

# 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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# The 11th international cognitive load theory conference was held successfully

On September 4th, 2018, the 11th International Cognitive Load Theory Conference (ICLTC 2018) is held at Beijing Normal University. It was hosted by Beijing Normal University and International Cognitive Load Theory Association (ICLTA), organized by the Smart Learning Institute of Beijing Normal University, and co-organized by School of Education and School of Psychology of Beijing Normal University.

The conference, lasting for three days, including four invited keynotes, nine academic report sessions and one poster session, attracted more than 100 scholars in the field of education, scholars and related fields from all over the world. ICLTC2018 has provided an excellent opportunity for them to present and share their researches and experiences in the field of Cognitive Load.



John Sweller, founder of Cognitive Load Theory and Honorary Chairman of ICLTA; Liu Zijian, Executive Chairman of ICLTA, Ronghuai Huang, Dean of Smart Learning Institute of Beijing Normal University attended the conference. The conference not only promoted academic exchanges in the related fields, but also strengthened emotional ties between scholars at home and abroad. The conference provides a good platform for scholars to explore how to rationally allocate media resources, make good use of technical tools, effectively design teaching strategies, maximize learners' learning effects, and promote the realization of advanced teaching goals in the future.



John sweller, Honorary Chairman of ICLTA



Tzi-chien Liu, Executive Chairman of ICLTA

Professor Jan L.Plass, from New York University, shared a report entitled "Cognitive Load Theory – Challenges and Next Steps"; Jia Liu, Director of School of Psychology at Beijing Normal University, presented a report entitled "Efficient Learning and Brain Plasticity"; Professor Detlev Leutner, from Duisburg-Essen University, Germany, shared a presentation entitled "Self-regulated Learning and Transfer of Metacognitive Knowledge and Skills"; Professor Chee-kit Looi, from Singapore's Nanyang Technological University, brought a report entitled "When Mobile Learning Meets Cognitive Load Theory".



Professor Jan L. Plass,  
New York university, USA



Professor Liu Jia,  
Director of School of Psychology Beijing Normal University



Professor Detlev Leutner,  
Duisburg-Essen University, Germany



Professor Chee-kit Looi,  
Nanyang Technological University, Singapore

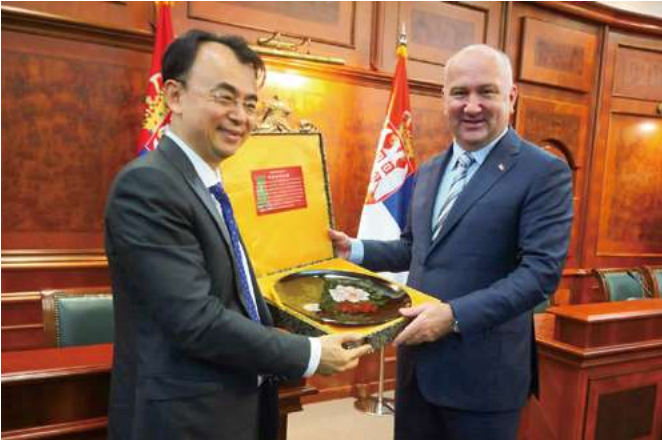


➤ More than 40 authors from different countries have made excellent reports on their latest research results in the field of cognitive load, and have conducted heated discussions on research issues with each other. The conference also announced that the next conference would be held on June 17-19 2019 at Maastricht University, Netherlands.



## Dean Dejian Liu visited Serbia

➤ During July 14-19, Dean Dejian Liu and his team visited Serbia for a cordial meeting with Nenad Popovic, the Minister of innovation and technology development of the Serbian side. This is the first official visit to Serbia after the cooperation memorandum of the "Education Informatization Partnership" Program signed by Novi Sad University, Beijing Normal University and Netdragon Network Co., Ltd. On May 29. Liu and his team visited two well-known universities in Belgrade and Novi sad, and had academic exchanges with relevant professors. He also visited several educational institutions, including Milan Petrović Special Education School and the Laza Kostic Middle School, in order to gain a deeper understanding of the status and needs of education informatization in Serbia.



Dean Liu and Minister Nenad Popovic



Meeting between the two sides



Dean Liu is interacting with Professor Bojan Lalic





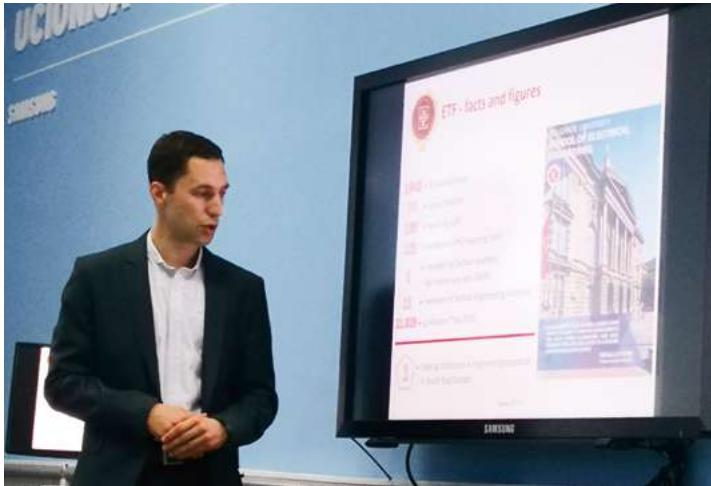
A Visit to Novi Sad University



A Visit to Novi Sad University e-learning lab



A Visit to School of Teaching and Learning at University of Belgrade



A Visit to ETF robot laboratory at the University of Belgrade



A Visit to Vasa Stajic Primary School



A Visit to Laza Kostic Middle School

# Co-Deans and the team visited India

## Co-Deans attend the 18th IEEE Advanced Learning Technology International Conference

On July 9, two Co-Deans and their team went to India to attend the 18th IEEE International Conference on Advanced Learning Technologies (ICALT 2018). Dean Ronghuai Huang was invited as the chairman of this conference, and Dean Dejian Liu was invited to deliver a keynote speech entitled "Interaction and Engagement in Education Through Technology Innovations".

ICALT is the world recognized and one of the highest qualified academic conferences in educational technology field. The conference was held at Indian Institute of Technology Bombay (IITB), which collected many elites from current and future educational technology field, sharing the thinking and exploration of science and technology about global transformative learning.

After the conference, two Co-Deans and their team discussed cooperation in the field of educational information with president of Indian Institute of Technology Bombay (IITB), well-known Indian professors, Indian scientists, and Indian education companies, negotiating the potential cooperation in the field of educational informatization in the future.



Dean Dejian Liu is delivering the keynote speech



A Visit to Indian Institute of Technology Bombay (IITB), Bombay



Working with Professor Deepak B. Phatak and his team



## Dean Ronghuai Huang attended 2018 International Conference on Educational Media

During August 16-18, Dean Ronghuai Huang attended the 2018 International Conference on Educational Media held at Chungbuk University in South Korea. He was invited to give a keynote speech entitled "A New Era of Artificial Intelligence", and conducted multi-party communications with other international scholars and researchers during the conference period as well.



Dean Ronghuai Huang is delivering the speech



Group photo of invited participants

## Dean Ronghuai Huang attended 2018 Dujiangyan International Forum

On August 30th, the 2018 Dujiangyan International Forum was held. The theme of the forum was "Coordinated Development of Urban and Rural Education in the Context of Education in 2030". Qin Changwei, Secretary General of the National Committee of UNESCO; Zhan Tao, Director of the UNESCO Institute for Educational Information Technology; Yu Xiaoping, Director of the Education Department of the National Committee of UNESCO of China; Zhu Dongbin, Director of the Department of Education and Education of the Ministry of Education, and many other experts attended the event. Dean Ronghuai Huang attended the forum and gave a report titled "From Digitalization to Digital Survival in the Information Society".



Zhan Tao, Director of the UNESCO Institute for Educational Information Technology



Dean Ronghuai Huang is delivering the speech

## Webinar on "How will emerging IT reshape learning and industry?" rounded off

From September 25-28, Smart Learning Institute of Beijing Normal University held a webinar on the topic of "How will emerging IT reshape learning and industry?". A total of 12 experts and scholars from the United States, Britain, Serbia, Romania, Russia and China in the field of education, humanity and medicine provided their presentations. There has been a heated discussion on topics such as "Rethinking teacher's role in artificial intelligent era", "How to realize the effective combination of artificial intelligence and data science in the education industry", "How to use information technology for smart education in different branches of education" and so on. The audience and experts from more than 10 countries have conducted in-depth exchanges and interactions online.





## Artificial Intelligence Laboratory in Xiong'an New Area unveiled

On September 14th, the inauguration ceremony of the "Xiong'an New Area Artificial Intelligence Education Laboratory" jointly established by SLIBNU and Baidu Education was held in Baiyangdian High School of Xiong'an. Mr. Shouqing Fu, member of the Party Working Committee of Xiong'an New Area, deputy director of the Management Committee; Yuefeng Yang, the magistrate of Xiong'an New Area; Ronghuai Huang, Co-Dean of Smart Learning Institute of Beijing Normal University; Cheng Zhao, vice president of Baidu, and other guests, as well as the faculty and students in Baiyangdian High School participated the event. The three parties of this cooperation will form complementary advantages and jointly explore a new path for the development of smart education in Xiong'an New Area, also with a view to positively influence Xiong'an's smart education and even the coordinated development of Beijing-Tianjin-Hebei education.



Rongxue Xiao, President of Baiyangdian high school



Gao Zhang, General manager of Baidu education division



Based on emerging technologies such as artificial intelligence, robotics, big data, internet of things, and brain science, the lab is a smart education solution that integrates curriculum resources, teaching platforms, training programs, and virtual experiences. It will serve schools and even for the artificial intelligence teaching, STEAM education and teacher new technical ability training in Xiong'an New Area. The completion of the laboratory is a response to national artificial intelligence strategy and will also be part of Xiong'an's smart education.





# Artificial intelligence and education academic Salon

On July 18th, the "Artificial Intelligence and Education Academic Salon" was held at the Smart Learning Institute of Beijing Normal University. The Turing Award winner, John E. Hopcroft, a professor from Cornell University, gave a keynote speech entitled "Artificial Intelligence and Deep Learning". Vice President of Beijing Normal University Li Chen, vice President of the School of Education, Xudong Zhu; Professor Shengquan Yu, Professor Yonghe Zheng, Professor Yanyan Li, etc. attended the dialogue on "The Impact of Artificial Intelligence on Education", and more than 50 teachers and students participated in the salon.



Professor John E. Hopcroft at Cornell university, USA



Li Yanyan, Professor from Beijing normal university



Group photo for participants



Salon scene

# Intelligent technology-supported learning environment and technology application academic salon

On September 1st, "The Intelligent technology-supported learning environment and technology application academic salon" was held at SLIBNU. Sharon invited Professor Thomas Dana, deputy director of the Department of Education at the University of Florida, Professor Fu Danling, and Professor Zheng Qinhu, deputy director of the National Engineering Laboratory for Cyberlearning Intelligent Technology, to give an academic report. Teaching faculty and students from School of Education and the School of Information Science and Technology of Beijing Normal University, the faulty from the high-tech innovation center of the "Future Education", Arts and Sciences, as well as representatives of relevant education enterprises participated in the event.



Professor Thomas Dana from the University of Florida



Fu Daling, Professor from the University of Florida



Zheng Qinhu, deputy director of national engineering laboratory of Internet education



Salon scene



## Seminar on Regional Education Informatization Construction and Enterprise Synergy Development

On July 13, a number of university experts including Beijing Normal University, Northwest Normal University, Jiangsu Normal University, and New Oriental Education Group, Weidong Yun Education Group, and Keda Xunfei attended the seminar. The issues of "informatization development" and "co-construction of enterprises and government, universities, and primary and secondary schools" were discussed during the seminar.



## Artificial intelligence and educational revolution: a seminar on educational robot development strategy

On July 23, Zhong Binglin, president of the China Education Association, Wang Zhuzhu, director of the Central Electro-Education Education Center, and many other experts attended the seminar to discuss the strategic goals, directions, paths and action strategies of educational robot development and explore the way of operating the Global Educational Robot Alliance.



## Expert Seminar on Innovative Design

On September 12th, Huang Huizhong, director of the Animation Department of the Central Academy of Fine Arts, Cui Xiaosheng, an associate professor of the Department of Environmental Art at the Academy of Fine Arts of Tsinghua University; Li Wei, an associate professor of design at the Art and Media College of Beijing Normal University, and many other experts in the field of art design gathered at SLIBNU to discuss how to integrate design with technology and produce better products to serve the society.



## Expert Seminar on the Development of Cyberlearning Products

On September 18, leading experts from universities, institutions such as the Ministry of Education, Beijing Municipal Education Commission, China Education Technology Association, China Education Equipment Association, China Science and Technology Association, Tsinghua University, Beijing Jiaotong University, and Beijing Normal University attended the seminar to discuss relevant academic issues of the "2018 Cyberlearning Product Development Index Report".





# Design and study of college joint courses

In September, SLIBNU together with other nine well-known universities (East China Normal University, Huazhong Normal University, Shaanxi Normal University, Southwest Normal University, Northwest Normal University, Xuzhou Normal University, Hangzhou Normal University, Northwest University for Nationalities, Northeast Normal University) provided a course in Design and Learning, attracting a great number of students to participate.



Director Liu is giving a lecture

The course involves the design thinking model of the world's top universities and well-known enterprises, with the help of design methodology concepts and tools provided by Netdragon, with the purpose to cultivate and improve students' collaborative learning ability and system thinking ability based on real-world problems. Finally, students are expected to design systems, products and solutions for the education field.



# The faculty of SLI carry out various activities



Innovation design methodology training  
(July 13)



Educational robot white paper discussion  
(August 29)



SLIBNU Mid-Autumn Festival Luncheon  
(September 20)



Python programming training  
(September 29)



# Scholars, experts and students visited SLIBNU



Romanian-Chinese Delegation Visited SLIBNU  
(July 2, 2018)



High School Students in Summer Camp of the School of Education of BNU Visted SLIBNU (July 19, 2018)



African Students(Chad)of the Ministry of Commerce Visited SLIBNU  
(July 23, 2018)



Hefei High School “Informationization Leadership” Special Training Group Visited SLIBNU (August 9, 2018)



Western University of Timisoara, Romania Visited SLIBNU  
(September 3, 2018)



ICLTC2018 Experts Group Visited SLIBNU  
(September 4, 2018)

# Smart Learning Environment Series Research Report

## Introduction

One of the core research objectives of SLIBNU is to study the characteristics and laws of school education, family education, community education, enterprise learning and public places, in order to provide support for the construction of a learning society and smart cities.

The series "White Paper" comprehensively interprets the smart learning and smart learning environment from the perspective of smart city construction and development, collecting basic data information in various administrative regions of China, monitoring the development status of the smart learning environment, and conducts industrial surveys extensively, reflecting real data.

The "2016 Report of the City" Smart Learning Environment Index in City is devoted to the preparation and construction of Learning index evaluation smart indicator system, and evaluate the current status of smart learning in various provinces and cities across the country, form basic judgments and research reports, and provide intellectual support for optimizing educational decision-making, improving teaching quality, balancing teaching resources, and improving employment levels.



White Paper: Smart Learning environment in China 2015

White Paper: Smart Learning Environment in China 2016

2016 Report of the City Smart Learning Environment Index in City



# Project Status in 2018

## "Everyone Can Create" course development project

➤ In August 2018, commissioned by Apple, the course "Everyone Can Create" was created and published, providing customized curriculum to cultivate the ability of creation for Chinese learners. It is expected that relevant course plans, course contents, course resources, and case studies will be completed by the end of December.

Submitted by Yongzhong Wang



## "Development Status of Education Informationization in Beijing" research project

➤ In September 2018, commissioned by the Beijing Municipal Education Commission, the evaluation and research on the development of educational informationization in 16 districts, more than 1,000 primary and secondary schools, and 38 universities in Beijing has been done. The project was conducted on the aspects of infrastructure, resource application, management informationization and safeguards work. The draft of the research report has already been completed. It is expected that the report will be finalized by the end of October.

Submitted by Yongzhong Wang

## Seminar on Demonstration Zone of Smart Education

➤ On July 11th, the seminar on Demonstration Zone of Smart Education was held in SLIBNU. Jiayong Li, Party Secretary of the Department of Education of Beijing Normal University, Geng Chen, Professor of Beijing Jiaotong University, and many other experts attended the seminar and discussed on the construction of Demonstration Zone of Smart Education.

Submitted by Haijun Zeng



## Expert Seminar on "The Construction of Innovative Design" in Higher Education

➤ On July 25th, the expert seminar on "The Construction of Innovative Design" in Higher Education was held in SLIBNU. Bo Wu, director of the Teaching Research Office of the National Higher Education Teaching and Research Center, Yunfei Ma, secretary general of Beijing Digital Creative Industry Association, Jinluan Ren, vice president of Communication University of China, Professor Cheng Jiujuan from Beijing Institute of Technology, Professor Huansen Yan, from Beijing University of Posts and Telecommunications, and many other experts and scholars attended the seminar, discussing on how to build innovative design courses with independent characteristics.

Submitted by Zhicheng Dong



## Seminar on Artificial Intelligence Laboratory in Xiong'an New Area

➤ On August 22, Yonghong Zhao, director of the Education Bureau of Xiong'an New Area; Rongxue Xiao, head of the Baiyangdian Senior Middle School of Xiong'an New Area; and other relevant leaders of the institute jointly discussed the development and planning of smart education in Xiong'an New Area. Valuable suggestions and advice are provided, in order to solve the practical problem in the development process of Xiong'an New Area.

Submitted by Zhicheng Dong

## Training course on Innovation Design Methodology in Vocational Education Center of Xiong'an new area

➤ Following previous three successful teacher trainings on innovative design methodology Xiong'an No. 3 Primary School, Xiong'an Mingzhu Primary School and Xiong'an Rongcheng Middle School from April to June, Design and Learning Lab of SLIBNU was invited by Vocational Education Center of Xiong'an new area to provide another training course. More than 100 teachers attended the course.

Submitted Zhicheng Dong





## Exclusive Interview



Wang Yongzhong

Wang Yongzhong, Director of the Information Teaching Research Center of the Smart Learning Institute of Beijing Normal University, has led his team to complete Education Informationization Research Report for Ningbo, Baotou, Pinggu District as well as Qingdao.

**Q What kind of role the Information Technology Research Center play in the Smart Learning Institute? What is the goal and performance of the center? What have you done to make them realised?**

**A** The Informatization Education Research Center aims to explore and promote the smart learning solutions by exploring and integrating advanced educational technologies into education, in order to promote and industrialise the academic research and the results of technology development of Smart Learning Institute. Relying on the advantages of professional scientific research and expert resources, the system and scientific method flow are used to explore the regional informationization construction mode and path, to provide planning, consultation and service for regional education information construction in many regions of the country.

Our work is mainly based on external commissioned or cooperative co-construction projects, providing education and information-related support services for different regions. Therefore, the performance of team members depends on project implementation and project outcomes, and the performance indicators are quantifiable. Generally speaking, each project has an agreed contract period. It is necessary to formulate a feasible plan for the project according to the agreement, clarify the milestones of the project and the execution cycle of each milestone event, and strictly follow the schedule. In the process of project implementation, we need to strictly abide by the financial management requirements, formulate the project budget table, submit the project budget execution report on time, reasonably allocate various expenses, and complete the requirements of the client in the project budget with high quality. Under the premise of the specified time and budget, the goal of accomplishing the project with high quality and efficiency, and giving the client a satisfactory answer is the practice that my team and I have been working hard.

**Q What do you think are the effective ways to manage the central project? Would you please share some good experiences with other departments of the Institute?**

**A** The project management approach at our center may differ from the general project management concept. To be precise, we mainly use the

project responsibility system. Each student is basically the project leader, being responsible for different projects.

Each project leader has multiple roles. First of all, each project leader is a project manager who is responsible for formulating relevant milestones, setting timetables, organising various meetings or events, and communicating with the client. At the same time, each project leader is also the backbone of the project implementation process. They have to possess sufficient professional knowledge related to education and information, and be able to participate in requirements analysis, expert discussion and even content writing. In addition, each project leader is also a member of other projects. In other projects, they are expected to undertake part of the project implementation work and complete the corresponding workload.

Through several years of practice, our center has formed an effective working mode: unified deployment by project system, professional guidance, top-level design by external experts, and actively exerting the advantages of the team to promote work. This mode of work is an effective attempt by the Institute to promote the "flat management of project management".

**Q What are the biggest achievements or experiences in the three years since the center has been established? Where are the challenges in the future?**

**A** Dean Ronghuai Huang has always quoted Mr. Liu Chuanzhi's "sponsoring the team, setting the strategy, and bringing the team" to share the team management experience. As the person in charge of this center, I have been adhering to this rumor in the team building process. At present, there are 6 students in the center, and 4 of the 5 graduate students (including those still studying)

are from Beijing Normal University. Among them, 3 are graduated from the education technology major, and 3 students have rich first-line teaching experience and basically guarantee. The team's classmates all have high professionalism and educational sentiment, which is a valuable "wealth" accumulated during three years.

During the three-years' development of the center, we have focused on the front line of front-line education and teaching, and have done a lot of researches and explorations in the areas of "Research and Practice of Regional Education Informationization" and "Deep integration of information technology and teaching research and practice". Up to now, we have provided municipal-level education informationization special planning and evaluation consultation for Zhejiang, Ningbo, Inner Mongolia Baotou, Shandong Qingdao, Beijing Pinggu, etc. We also have provided many trainings in Fuquan, Guizhou and Qingyang, Guizhou, such as principal informatization leadership professional training, teacher information literacy training, technology-supported flipped classroom training. Among them, the "Smart Cloud Education" project implemented in Qingyang, Gansu, carried out a number of researches such as 101 Wisdom Classroom, iPad Tablet Teaching, and STEAM Education, which promoted the balanced development of education in the pilot area.

In the future, under the guidance of the "Education Informatization 2.0 Action Plan", we will cooperate with more other test areas, continue to explore and carry out researches and practice on the deep integration of information technology and education, to promote teaching research and practice under the new technology form, to explore ways and strategies to promote balanced development of regional education, in order to promote the quality of China's education.



# 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.

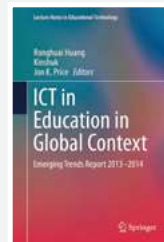


**Co-Dean, Ronghuai Huang**

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



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

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.

## 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