

INSIGHTS

Gen Alpha Embraces AI Landscape

AI Ripples

By LONG Yun & FANG Linlin

In an era where technology is reshaping our world, there is growing concern among many adults about the long-term influence of AI technology. This was recently put into stark reality when 13-year-old Xu Mengmeng used generative AI to write a science fiction novel, *AI Teen: The Mars Survival Challenge*, which has earned him 20,000 RMB in royalties.

Dubbed the "Alpha Generation," young people like Xu, born after 2010, are ready and unafraid to harness the power of artificial intelligence (AI) in unprecedented ways.

A wave cannot be resisted
"Today, AI systems routinely exceed human performance on standard benchmarks," said Ray Perrault, Co-Director of the Stanford University *AI Index 2024 report*. This technological advancement is transforming industries and even redefining how the younger generation learns and interacts with people and the world. As Professor Mohamed Sawan from Westlake University said, the popularity of AI presents significant opportunities for socio-economic development, particularly in some sectors like education and healthcare.

A recent survey by Tencent, a Chinese multinational technology conglomerate, shows that 45.1 percent of Chinese youth have used AI products, while the American organization Common Sense Media reports that 58 percent of American teens aged 12-18 have used ChatGPT. These statistics show a growing trend where the Alpha Generation is not just passively consuming technology but actively engaging with it to create, learn and explore.

Around the globe, educational institutions are promptly responding to this shift, integrating AI tools into their curricula and fostering environments that help students for a future where human and AI tools collaboration is embraced.

In China, the Ministry of Education has established 184 AI education bases



Primary school students practice programming using AI under the guidance of teachers. (PHOTO: XINHUA)

in primary and secondary schools, encouraging a deeper integration of intelligent technologies into teaching and learning. Examples of this are innovative programs, such as the AI creative courses offered at Shanxi Experimental Primary School and the dedicated AI experimental zone at Luwan High School in Shanghai.

Concerted efforts to mitigate risks
According to a paper published in the open-access journal *Science Advances* this July, "We find that access to generative AI ideas causes stories to be evaluated as more creative, better written, and more enjoyable, especially among less creative writers. However, generative AI-enabled stories are more similar to each other than stories by humans alone. These results point to an increase in individual creativity at the risk of losing collective novelty."

As we unleash the potential of AI, using AI-related applications with caution becomes more important. Experts warn that overreliance on AI for creative tasks could lead to a homogenization of ideas, and the phenomenon of "AI hallucinations," where AI models generating inaccurate or false information will put young learners' thinking patterns in jeopardy.

Biases are not a question that can

be ignored. According to *OECD Digital Education Outlook 2023: Towards An Effective Digital Education Ecosystem*, the potential of digital education cannot be fully reached if algorithms that may for example support the personalization of education replicate or even magnify the biases occurring in societies around the world.

Regarding these problems, experts call for critical engagement with AI and the responsible use of these tools. "Harnessing AI-related technologies requires a collaborative effort from governments, tech developers, educators, and parents, all working towards a common goal to maximize the role of these technologies," said Hu Jiehui, professor at the University of Electronic Science and Technology of China.

For tech developers, Professor Wang Xin from Tianjin University emphasizes the importance of developing native language AI models that can reflect local cultural values, ensuring that the content generated aligns with the educational and social benefits of each country.

From an educator's perspective, Hu said that teachers and students should join hands to leverage AI to enhance personalized learning experiences, while maintaining the essential role of teachers in guiding students' intellectual and

emotional growth.

Advanced human-AI interaction

AI is not just a challenge. For the new generation, learning to utilize AI tools well has become an inevitable trend for improving learning efficiency and unleashing their creativity.

Experts agree that enhancing the level of human-AI interaction and developing advanced and thinking skills are critical for new-generation learners.

The question begs asking, what skills will be essential for learners in an AI-driven world?

The ability to ask high-quality questions is particularly important, as noted by Professor Oguz A. Acar from King's College London in an article on the World Economic Forum website. "A vital skill is problem formulation. In a world abundant with AI tools offering instant solutions, the real ability lies in effectively identifying and dissecting problems, delineating their boundaries, and creatively reframing them to broaden solution space," Acar said.

According to Hu, effective human-AI interaction is essential, which includes the skill to use questions for richer responses and avoid potential misinformation and biases during the dialogue with AI.

Tang Xiao, associate professor at Tsinghua University, added, "As generative AI gradually integrates into education, it is important to cultivate critical thinking, information discernment, logical reasoning, and an 'aesthetic sense' for language and content."

In fact, the capability to pose high-quality questions relies on the individual's social experiences and knowledge base. It is obvious that many young people, including the Alpha Generation, currently lack the proficiency in asking such questions. However, AI tools at least offer a means to train curious minds to resist the "Siren's call".

"To a certain extent, I am not worried about the impact of generative AI," Tang said, adding that, "The mission of education is to nurture the growth of the next generation with love and responsibility. Each generation has its unique mission and challenges, and as long as the new generation is stronger than the previous one, they will be able to overcome these difficulties."

Comment

'Small Yard, High Fence': Blocking Sci-Tech Progress

By TANG Zhexiao

Although sci-tech development empowers all sectors and provides great convenience and opportunities to humanity, it also brings new challenges to global peace and security, said Fu Cong, China's permanent representative to the United Nations. Fu made the remarks at the UN Security Council's briefing on exploring the double-edged nature of rapid technological advancements, held on October 21.

Robin Geiss, director of the UN Institute for Disarmament Research, echoed Fu's view. While it took nearly 50 years for the 1880s electric grid to reach 100 million homes, ChatGPT achieved the same milestone in just two months in 2022, according to Geiss.

The pace of scientific developments across fields like advanced robotics, 3D printing, and generative AI is so fast that risks to global peace and security are higher than ever.

This gives access to some countries to generalize the concept of national security, and under the guise of preventing risks, suppressing the high-tech companies of others and advocating the so-called "decoupling" and "breaking the chain."

The U.S. and its allies have also organized various "small circles" to specifically exclude other countries and build the so-called "small yard and high walls." This concept involves placing stringent barriers on select technologies, while maintaining normal economic trade in other areas. Meanwhile, their real intention is to solidify their own technological monopoly and impede the development of other countries.

Worse still, the construction of these "small yards with high walls" has disrupted the industrial and supply chains, widened the development gap, and stagnated scientific and technological progress.

Such artificial divisions are more harmful to global peace and security, and may eventually lead the world into the abyss of confrontation, according to Fu.

The U.S.-China tech conflict has

picked up steam in recent years. There are more and more curbs on Chinese chips, NEVs, and other imports, not to mention the ever-increasing tariffs to combat Chinese technological advancement.

However, "small yard and high walls" cannot stop China's independent innovation. Faced with the containment and suppression of the U.S., Chinese companies have increased their R&D investment, deepened independent innovation, broken through technological bottlenecks, and made major breakthroughs in operating systems, 5G, AI and other fields, becoming leading companies in the global science and technology field.

Strong bipartisan support in Washington for further sanctions on China will continue no matter who becomes the next U.S. president, Derek Scissors, resident scholar at the American Enterprise Institute based in Washington, told *EE Times*.

The latest report from Reuters also suggested that the battle to keep U.S. money and technology from boosting China's high-tech capabilities is bound to escalate under either Harris or Trump.

Protectionism may temporarily protect domestic industries, but in the long run, it is self-limiting and impedes opportunities for broader exchanges and cooperation. The U.S. "small yard and high wall" policy against China, tries to maintain its technological hegemony through trade barriers and technological blockades, which not only harms the interests of Chinese and American companies, but also affects global scientific and technological innovation.

Only fair competition and open cooperation can achieve real innovation. Scientific and technological innovation is a common cause of all humankind. As the two largest economies and technological powers in the world, the U.S. and China should optimize their respective advantages, strengthen sci-tech cooperation, share scientific research resources, and jointly promote global scientific and technological progress.

Meeting Challenges, Guiding AI for Good

Opinion

By TANG Zhexiao & WANG Chun

Gathering nearly 300 of the world's top scientists including 11 Nobel laureates, the World Laureates Association (WLA) Forum 2024 was held in Shanghai recently, discussing the use of science and technology to shape a sustainable future and improve the common well-being of humankind.

This year, AI-related topics occupied an important part and attracted top experts' and industry professionals' attention.

When AI becomes a new productivity, are we ready to deal with the "double-edged sword" effect brought by AI?

Science or technology is neutral,

but sci-tech development sometimes brings unexpected threats and challenges, including global warming, regional disputes and others, David Gross, 2004 Nobel laureate in physics, said in his keynote speech at the opening ceremony of the forum. "This requires global scientists to cooperate to cope with the ever-changing problems and guide science for good. Young scientists need to step up and take on the responsibility."

With the development of AI, scientific research is ushering in a series of new breakthroughs, according to E Weinan, an academian of the Chinese Academy of Sciences and dean of the Beijing Institute of Big Data Research. He said AI has become an indispensable tool in many scientific researches. For example, the AlphaFold, an AI system that predicts a protein's 3D structure from its

amino acid sequence, solved the basic problems that had plagued biological science for many years.

AI does not bring threats at its birth, but opportunities are accompanied by threats. Regarding the ethical risks and security challenges behind AI, Gong Ke, executive director of the Chinese Institute of New Generation Artificial Intelligence Development Strategies, said that there are now hundreds of AI-related governance frameworks or declarations, but they are "fragmented" and hard to coordinate and implement. Therefore accelerating the establishment of a global AI governance framework is an urgent task.

Christopher Pissarides, 2010 Nobel laureate in economics, spoke about the impact of AI on future human work. He said that the era of widespread applica-

tion of AI may be coming, but its current application is still very limited. According to his theoretical research and social surveys, AI application scenarios are relatively simple in most cases, and the main applications are image recognition and monitoring. AI technology may constitute a new human-machine competition and reduce the welfare of employees. According to him, while improving productivity, technology should improve the welfare of employees.

Jon Kleinberg, professor of computer science and information science at Cornell University, said computer scientists not only need to "ensure that the algorithms we build and the designs we choose can benefit humankind," but also work closely with experts in fields such as economics, sociology, behavioral science, law and policy research to solve problems creatively.

and more than one billion connected devices, the company said. It is also said 15,000 HarmonyOS native applications and meta services have been launched.

According to market research company Counterpoint Research, HarmonyOS overtook iOS in China for the first time, making up 17 percent of China's smartphone market in the first quarter of 2024. This makes it the second largest OS in the country.

The same quarter saw 5G adoption for the OS reach 50 percent, up from nine percent in the same period in 2023.

Huawei Launches China's 1st Self-developed Mobile OS

Hi! Tech

By GONG Qian

On October 22, Chinese tech company Huawei unveiled its latest operating system (OS), HarmonyOS NEXT, China's first domestically developed mo-

bile OS. It is now the world's third major mobile OS after Apple's iOS and Android. It took Huawei five years to make such a major update since its HarmonyOS 1.0 made its debut in 2019. HarmonyOS NEXT, different from its predecessors, has a self-developed OS that solely uses Hongmeng kernel and system architecture.

HarmonyOS NEXT offers better

performance with 30 percent better system-wide fluency, a 56-minute increase in battery life, and 1.5GB more of system memory.

Other highlights are new home and lock screen customization options, AI embedded in its core, and faster animation and app launch speeds.

The OS has 110 million lines of code, 6.75 million registered developers



A foreign visitor experiences mobixustion performed by a Chinese medicine robot at the 3rd Global Digital Trade Expo in Hangzhou, on September 26, 2024. (PHOTO: VCG)

Shenzhou-19 Blasts Off to Push Space Station Development

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In future, these astronauts are expected to not only carry out space station missions, but also manned missions to the moon.

Currently, China has carried out international collaborations with other countries across various areas, including astronaut selection and training, space science applications, and in-orbit facilities, Lin said.

The first batch of payloads selected

through cooperation between China and the United Nations Office for Outer Space Affairs are undergoing experiments in orbit, and more international collaborative research initiatives are in the pipeline.

"China's space station is an excellent platform for international collaboration," Lin said, noting that it serves not only as a national asset but also a platform for advancing space technology and bringing benefits to all of humanity.