

AI chatbot to engage pre-schoolers

EdGPT, to be launched by education company Ednovation, will use both text and voice, and will be rolled out to the public for free

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Education company Ednovation is using ChatGPT and its own child-friendly version of the artificial intelligence (AI) chatbot across its pre-schools in Singapore and other Asian countries.

The move comes after successful pilot projects in February in its local pre-schools, where five- and six-year-olds co-created a children's book and asked Ednovation's new chatbot, called EdGPT, questions such as: "Are you a boy or a girl?"

The company will be making its chatbot, which is powered by ChatGPT, available for free.

ChatGPT has stirred controversy since its debut in November 2022. Launched by San Francisco-based research company OpenAI, the AI text-based tool produces answers in human-like language when fed written prompts.

Observers have raised concerns, for example, about whether its ability to produce essays and scripts would lead to cheating or plagiarism by students doing homework.

Dr Richard Yen, founder and managing director of Ednovation, says: "I believe we're the first pre-school in Singapore to use ChatGPT to engage pre-school children."

"It's important for us to prepare children for the future world. Otherwise, if they are just very good at exam-taking, they may be replaced by AI in the future."

Ednovation, established in 1991, was an early adopter in using technology in teaching and learning in pre-schools.

One of its recent pilot projects involved teachers guiding Kindergarten 2 pupils to interact with ChatGPT and come up with short sentences to make up a story. They then used Dall-E, another piece of AI software by OpenAI, which generates art from text descriptions.

The resulting book, which includes story ideas and illustrations by the children, tells the tale of a future city which has five seasons, including candy season when it rains sweets.

ChatGPT and Dall-E are examples of Generative AI, a category of AI that creates new content in the form of images, text, audio or computer code, based on the data it is trained on.

Generative AI could potentially disrupt industries as diverse as advertising and software development.

Dr Yen says the use of generative AI in the pilot programme seemed to enhance the children's curiosity, but there was one drawback.



A child using voice activation to ask EdGPT questions (above) at ChildFirst @ King Albert Park. ChildFirst is a brand run by education company Ednovation, which is founded by Dr Richard Yen (below). ST PHOTOS: KEVIN LIM



Dr Richard Yen, founder and managing director of Ednovation, says: "I believe we're the first pre-school in Singapore to use ChatGPT to engage pre-school children."



"When we were doing the project, we realised that it is very difficult for young children to use ChatGPT as it requires typing and spelling. Therefore, we decided to develop EdGPT to be the world's first generative AI for children. It is child-friendly since children can talk to it and it can reply by voice," he says.

Powered by ChatGPT via an API (application programming interface), the EdGPT chatbot uses both voice and text. An API enables two or more computer programs to communicate with each other.

Ednovation's second pilot project, also in February, had pre-schoolers engaged in a question-and-answer session with EdGPT.

At a recent demonstration at its ChildFirst @ King Albert Park pre-school, children aged five and six asked EdGPT questions such as

"Why does the dragon fish have spikes?" "What is the fastest car in the world?" and even "What happens if the Earth disappears?" and "Who made Jesus?" (See sample questions and answers in box.)

The use of these generative AI tools is being rolled out to all of Ednovation's Singapore pre-schools, followed by those overseas over the next few months, Dr Yen says. The company operates more than 70 pre-schools in Singapore, China and some South-east Asian countries, 17 of which are local establishments under the brands ChildFirst, Cambridge and Shaws Pre-schools. The two pilot projects involved about 90 local pre-schoolers.

Ednovation is making its child-friendly chatbot EdGPT publicly available for free by the end of March, via the EdGPT.io website. It

KIDS ASK, EDGPT ANSWERS

Kindergarten pupils, aged five and six, pose hard questions to EdGPT, a voice-activated version of ChatGPT, at their pre-school, ChildFirst @ King Albert Park:

Where do books come from?
Books come from authors and publishers. Authors are people who write the stories and decide what happens in them, and publishers are businesses that publish them and make it possible for readers to buy the books.

Why does the dragon fish have spikes?

The dragon fish has spikes to help protect it from predators. Spikes make it harder for predators to eat the dragon fish, so it can stay safe.

What is the fastest car in the world?

The fastest car in the world is a car called the Bugatti Chiron. It can go from 0 to 60mph (97kmh) in less than 2.5 seconds, and it can go up to over 250mph (402kmh)! That's really, really fast!

can also be accessed via ednovation.com

Dr Yen explains why the firm is making the AI assistant free for use: "We think it's beneficial to parents of young children, who sometimes ask difficult questions. It's very important to inculcate qualities like curiosity and creativity. If children's curiosity is not addressed most of the time, over time, they will stop asking questions. Hopefully, we will preserve children's curiosity as they grow up."

Coding, besides English and Mandarin, is described at his company's ChildFirst pre-schools as the third language because Dr Yen believes that digital literacy, like languages, is best learnt young.

However, he adds that his establishments also emphasise traits relating to "human intelligence" such as creativity, curiosity, risk-taking

and perseverance, which will become more important in the future.

"I think a lot of people are fearful of AI and they're concerned that AI will take over their jobs. In a way, it's justified... but it also offers other opportunities," Dr Yen says.

Using the example of law, he says ChatGPT could be used to draft legal contracts, transforming the profession. In contrast, lawyers will be more valued in the future for skills such as negotiation and the ability to broker a deal between opposing parties, he says.

Associate Professor Donny Soh, programme leader in applied artificial intelligence at the Singapore Institute of Technology, says generative AI can be a teaching tool.

"For children aged four to six, we should view AI through the same lens as how we view books, picture cards or simple iPad games. Ulti-

mately, what do we want to teach them?"

While it can be helpful for children to be exposed to such technology at a young age, grappling with generative AI is still "an experiment in progress" for society at large, he says.

"The challenge is getting young children to understand that the AI assistant is not a real person. A chatbot is very responsive but sometimes, friends are not," he adds.

Assistant Professor Andrew Yee from the humanities, arts and social sciences cluster at the Singapore University of Technology and Design, says: "Children at this age may not fully comprehend the possibilities and limitations of information technology. This applies not only to generative AI tools such as ChatGPT, but also to services we have been using for a long time, like Google."

They need to be educated, for instance, about how AI responses are only as good as the data that it was trained on, and how responses may be erroneous and possibly biased, he adds.

Ms Patricia Lyn, a senior teacher at ChildFirst @ King Albert Park, says her charges, who are kindergartners aged five and six, frequently pepper her with questions. When they use EdGPT, "they treat it more like a friend".

"They ask questions like: 'How old are you? Are you a boy or a girl? And when is your birthday?'" she says.

EdGPT, it turns out, is a girl. When ChatGPT was prompted the same question, it replied it is a "machine" without a gender identity, says Dr Yen.

"Ednovation felt this was not relevant for children and might confuse them. Thus, it was decided that EdGPT would answer that it is a girl so that it can be more relatable for children and is a more familiar concept."

Ms Mabel Tan Ling Ling's five-year-old son, Eton Wong Yi Teng, is a Kindergarten 2 pupil at ChildFirst @ King Albert Park.

Ms Tan, 41, a sales director in the corporate banking sector, says: "We're surrounded by AI, it's part of our life already. People who are not geared to explore digitalisation will not be able to thrive as well. It's important to ensure children are equipped with this knowledge at this young age."

"Eton is extremely excited when it comes to anything digital. Technology enables him to self-help almost instantaneously without having to go to adults."

Her son talks to Siri, Apple's virtual assistant, almost daily on his iPad, sometimes asking his mother how to spell words like "weather". He asks questions that relate to his daily life, such as why it has been raining so much, and what a dishwasher - which his mum just bought - does. He also likes robots and video games such as Final Fantasy.

Eton approves of EdGPT, which he has used at school, because it has both voice and written language, unlike Google Assistant.

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