liu, Professor of Academy of Arts & Design, Tsinghua University



Eric Byler, Expert of China-US ME310



Michael Spector, Professor of University of North Texas



Zhang Xiong, Professor of Beihang University



Nian-Shing Chen, Professor of Griffith University, Australia



Guangzuo Cui, Professor of BNU



Yanyan Li, Professor of BNU



Jianzhong Zhou, Researcher of Institutes of Science and Development, CAS



Zhongming Wen, Professor of Tianjin University



Jinsheng Ma, Assistant Professor of Beihang University



Dianjun Gao, President of Chongshi Branch School of Beijing Chen Jinglun High School



Junjie Wu, Teacher of Beijing Jingshan School

## Works of Design & Learning Gathered at Smart Learning & Innovative Design Week

As one of the highlights of Academic Week, nine works of the course debut. Experts include Guan Liu, Professor of Academy of Arts & Design, Tsinghua University, Weizu Song, Deputy Secretary General of China Industrial Design Association (CIDA), Jianzhong Zhou, Researcher of Institutes of Science and Development, CAS and Jinsheng Ma, Assistant Professor of Beihang University debriefed the reports and gave comments. 2000+ online audiences voted.



Group Photo of Experts and Students

### Design & Learning Workshop for Teachers

On January 6th and 7th, 2018, as the most important academic week event, more than 30 university teachers and primary and secondary school teachers came to the "Design & Learning" workshop. The workshop was divided into 2 sessions, one for university teachers and another for primary and secondary school teachers. Teachers from Beijing Normal University, Capital Normal University, Beijing Jingshan School and Xicheng District Experimental Primary School participated in the activity.



Design & Learning Workshop for University Teachers



Design & Learning Workshop for Primary School Teachers

### Work Exhibition of Enterprises and Universities

During the Academic Week, Design Innovation Experiencing Zone and Design Computing Thinking Experiencing Zone were set at the Four Season Hall at the first floor of the main building of Beijing Normal University to exhibit works from enterprises and universities, which attracted many audiences.



Co-dean Dejiiian Liu and Ronghuai Huang visited and supervised the experiencing zone.



Foreign guests experienced new technologies.



# The Third US-China Smart Education Conference

## successfully held at the Beijing International Conference Center

### Introduction

On 18-20 March, The Third US-China Smart Education Conference convened at the Beijing International Conference Center on March 18th. This year's conference was organized jointly by Beijing Normal University, University of North Texas and National Engineering Laboratory for Cyberlearning Intelligent Technology, and organized by the Smart Learning Institute of Beijing Normal University, China Research Institute of Education and Social Development and the Association for Educational Communications and Technology (AECT). The conference was supported academically by Tsinghua University, Chinese Education Society, Chinese Association of Higher Education, and China Educational Technology Association (CETA). A total of over 800 participants from research institutes, universities and businesses attended the conference.



Scene of the conference



Group Photo of Guests on the Opening Ceremony

Experts in attendance included Yunhe Pan and Qinqing Zhao, academicians of the Chinese Academy of Engineering, Chaozi Lei, director of the Science and Technology Division of the Ministry of Education, Qi Dong, President of Beijing Normal University, Binglin Zhong, Chairman of the Chinese Society of Education, Eugene G. Kowch, President of AECT and other experts from of educational technology from China and the US. They engaged in in-depth discussions on the frontier issues related to Artificial Intelligence (AI) 2.0 and ICT in Education 2.0. During the Conference, 2018 Technology Outlook - Chinese Vocational Education: A Horizon Project Report was released. At the same time, the conference held some forums: Education Forum on Innovation & Startup, Forum on Enterprise strategic Development in Intelligence Era, Forum on New Technological Aggregate Breakthrough of Industry-Education Integration, Forum on AI and Education, Forum on Smart Campus and some parallel sessions like Smart Learning Environment International Conference and China-US Intelligent Technologies Cooperation Conference. Besides, smart education exhibitions are held during the conference.

### The Opening Ceremony



#### Qi Dong, President of Beijing Normal University

Smart education should be adopted to push for education equality, for improving education quality, for resolving practical educational issues, as well as for promoting policy and institutional reform and expedite the research of brain science, so as to provide a solid foundation and strong momentum for the further development of smart education in the future.



#### Neal J. Smatresk, President of University of North Texas

The US-China Smart Education Conference are inspiring us to significantly change the ways of learning on campus with technology. I hope all colleagues at the conference would jointly make creative and innovative changes to the world.



#### Qinqing Zhao, Academician of the Chinese Academy of Engineering

In the field of education, multi-media and computer teaching will be followed by virtual reality (VR) in reshaping people's ways of learning. VR will serve as an important promotional force in all aspects of education and usher in a new chapter of education.



#### Zuoyu Zhou, Vice President of BNU, Host of the Opening Ceremony



Keynotes



**Yunhe Pan, Academician of the Chinese Academy of Engineering: AI 2.0 and Educational Development**

AI is entering a stage of 2.0, where key technologies such as big data intelligence, swarm intelligence, cross-media intelligence, augmented human-machine hybrid intelligence and autonomous intelligence system have already been applied in smart cities, smart healthcare, smart manufacturing and various other fields. In implementing the new-generation AI strategy, teambuilding and talent cultivation are extremely important.



**Director Chaozi Lei, Science and Technology Division, Ministry of Education: Chinese Education in the New Era: from 1.0 to 2.0**

Via the implementation of Education Informationization 2.0, there are three transformations to strive for. First, the transformation from the development, application and service of private education resources to that of big resources; Second, the shift of focus from improving the application capability of information technology to improving teachers and students' information literacy; Third, the change from integrated ICT application in education to innovative development.



**Binglin Zhong, Chairman of the Chinese Society of Education: Meeting the New Challenges of Web-Based Teaching**

Web-based teaching has led to new opportunities and challenges in the process of resolving major education issues in the new era. Internet education facilitates the expansion of sound educational resources and fuels the internationalization process of education. Still, it is necessary to keep optimizing web-based teaching while avoiding detours, with a focus on bringing up the quality of online courses and stepping up integrated planning, so as to create sound educational resources that feature joint contribution and shared results.



**Eugene G. Kowch, President of AECT: Leading Education Systems through Collaborative Networks**

The application of AI and VR changes the original learning environments, which is bound to bring about transformation in learning styles and education system. He appealed that AI and VR are supposed to be introduced in vocational education and promote the cooperation and communication between colleges and universities.

**2018 Technology Outlook - Chinese Vocational Education: A Horizon Project Report released in Beijing**

Co-Dean Ronghuai Huang released the Report on behalf of the project team. It is another important research achievement after The 2016 NMC Technology Outlook for Chinese K-12 Education-A Horizon Project Regional Report and The 2017 NMC Technology Outlook for Chinese Higher Education: A Horizon Project Regional Report released by Smart Learning Institute.



**Invited Guests of the Report**

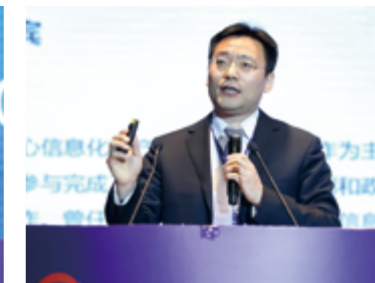
The Conference invited 8 domestic and foreign famous experts in this field.



Yangnan Wang, Director of Central Institute for Vocational and Technical Education



Joseph South, Former Director of the Office of Educational Technology, U.S. Department of Education



Zhiguang Shan, Director of Department of Informationization & Industry Development, National Information Center



Michael Spector, Professor of University of North Texas



Xiaochun Yang, Deputy director of Exchange Center of China and Foreign Talents of the Ministry of Education



Amy L. Baylor, Program Director at the Natural Science Foundation of the US (NSF)



Yonghe Zheng, Head of the Policy Bureau of the National Natural Science Foundation of China (NSFC)



Zhijian Yang, President of Open University of China and Chairman of the Chinese Association of Education Technology



## Education Workshop on Innovation & Startup

Education Workshop on Innovation & Startup is organized by SLIBNU and Eternity. During the forum, the opening ceremony of 'VR+Education' Working Committee of Information Technology New Engineering Industry-University-Research Alliance, VR + Industry Educational Resources Co-construction and Sharing Alliance foundation ceremony Agent Unit Awarding Ceremony and Roundtable Forum were held. The forum invited experts from China and U.S. to discuss on vocational education and innovation education, which attracting more than 300 representatives.



Information Technology New Engineering Industry-University-Research Alliance, 'VR+Education' Working Committee Foundation Ceremony



VR + Industry Educational Resources Co-construction and Sharing Alliance foundation ceremony



"Vocational Education Talents Cultivation in New Situation Roundtable Forum



Guangju Chen, Professor of BNU



Kai Kang, Vice President of China Association of Higher Education (CAHE)



Junming Wang, President of Nanjing Vocational College of Information Technology



Patrick Perry, Chief Information Officer, California State University



Ming Zhou, Deputy Director of Education and Test Center of The Ministry of Industry and Information Technology



Tao Zhang, Chief Inspector of Enterprise Development Center, NetDragon



Xiaoming Ma, Vice President of Shenzhen Polytechnic



Hao Lin, Vice President of Dell China

## Workshop on Enterprise strategic Development in Intelligence Era

The workshop was organized by SLIBNU and Baidu to discuss around 'Education and Technology', 'Industries and Capital', aiming at defining the role of new technologies in pushing forward education reform and trends in core intelligent technology, educational products & services. 150+ representatives from colleges, institutions and enterprises attended the workshop.



Li Xiong, CEO of NetDragon



CEO Michael Moe, Founder and CEO of The Global Silicon Valley



Hongrong Luo, Business Owner of colleges and universities, Baidu Education



Bibo Xiang, SVP of VIPKID



Anthony Marshall, The IBM Institute for Business Value



Yanli Jiao, Director of SCLE Lab of SLIBNU



Chee-Kit Looi, Professor, Nanyang Technological University.



Dr. Zhicheng Dong, SLIBNU



Site of Trends of China-US Educational Technology Development in the Era of Intelligence

Co-Dean Ronghuai Huang discussed with Michael Moe, Founder and CEO of The Global Silicon Valley, Lian Zhong, Vice President of Shenzhen Capital Group and Eugene G. Kowch, President of AECT on Trends of China-US education technology development in the era of intelligence.



### Workshop on New Technological Aggregate Breakthrough of Industry-Education Integration

The workshop was organized by National Center for Schooling Development Program and SLIBNU. It focuses on 'Smart Learning Workshop, Core engine of Educational Transformation' and gathered experts from governments, schools and enterprises to discuss educational transformation in the new situation, attracting more than 100 representatives from academia and enterprise circle.



Feng Chen, National Center for Schooling Development, Ministry of Education, PRC



Zhen He, Dean of National Vocational Education Research Institute, BNU



Guoquan Wu, President of Hezhou University



Shanxue Sun, President of University for Science & Technology, Beijing

In the Round Table, Qingyun Dai, Vice President of Guangdong Polytechnic Normal University, guests include Zihao Liu, Vice President of JD Cloud, Xiaofei Duan, product General Manager of HUATEC, Lijun Zhang, Executive Director of Innovine Works shared their ideas on the influence of new technology to education from different perspectives. Enterprise representatives of VIPKID, Hentane Education, Mosotech shared the construction thoughts of smart learning workshop from the perspective of business modes exploring.



Experts of Round Table

### Workshop on AI and Education

The workshop was co-organized by National Engineering Lab for Cyberlearning Intelligent Technology and Mosotech and invited China and US experts in AI to discuss on 'AI and Education', 200+ representatives from universities, institutions and enterprises attended the workshop.



Hong Liu, Deputy Managing Director of Chinese Association for Artificial Intelligence (CAAI)



Gang Dong, Vice President of The Chinese Society of Technical and Vocational Education (CSTVE)



Thomas D. Parsons, Professor of University of North Texas



Songhao Piao, Director of Multi-Agent Robotic Research Cente, Harbin Institute of Technology



Jun Zhang, Professor of Wuhan University



Guangzuo Cui, Professor of BNU



Global Educational Robots Alliance Launching Ceremony

During the Conference, Global Educational Robots Alliance Launching Ceremony was held. Co-Dean Ronghuai Huang and guests include Songhao Piao, Director of Multi-Agent Robotic Research Cente, Harbin Institute of Technology and Kinshuk, Dean of the College of Information, University of North Texas witnessed the launching of the Alliance.



### Workshop on Smart Campus

The workshop was organized by SLIBNU and focused on smart campus construction, education reform practices and campus data management, gathered experts in this field to share their research achievements and experiences, discussing the construction and development of smart campus. It attracted more than 100 representatives from academia and enterprise circle.



Group Photo of Guests



Nian-shing Chen, Griffith, Professor of Griffith University, Australia.



Haiguang Fang, Professor of Capital Normal University



Huiyong Liu, Assistant Professor of Beijing University of Posts and Telecommunications



Wanjun Sun, Division Chief of Beijing College of finance and commerce



Chunlin Huang, Vice President of Zhejiang Technical Institute of Economics (ZTIE)



Daming Jia, BGM of Seentao Technology

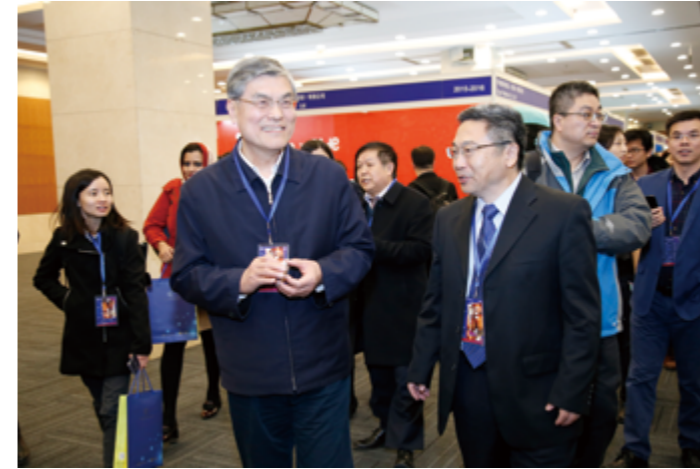


Xin Jin, Chairman of Beijing Mosoink



Huaen Liu, CEO of Beijing Jiuhua Technology

### Smart Education Exhibition



### Media Reports

100+ medias include Xinhua News Agency, Xinhua.net, China Education Daily and TouTiao reported the Conference.



Report of the Xinhua News Agency

Report of China Education Daily

On 6:30 p.m. 21th March, the Conference was reported by CETV in China Education Report.



Report by CETV



## The Innovation, Design and Learning Webinars

Smart Learning Institute held the Innovation, Design and Learning Webinars from 21 to 25 March 2018. Webinars attract 17 experts and scholars in the field of education, design, humanity, technology and business from 13 countries around the world. They had robust discussion centers on 'the role of OER in vocational education', 'harnessing OER for innovation, design and learning' and 'the design and learning in interdisciplinary subjects'. In the course of Webinar, audiences from Russia, Japan, Korea, Romania, Madagascar, East Timor, Algeria and other countries communicate deeply with experts.



Experts include Kekang He (Director of Modern Education Technology Research Institute of BNU), Jonathan Michael Spector (Professor of University of North Texas), Robert Schuer (UNESCO Chair on Open educational resources), Sandra Kucina Soffic (Vice-president for OPEN PROFESSIONAL COLLABORATION of EDEN), Jenni Hayman (Director of Digital Campus Program of Ontario of Canada), Chee Kit Looi (Professor of National Institute of Education, Nanyang Technological University), Yan Wu (Professor of Southern University of Science and Technology) and Ilia Rodov (Professor of Department of Jewish Art, Bar-Ilan University, Israel) made perfect reports. At the same time, participants spontaneously formed many parallel sessions, including Peking University, Tsinghua University, Beijing Normal University, East China University, HuaiHai Institute of Technology, etc.



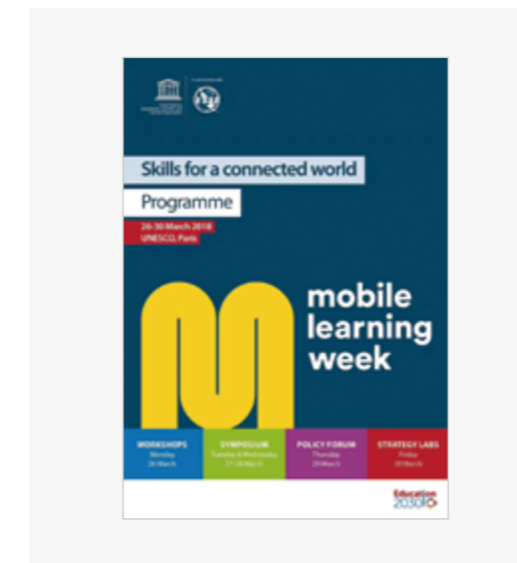
Kekang He, Director of Modern Education Technology Research Institute of BNU



Foreign Students participated the Learning Week

## Co-Dean Huang attended The ITU UNESCO Mobile Learning Week 2018 in Paris

Co-Dean Ronghuai Huang attended the ITU UNESCO Mobile Learning Week 2018 held from 26-30 March at UNESCO Headquarters in Paris, France. This year's event is organized under the theme "Skills for a connected world". The Learning Week is the representative activity of ITU UNESCO, participants will exchange knowledge about the ways governments and other stakeholders can define and achieve the skills-related targets specified by Sustainable Development Goal 4 (SDG 4). The Learning Week hamming at integrating "non-digital" teaching methods with mobile learning to reduce inequality and promote teaching & learning innovation, narrowing the gap between formal and informal education system. Co-Dean Huang introduced China's new curriculum on information technology and our Education Informationization 2.0.





## The Innovation, Design and Learning Webinars

➤ On 16th January, Educational Resources Open & Publication Service Seminar was held by SLIBNU. The Seminar invited experts and representatives from China Copyright Protection Center, People's Education Press(PEP), Lhasa Enterprise Chamber in Beijing, FOXMAX BPO BEIJING INC, Longmen Press, Beijing Education Media, China National Publications Import & Export (Group) Corporation, Chongqing Publishing & Media, ChineseAll, NetDragon and Amazon. They had discussions on new demands of Belt and Road countries for educational resources and new opportunities they bring to domestic education publishing, as well as 'coexistence of educational resources opening & sharing and pay for knowledge'.



Site Photo of the Seminar

## Financing Forum on Web Education and Educational Service Industry

➤ On 17th January, Financing Forum on Web Education and Educational Service Industry was held jointly by SLIBNU and National Engineering Lab for Cyberlearning Intelligent Technology. The Forum invited experts and representatives from governments, universities, media and Tencent, Baidu, NetDragon, China Culture Industrial Investment Fund, Hejun Capital, and Shunwei Capital. They had discussions on 'education serves the development of industry', 'enterprises' concentration and level of service to education service', and '2018 trends of investment of education industry'. The Seminar was reported by China Education Daily titled 'Web Education and Education Service: A Warm Winter'.



Site Photo of the Forum

## Seminar on Edu-Service Robot Development

➤ On 2nd February, Seminar on Edu-Service Robot Development was held jointly by SLIBNU and National Engineering Lab for Cyberlearning Intelligent Technology. The Seminar invited experts from Institute of Automation CAS, Tsinghua University, Beijing Normal University, Capital Normal University, and Harbin Institute of Technology, as well as representatives from China Mobile, Microsoft China, IFLYTEK, UBTECH, Turing Robot, Leju Robot, Zige AI, and Meike Digital Technology. They had discussions on initiation, launching, organizing and orientation of Global Education Robot Alliance.



Site Photo of the Forum

## Forum on Educational Development Subject Plan of Pinggu District, Beijing

➤ On 10th February, Forum on Educational Development Subject Plan of Pinggu District, Beijing was held by SLIBNU. The Forum invited experts from Basic Education Division of Ministry of Education PRC, Institute of Teacher Education of BNU, and Learning Society Research Institute. At the same time, The Forum invited relevant leaders form education office of Pinggu District, Beijing.



Site of the Charrette



## Forum on Educational Informationization Leadership Training Plan

➤ On 3rd March, Forum on Educational informationization Leadership Training Plan was held jointly by SLIBNU and National Engineering Laboratory for Cyberlearning Intelligent Technology. The Forum invited leaders, experts and representatives from Ministry of Education of PRC, Beijing Normal University, Tsinghua University, China Mobile, Elernity, and IFLYTEK. They had discussions on the training objects, course systems, and base construction of the Project.



Site of the Forum

## Xiongan New Area Smart Education Plan Project -Smart Campus Construction Workshop

➤ On 30th March, SLIBNU held the Xiongan New Area Smart Education Plan Project -Smart Campus Construction Workshop. Experts and scholars from China Information Industry Association, Beihang University, Beijing Normal University, representatives from educational institutions of Dongcheng, Haidian and Daxing districts and business representatives from HUAWEI, COMBANC, Beijing Zonekey attended the workshop. They had discussions on the idea, connotation, path of development, constructing mode and OPS service of smart campus construction.



Site of the Workshop

## Project Status in 2018

### Xiongan New Area Smart Education Plan

➤ Co-Dean Ronghuai Huang was entrusted by Ministry of Education of the PRC to redact Xiongan New Area Smart Education Plan. Up to now, seven working conferences were held to discuss work mechanism, implementation steps, publicity, investigations and division of labor in detail, which speeded up the sustainable development of the project. To increase the scientificity and feasibility of investigations, the group discussed with enterprises like Tencent and COMBANC Technology. China Education Daily wrote an article titled Smart Education permeated in the construction of Xiongan New Area based on the project.

Fed by Yanli Jiao

### 'Research & development and Application of Instant Visualized Virtual Simulation System in Orthopedics Minimally Invasive Surgery' of Ministry of Science and Technology of PRC

➤ The Project studies registration mechanism of feedback iteration on multisource multimoding medical images to coordinately enhance the accuracy of registration results. Directing at registration results, it probes into body data in drawing them under photorealistic and non-photorealistic and integrating the results in parallel visible approach. Till now, prototype system development of virtual display platform has finished. Next, a patent is expected to be applied. On 28th March, the group held a seminar to clearly put forward the directions of the next steps.

Fed by Zhong Ren

### Pinggu District Education Development Subject Plan 2035 Project

➤ SLIBNU was delegated by education office of Pinggu District to undertake Pinggu District Education Development Subject Plan 2035 Project and Pinggu District Education Informationization Development Plan. The project aims at pushing forward the education development of Pinggu District, improving the level of education research and talents cultivation to enhance the education quality of Pinggu District and help to promote the equity, high quality, innovation, the construction and perfection of open education system in Pinggu District. The project centers on solving the crucial issues related to the development and reform of the District, making new technologies like Bigdata, Cloud Computing, Internet of Things and AI to integrate and innovate in Pinggu's education, which will benefit for the transformation and upgrading of Pinggu's education informationization. At present, several seminars and investigations have been implemented and the group continue to communicate with education office of Pinggu District.



Pinggu District Education Informationization Development Plan 2018-2022 Seminar

Fed by Yongzhong Wang



## iSTEM Camp 2018 Rounded Off

On 18th to 24th January, iSTEM Camp 2018 was held by SLIBNU. This activity integrated Khan Math, programming education, science activities and technology experience, jointly launched the journey of future learning experience under smart learning environment. Via the activity, SLIBNU explored the implementation path and effective modes for organizing interdisciplinary activity coursed under smart learning environment, carried out relative verification researches from 'Environment Design & Establish', 'Integration & Application of Technology', 'Design & Implementation of Activities' to 'Exploitation & Assessment of Courses', offered referential experiences for it being popularized in pilot schools around the country.

Fed by Yongzhong Wang



Group Photo of Participants

## Innovative Design Courses R&D Popularization Project

The project based on the Design Methodology, investigating the teaching and learning needs of first-tier institutions, absorbing ideas and methods of world famous innovation education, developing courses meeting the needs of different groups, serving for cultivating teacher resources and talents of innovative design. At present, SLIBNU is docking with No.8 Middle School of Beijing, Renqiu Middle School and Huaihai Institute of Technology and offering total solutions for innovative design courses.

Fed by Zhicheng Dong

## White Paper On Digital Education Project and Human Destiny Community

The group implemented investigations on Human Destiny Community, Digital Education and Current Situation of Education Informationization in Belt and Road Countries. At the same time, they asked for opinions from experts in international relationships. The draft of White Paper has took into shape up to now, which is expected to publish at 'Digital Haisi', sub-forum of Digital China Construction Summit on 22-23 April.

Fed by Yanli Jiao

## Research Project of Digital Educational Resources Sharing Standards & Service Modes Innovation: Facing Online Education

Up to now, one academic monograph, 2 research reports, 3 investigation reports and 3 papers were published. On 29th, SLIBNU had a meeting with ISCAS and Open University Online to discuss project progress and reviewed the achievements and future tasks.

Fed by Lanqin Zheng

# 2018 Technology Outlook - Chinese Vocational Education: A Horizon Project Report

## Introduction

**Introduction:** The Report is composed of 112 international and domestic experts, made use of Delphi-based process and desktop research, answering research problems, run-off voting and collecting case, and finally identified 9 significant challenges and 12 important developments in educational technology, reflecting the overall trend of applying educational technology in vocational education of our country in the next five years.



## 9 Key Trends

**Short-term trends:** making informationization promotes the development of vocational education, increasing use of blended learning designs, accelerating proliferation of open educational resources.

**Mid-term trends:** transforming to deep learning, resetting learning space, interdisciplinary study rises.

**long-term trends:** students transform from consumers to creators, promoting revolution and innovation, rethinking college operation mode.

## 9 Significant Challenges

**Solvable Challenges:** reversing social prejudice against vocational education, updating educational technology and adapting to ever-changing teachers' roles, creating genuine learning opportunity.

**Difficult Challenges:** bonding college education with workplace learning, integrating formal and informal learning, supporting personalized learning.

**Severe Challenges:** lead changing sustainable innovation, popularizing interdisciplinary empirical approaches.

## 12 Important Developments in Educational Technology

**Those taking one year to adopt:** three-dimensional teaching material, flipped classroom, Micro Learning Resources, online learning.

**Those taking two to three years to adopt:** virtual reality, augmented reality and mixed reality technology, mobile learning, cloud computing, learning analysis and adaptive learning.

**Those taking four to five years to adopt:** next-generation learning management system, artificial intelligence, virtual and remote laboratory, information visualization.



## Exclusive Interview



Character: **Tingwen Chang**

Ph.D of Chung Cheng University, Taiwan; Post-doc of Athabasca University, Canada.

**Q** You've been evaluated as gainer of Top 10 Touching Stories of SLIBNU for two consecutive years and incubated several teams for SLIBNU. Could you please share some of your perceptions of work or your managerial experiences?

**A** First of all, I was surprised and appreciated being evaluated as gainer of Top 10 Touching Stories of SLIBNU for two consecutive years. I came here in Beijing to work four years ago. At the very beginning, I undertook various research projects. Then I took over International Communication and Cooperation Center of SLIBNU and later I was in charge of Design and Learning Lab. In the past four years, 'making thing right' has always been an idea of mine and I am endeavor to achieve expectations of our Co-Dean Ronghuai Huang and SLIBNU. 'To define the strategies, Build the teams and Lead them' is the precept that Huang always emphasizes, which is also helpful to me. As a team manager, the capacities to set farseeing strategic goals are vital to attach Sense of Direction to every member; the capacity to select and cultivate satisfactory members are significant to attach Sense of Position to every member; and the capacities to lead potential members are crucial to attach Sense of Identity to every members.

**Q** You were promoted as Assistant to the Dean to assist him to plan the development of SLIBNU, could you please share some plans or changes of SLIBNU in staff and orientation development?

**A** Since taking over as Assistant to the Dean, some changes occurred in my working content. I always seek for proper working mode to make greater contributions to SLIBNU. Previous works are in charge of specific projects and staffs. But as an Assistant to the Dean, I am supposed to get a whole picture of various sections of SLIBNU and their work in a more macro way. This may be contributes to support or guide the synergy among various sections and help the Dean to solve problems in daily management, as well as offering suggestions for SLIBNU to develop better. For me, it's a significant transformation and challenge.

In recent months, in addition to knowing more about all sections and their

works of SLIBNU, we will carry forward 2 significant reforms. First, meeting system reform will be implemented so as to improve our working efficiency. New meeting standards related to weekly meeting, strategic meeting, council meeting even annual meeting are expected to be set; decision making, coordinating, advancing and problem-solving of important issues will become themes of various meetings. For example, weekly meetings of SLIBNU will adopt the system of rotating secretary-general. Key themes and problems are to be defined by the secretary-general based on significant projects of SLIBNU and be solved during the meeting. Second, all members are expected to clear the goals of SLIBNU and the section, the capacity demanded by the post and the assessment standards of the organization. Besides, 99U system will be adopted to manage staffs and projects of SLIBNU to help every member know about our systems. The above reforms are aiming at effectively utilizing our human resources and will be helpful to the development of staff and our organization.

**Q** In recent year you put a lot of efforts in the construction of Design and Learning Lab. Could you please share the essence and popularizing plan of 'Design Methodology'?

**A** 'Methodology of Design' is the experiences summary of Co-Dean Dejian Liu of his product design in NetDragon. It can be seen as a design flow, or a series of complete work norms. It's core is to cultivate people's design thinking and make it possible for everyone to work with design thinking and become excellent designers when conducting industrial, software, game and education related designs. Design Methodology starts from original needs, constantly filters, optimizes, and outputs the

function and prototype of products via target users, stakeholders, and competing products.

We hope it can be applied effectively in global education to witness more excellent application results. In 2017, we held many workshops and seminars on design & learning; beyond that, we opened graduate courses based on it. At the same time, we also cooperated with world top universities to continuously improve the prototypes and methodologies as well as verifying its values. We opened short -term courses in graduate school of education at Harvard University and carried out ME310 courses with Design School of Stanford University.

In 2018, we will not only popularize our Design Methodology to more areas in China, but also to Belt and Road countries via the Internet. For example, we discussed with famous experts from more than 10 countries with the help of Webinar. In the future, we will build globalized design centers and professional platforms to offer various services such as training, courses, video of experts, and design services. That will makes more people around the world know about characteristics and advantages of Design Methodology and work out more excellent works based on it.



# Smart Learning Institute of Beijing Normal University

The Smart Learning Institute (SLI) of Beijing Normal University is a comprehensive experimental platform involving scientific research, technology development and instructional teaching, which is jointly established by Beijing Normal University and a global educational technology company, Eternity (a subsidiary of NetDragon). SLI focuses on finding learning patterns powered by ICT, creating smart learning environment and platforms for lifelong learning, as well as supporting diversified, personalized and differential learning needs for digital learners.

- ▶ Focusing on the methods of design, optimization and evaluation for learning environment as well as developing the key technologies for learning environment engineering aims at providing a widely-spread solution for promoting smart learning.
- ▶ Constructing the theory of smart learning and exploring the approaches of integrating ICT with Education aims at offering an international exchange and cooperation platform to smart learning research.
- ▶ Studying on the characteristics and patterns of schooling, family education, community education, enterprise learning and public learning aims at providing support for constructing a learning-oriented society and smart city.
- ▶ Expanding the experimental areas and schools for smart learning as well as exploring the characteristics of ICT-based instruction and the models of future schools aims at promoting educational transformation and innovation.



**Co-Dean, Dejian Liu**

CEO & Chairman of NetDragon Websoft Holdings Limited (777.HK), Special Allowance Expert in the State Council of China, Co-dean of Smart Learning Institute of Beijing Normal University, Adjunct Lecturer of Harvard Graduate School of Education.



**Co-Dean, Ronghuai Huang**

Co-dean of Smart Learning Institute of Beijing Normal University, Director of UNESCO International Rural Educational and Training Centre, Director of National Engineering Lab for Cyberlearning Intelligent Technology.

## Open Series in Springer

- Lecture Note in Educational Technology  
Series Editors: Huang, R., Kinshuk, Jemni, M., Chen, N.-S., & Spector, J.M.
- Smart Computing and Intelligence  
Series Editors: Huang, R., Kinshuk, & Dede, C.



## Springer's Journals

- Smart Learning Environment (The Official Journal of IASLE)  
Editors: Huang, R., Kinshuk, & Soloway, E.
- Journal of Computing in Education (The Official Journal of GCSCE)  
Editors: Huang, R., Hwang, G.-J., Kong, S.-C., & Chen, W.



## Design and Learning Laboratory

Study on the features and patterns of design, computational and innovative thinking for youth; Develop courses and books about design methodology, computational thinking and ICT; Build cooperative platform with world-renowned universities, enterprises and institutes for design and innovation.



Virtual, Augmented, and Mixed Realities in Education



Discuss with Prof. Larry Leifer at d.School of Stanford University (2017.04.11)

## Smart City and Learning Environment Laboratory

Study on the typical learning fields in smart cities and learning societies; Create database of smart learning environment; Publish serial reports on learning environment as well as service industry and products of cyberlearning.



Release Conference of White Paper: Smart Learning Environments in China 2015(2015.09.20)



Index Report of Smart Learning Environments in Chinese Cities



2016 Report of the Cyberlearning Products Development Index in China

## Open Educational Resources (OER) Laboratory

Study on the solution of OER under its impact to the developing countries; Construct the OER community for The Belt & Road countries; Publish reports on the trends of ICT in education.



The 1st US-China Smart Education Conference (2016.01.14)



Series of Horizon Report in China



At a Glance: Education Development in the Belt & Road Countries



Smart Learning and OER International High-end Forum (2017.05.25)

## ICT-based Instruction Center

Explore the methodology of integrating ICT into education with large-scale experiments; Study on the solutions of smart classroom and smart campus; Provide the services for transferring education through the bridge of the theory and practice.



Initial Conference in Experimental Area of Smart Education in Fuquan, Guizhou Province



101 Education PPT Solution

## Educational Robotics Center

Study on the scenarios of robotics in education and the trend of artificial intelligence; Develop the courses for robotic education and STEAM education for K-12 schools. Design educational robotic for various learning fields, such as school, family, etc.



2016 Educational Robotics White Paper: The Global Development



The Next Big Thing: Global Development Status and Trends in Educational Robotics



Prototype of Educational Robotics