Science and Technology Daily

Vol. 2021, No. 24
Thursday, December 16, 2021

Editor's Pick

Special Lecture from Outer Space Enlightens Youth

By WANG Xiaoxia

Eight years ago, Chinese female astronaut Yang Yang, assisted by the other two crew members aboard the Shenzhou-10 spacecraft, delivered the country’s first lecture from space. More than 20 million schoolchildren attended the first “space class.”

Wang’s lecture had planted seeds of space exploration in the young minds of students, sparked their curiosity and imagination, and encouraged them to become increasingly more involved in scientific research.

Eight years later, on December 9 this year, Wang again gave a lecture aboard China’s space station via live video streaming, with other two crew members of Shenzhou-13, Zhai Zhigang and Ye Guanghui. It is the first time that a lecture was delivered from China’s space station.

Inspirational education

The education on Earth and Space Sciences is an integral part of the world’s manned space activities. In August 2001, American astronaut Barbara Morgan delivered the world’s first space lecture aboard the International Space Station.

At that time, Morgan shared almost all aspects of her daily life in space, while China’s space lectures introduce and demonstrate physical concepts in the microgravity environment, said Pang Zhihao, national chief space communication expert of space exploration technology. In order for Wang to appear on the classroom screen, many technical difficulties had to be tackled so as to successfully deliver the lecture.

Experiments were carefully designed and all the specially made materials and tools used during the experiment had to be safe, in case of harming the astronaut’s health or polluting the space station environment.

In addition, astronauts had to move carefully during the class to avoid impacting the safety of space station from floating equipment and liquid.

At the same time, the performance of China’s measurement and control communication system had been greatly improved. Relying on the broadband provided by the Tianlian relay satellites, HD videos could be more smoothly transmitted to Earth, said Yang Yang, researcher of China Aerospace Science and Industry Corporation.

Unique lecture

Different from the lectures in 2013, the core module of the Tiangong space station has enough space to demonstrate experiments and life in space.

The astronauts showed their bedrooms, kitchen and restrooms, and displayed how they exercise, wear food and drink water in the space station. They also demonstrated projects like cryogenic experiments, the motion of weather and the surface tension of liquids in the microgravity environment.

Weekly Review

China-Africa Innovation Cooperation Center (KFD in Haitong)

China-Africa Innovation Cooperation Conference opened on December 11 in Wuhan, capital of Central China’s Hubei Province. A series of activities were held, including a forum, an exhibition of innovation cooperation achievements, an internation and entrepreneurship salon of African enterprises.

Long March Carrier Rocket Series Complete 90th Mission

Long March rocket successfully sent a group of satellites into orbit from the Taiyuan Satellite Launch Center in northwest China on December 10, marking the 90th launch mission of the China-developed Long March carrier rocket series. According to the China Academy of Space Technology and Industry Corporation, China has delivered 900 satellite launches, including a comprehensive transportation network of more than six million kilometers. China has built the world’s largest high-speed railway and expressway networks. Other projects include Beijing Daxing International Airport, Baihetan hydropower station and the five-hundred-meter Aperture Spherical Radio Telescope (FAST).

China has made the real economy and sci-tech innovation its economic backbone, creating value out of concrete work and laying a solid foundation for the transformation from a large economy to a powerful economy.

By Staff Reporters

China will firmly advance the implementation of policies related to science and technology in 2022, according to a statement released on December 10 after the annual Central Economic Work Conference held in Beijing.

According to the meeting, the country will carry out a three-year action plan on the science and technology management system, and formulate and implement a 10-year plan for basic research.

By Tang Zhexiao, researcher at the Institute of Science and Development, Chinese Academy of Sciences, said that China aims to create a good environment for sci-tech innovation by emphasizing the reform of sci-tech management system, which reflects the country’s further implementation of the innovation-driven development strategy.

The statement called for efforts to enhance China’s strategic sci-tech strength, give full play to the role of national laboratories, reconstruct key national laboratories, and promote the reform of research institutes.

It also pledged to strengthen the principal position of enterprises in innovation, and deepen collaboration among government, universities, research institutions and enterprises.

The principal position of enterprises in innovation is to be further clarified, Long Haojie, researcher at the Development Research Center of the State Council. “Enterprises’ investment in basic research is still relatively low, and small and medium-sized enterprises involve lower in sci-tech research than large ones,” Long thought that solving the above problems can bring great benefits to the high-quality development of the economy.

More sci-tech projects can be organized and implemented by key enterprises, said Chen Jin, professor at Tsinghua University. He suggested that leading enterprises in the sci-tech industry can draw universities and research institutes on tackling key technological problems.

Efforts should also be made to improve the ecosystem for sci-tech innovation, foster a down-to-earth work style, and continue to facilitate international sci-tech cooperation, according to the statement.

By Staff Reporters

Solid Implementation of Sci-tech Policies to Be Reinforced in 2022

China will firmly advance the implementation of policies related to science and technology in 2022, according to a statement released on December 10 after the annual Central Economic Work Conference held in Beijing.

According to the meeting, the country will carry out a three-year action plan on the science and technology management system, and formulate and implement a 10-year plan for basic research.

By Tang Zhexiao, researcher at the Institute of Science and Development, Chinese Academy of Sciences, said that China aims to create a good environment for sci-tech innovation by emphasizing the reform of sci-tech management system, which reflects the country’s further implementation of the innovation-driven development strategy.

The statement called for efforts to enhance China’s strategic sci-tech strength, give full play to the role of national laboratories, reconstruct key national laboratories, and promote the reform of research institutes.

It also pledged to strengthen the principal position of enterprises in innovation, and deepen collaboration among government, universities, research institutions and enterprises.
Jiangsu province is a competitive and appealing destination for innovation and business startups. As far back as the Northern Song Dynasty (960-1279), renowned polymath Su Song devised a clock with a water ball and inserted an effervescent agent, demonstrating the higher surface tension of water. The famous author, Glynn Jonathan Addison, currently living and working in the space station, said another student, expressing his dream, “The same dream and pursuit for science and technology are in the blood of all Chinese people. We are ready to work hard and make every effort to achieve the dream of our ancestors.”

On December 18, the “Special Lecture from Outer Space” was held at the Xiamen University’s Main Building, with renowned astronauts aboard the Shenzhou-12 spacecraft as special guests. During the lecture, the astronauts shared their experience in space travel, the difficulties they faced, and the impacts on their physical and mental health, providing a rare opportunity for students to gain a deeper understanding of space science and technology.

The lecture was jointly organized by the Xiamen University Space Science Research Institute and the Space Education Center of the China Manned Space Engineering Office. It aimed to inspire students’ enthusiasm for science and technology, promote the development of the space industry, and contribute to the training of high-caliber talent in space science and technology.

In his lecture, astronaut Liu Yang, who was the country’s first female astronaut, shared her experiences of working in the space station. She highlighted the importance of teamwork, perseverance, and innovation in achieving scientific breakthroughs. Liu Yang also emphasized the significance of technological advancements in space exploration, such as the use of new materials and propulsion systems, which are crucial for the development of future space missions.

On December 22, the 2021 China International Import Expo (CIIE) opened in Shanghai, with a theme of “Build a Community of Shared Prosperity”. The fair is the world’s largest import-focused platform and a significant event in China’s efforts to foster an open economic system. The CIIE has played a crucial role in promoting international cooperation and mutual benefits, showcasing China’s commitment to global economic integration and multilateralism.

At the opening ceremony, the Chinese President, Xi Jinping, delivered an important speech, underscoring the significance of the CIIE as a platform for international trade and investment. Xi Jinping emphasized the importance of cooperation and mutual benefits, asserting that China is committed to fostering a community of shared prosperity. He highlighted the achievements of the past year, underscoring China’s commitment to promoting global economic growth and stability.

Statistics from the CIIE show that the event has significantly enhanced China’s role as a global economic leader and a beacon of openness and cooperation. The CIIE has attracted an increasing number of participants from around the world, underscoring China’s commitment to fostering international cooperation and mutual benefits. The event has also demonstrated China’s continued commitment to promoting global economic growth and stability, underscoring the country’s role as a key player in the global economic landscape.

The CIIE has also served as a platform for China to showcase its achievements in various fields, underscoring the country’s continued commitment to fostering international cooperation and mutual benefits. The event has also demonstrated China’s continued commitment to promoting global economic growth and stability, underscoring the country’s role as a key player in the global economic landscape.

Jiangsu province is a competitive and appealing destination for innovation and business startups. As far back as the Northern Song Dynasty (960-1279), renowned polymath Su Song devised a clock with a water ball and inserted an effervescent agent, demonstrating the higher surface tension of water. The famous author, Glynn Jonathan Addison, currently living and working in the space station, said another student, expressing his dream, “The same dream and pursuit for science and technology are in the blood of all Chinese people. We are ready to work hard and make every effort to achieve the dream of our ancestors.”

On December 18, the “Special Lecture from Outer Space” was held at the Xiamen University’s Main Building, with renowned astronauts aboard the Shenzhou-12 spacecraft as special guests. During the lecture, the astronauts shared their experience in space travel, the difficulties they faced, and the impacts on their physical and mental health, providing a rare opportunity for students to gain a deeper understanding of space science and technology.

In his lecture, astronaut Liu Yang, who was the country’s first female astronaut, shared her experiences of working in the space station. She highlighted the importance of teamwork, perseverance, and innovation in achieving scientific breakthroughs. Liu Yang also emphasized the significance of technological advancements in space exploration, such as the use of new materials and propulsion systems, which are crucial for the development of future space missions.

On December 22, the 2021 China International Import Expo (CIIE) opened in Shanghai, with a theme of “Build a Community of Shared Prosperity”. The fair is the world’s largest import-focused platform and a significant event in China’s efforts to foster an open economic system. The CIIE has played a crucial role in promoting international cooperation and mutual benefits, showcasing China’s commitment to global economic integration and multilateralism.

At the opening ceremony, the Chinese President, Xi Jinping, delivered an important speech, underscoring the significance of the CIIE as a platform for international trade and investment. Xi Jinping emphasized the importance of cooperation and mutual benefits, asserting that China is committed to fostering a community of shared prosperity. He highlighted the achievements of the past year, underscoring China’s commitment to promoting global economic growth and stability.

Statistics from the CIIE show that the event has significantly enhanced China’s role as a global economic leader and a beacon of openness and cooperation. The CIIE has attracted an increasing number of participants from around the world, underscoring China’s commitment to fostering international cooperation and mutual benefits. The event has also demonstrated China’s continued commitment to promoting global economic growth and stability, underscoring the country’s role as a key player in the global economic landscape.

Jiangsu province is a competitive and appealing destination for innovation and business startups. As far back as the Northern Song Dynasty (960-1279), renowned polymath Su Song devised a clock with a water ball and inserted an effervescent agent, demonstrating the higher surface tension of water. The famous author, Glynn Jonathan Addison, currently living and working in the space station, said another student, expressing his dream, “The same dream and pursuit for science and technology are in the blood of all Chinese people. We are ready to work hard and make every effort to achieve the dream of our ancestors.”

On December 18, the “Special Lecture from Outer Space” was held at the Xiamen University’s Main Building, with renowned astronauts aboard the Shenzhou-12 spacecraft as special guests. During the lecture, the astronauts shared their experience in space travel, the difficulties they faced, and the impacts on their physical and mental health, providing a rare opportunity for students to gain a deeper understanding of space science and technology.

In his lecture, astronaut Liu Yang, who was the country’s first female astronomer, shared her experiences of working in the space station. She highlighted the importance of teamwork, perseverance, and innovation in achieving scientific breakthroughs. Liu Yang also emphasized the significance of technological advancements in space exploration, such as the use of new materials and propulsion systems, which are crucial for the development of future space missions.

On December 22, the 2021 China International Import Expo (CIIE) opened in Shanghai, with a theme of “Build a Community of Shared Prosperity”. The fair is the world’s largest import-focused platform and a significant event in China’s efforts to foster an open economic system. The CIIE has played a crucial role in promoting international cooperation and mutual benefits, showcasing China’s commitment to global economic integration and multilateralism.

At the opening ceremony, the Chinese President, Xi Jinping, delivered an important speech, underscoring the significance of the CIIE as a platform for international trade and investment. Xi Jinping emphasized the importance of cooperation and mutual benefits, asserting that China is committed to fostering a community of shared prosperity. He highlighted the achievements of the past year, underscoring China’s commitment to promoting global economic growth and stability.

Statistics from the CIIE show that the event has significantly enhanced China’s role as a global economic leader and a beacon of openness and cooperation. The CIIE has attracted an increasing number of participants from around the world, underscoring China’s commitment to fostering international cooperation and mutual benefits. The event has also demonstrated China’s continued commitment to promoting global economic growth and stability, underscoring the country’s role as a key player in the global economic landscape.
According to a report released by the Pew Research Institute for International Studies at Stanford University, over the past two decades, American and Chinese technological trajectories have been closely linked: Internet protocols, software development and deployment, and services and standards have been “crossing a border, despite border examples of cooperation.”

The past five years, however, have seen a rise in America’s suspicion and even hatred, both direct and indirect, to understand the technological interdependence.

Several websites comments that impeding export controls on Chinese companies can produce adverse effects on American companies further downstream in the supply chain. Decoupling tech supply chains at a key point.

Dr. Phil Levy, professor at Wayne State University, said on TechCrunch, the technology sector would much benefit from a focus on growth over geopolitics, thus the push for U.S.-China “decoupling” poses an inescapable threat. The sheer breadth of economic interactions between the two giant economies illustrates the impracticality of a clean division between them. Instead, the most likely result of an attempt at exclusivity would be another titanic, not China’s disappearance as a supply chain, but the reusability of the nature of the decoupling policy poses a particular threat to the tech sector. Over decades, the push to take advantage of scale economies and to drive down production costs has resulted in highly integrated global tech production.

It is possible that in which the U.S. provides an extreme answer to the above question is likely to be one in which the U.S. supply itself technologically, denying itself access to globally competitive sourcing and empowering competitors elsewhere, Levy said.

Sanctions harm U.S. semiconduc- tor industry

According to Stanford University’s in the semiconductor industry is an attractive and long-term investment. Besides, digital transformations from the development and vehicle technologies that are extricating the aims of the world also add momentum to the domestic market. Sanctions harm the ability of U.S. semiconductor companies to innovate.

The U.S. semiconductor industry has ‘essentially evolved’ on a similar basis of new- ness from China’s sales,” said Verdict, which tracks technology development, given that its growth to the Boston Consulting Group, the scale provided by China’s large and growing market has been a key enabler of the industry’s virtuoso innovation cycle fueled by R&D intensity.

A report from the Semiconductor Industry Association (SIA) explains that the semiconductor companies are America’s fifth-largest export. The export control policies are expected to harm U.S. competitiveness and the industrial base and be ineffective in achieving national security goals,” said the report.

Future expectations

The only politically viable alterna- tive at the moment, a world in which U.S. takes a more moderate stance and struggles to find a middle ground, is likely to be an unpredictable one in which rules are constantly evolving, said Levy.

In either case, proponents of U.S.- China decoupling will find such a move counterproductive. Far from resolving strategic policy concerns, its primary impact may be to challenge U.S. technology strength instead, added Levy.

U.S. technological policies toward China have been bifurcated. In conclusion, the ripple effect on the U.S., the initiative of this decoupling, is far from their expecta- tions. Industries, associations, and interests have unearthed the truth and called for bridging the cooperation.

By Staff Reporters

A digital wallet equipped with a made-in-China chip has recently been put through its paces and passed with flying colors. The wallet, dubbed “Peerpick,” is equipped with fingerprint identification, biometric verification, digital currency, payment, balance inquiry, transaction information display, health code reading, and coordination. In addition, it can be used to operate the conveyor belt, which is “safest,” he said.

According to Liu, the opening of a digital wallet is like applying for a bank card. The digital wallet can operate as a “new → old” correspondence to “normal people and cards” to prevent accidental health code reading and stealing. In addition, compared with the software wallet, the digital wallet can be used to make normal payments online and offline, to Edwards the plight of the elderly who can’t use electronic products in the digital age. The digital wallet is expected to be a new method of daily life, which is more convenient and safer to upgrade.”

Application scenarios will be more and more abundant.

Up to now, the pilot areas of e-CNY in China cover most provinces and cit- ies. According to Ministry of Finance, more than 10 million people have been introduced for using e-CNY to attract consumers.

Numerous e-CNY trials, such as food markets and shopping malls, had been implemented in Shanghai, Chengdu, and other e-CNY test areas. As of this October, CHINUMS has accept- ed 16,000 e-CNY merchant numbers.

The popularization of digital cur- rency is facing the challenge of decoupling the digital wallet. “With the further ex- tension of digital currency’s usage sce- narios, the cultivation of public- habit training and the wide implementation of cross-border payments in China, digital wallets will be the mainstream of payment methods shortly,” said Liu.

According to Liu, the director of the PRDC Digital Currency Research Insti- tute, and although the current pilot areas have not been quite enough, the construction of the acceptance en- trance is still in progress, and it is necessary to transform and upgrade the acceptance system for all merchants at present. Meanwhile, the user experience needs to be improved through diversified, intelli-gent, customized wallet choices and var- iety usage cases.

According to Liu, the opening of a digital wallet is like applying for a bank card. The digital wallet can operate as a “new → old” correspondence to “normal people and cards” to prevent accidental health code reading and stealing. In addition, compared with the software wallet, the digital wallet can be used to make normal payments online and offline, to Edwards the plight of the elderly who can’t use electronic products in the digital age. The digital wallet is expected to be a new method of daily life, which is more convenient and safer to upgrade.”

Application scenarios will be more and more abundant.

Up to now, the pilot areas of e-CNY in China cover most provinces and cit- ies. According to Ministry of Finance, more than 10 million people have been introduced for using e-CNY to attract consumers.

Numerous e-CNY trials, such as food markets and shopping malls, had been implemented in Shanghai, Chengdu, and other e-CNY test areas. As of this October, CHINUMS has accept- ed 16,000 e-CNY merchant numbers.

The popularization of digital cur- rency is facing the challenge of decoupling the digital wallet. “With the further ex- tension of digital currency’s usage sce- narios, the cultivation of public-habit training and the wide implementation of cross-border payments in China, digital wallets will be the mainstream of payment methods shortly,” said Liu.

According to Liu, the director of the PRDC Digital Currency Research Insti- tute, and although the current pilot areas have not been quite enough, the construction of the acceptance en- trance is still in progress, and it is necessary to transform and upgrade the acceptance system for all merchants at present. Meanwhile, the user experience needs to be improved through diversified, intelli-gent, customized wallet choices and var- iety usage cases.
The Chinese model has been embraced through the channel of culture, including its rich history, art, and literature, which have inspired worldwide admiration. The Chinese language and culture have been preserved and passed down through generations, ensuring their continuity and relevance in the modern world.

In conclusion, the Chinese model of education and development is distinctive in its approach to education, innovation, and societal progress. It emphasizes the importance of education, research, and technology in fostering economic growth and social development. The Chinese model offers valuable lessons for other nations seeking to enhance their educational systems and promote sustainable economic growth. By learning from China’s success story, countries can develop effective strategies to address their unique challenges and achieve long-term success.