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2023 Trend Report

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The Singaporean Government's Attempt to Integrate Chat GPT with Education

#Chat GPT #Educational Integration #AI #Learning Tool

Mr. Wooyong Shin / Yonsei University



Singapore's Education Minister, Chan Chun Sing, announced plans to integrate ChatGPT into the country's schools and higher education institutions to enhance learning among students, with the Ministry of Education guiding teachers on how to use AI tools responsibly. Singaporean educators believe that AI tools are useful as long as they are appropriately used and aim to equip students with the skills to use AI tools responsibly. Meanwhile, Singapore's higher education institutions have diverse assessment modes to prevent cheating using AI, including software like Turnitin to detect academic dishonesty.

01

ChatGPT, Embraced and Not Avoided in Singapore

The ChatGPT service has achieved a remarkable feat of garnering over 100 million users in just two months, making it the fastest-growing technology worldwide. Despite attempts by France and Australia to limit ChatGPT to educational use in their regions, Singapore has taken a different approach. On February 12th, 2023, the Singaporean government announced plans to integrate ChatGPT into the country's schools and higher education institutions.

The local newspaper The Strait Times reported that Singapore's Education Minister Chan Chun Sing informed the Parliament that there are discussions among educators exploring the use of AI tools to enhance learning among students. The Singaporean Ministry of Education (MOE) is guiding teachers on how to use AI tools such as ChatGPT to improve learning, given their potential to become widely adopted.

The Minister compared ChatGPT to a calculator, stating that it can be a valuable learning tool for students once they have grasped fundamental concepts and thinking skills. The Singaporean MOE aims to equip students with the skills to use AI tools responsibly, he added.

The Minister also noted that skills such as self-directed and collaborative learning and inventive thinking cannot be easily replaced by technological tools. These skills are acquired through leadership roles, interdisciplinary project work, and experiential learning.

The dominant voice in the education field of Singapore is that AI tools are useful as long as they are appropriately used. The spokesperson of SMU (Singapore Management University) stated, "We believe that AI tools are here to stay and will be increasingly present in our everyday lives. Our response is not to shy away from them, but to assess how we can harness the best of what AI tools can offer, and at the same time adapt the way we teach and conduct assessments to prevent misuse."

Meanwhile, the spokesperson of NTU (Nanyang Technological University) also asserted: "We are looking into how we can equip our students with the skills to make use of such technological aids in creative, critical, and ethical ways, while making sure students continue to develop the necessary critical cognitive skills."

In the case of Mr. Jonathan Sim, a lecturer from the department of philosophy at the National University of Singapore, his students are soon to be educated on generating reports through the ChatGPT program along with assessing the outputs themselves. He also observed that students ask ChatGPT basic questions that they may be too shy to ask in person and then turn to their human educators for more advanced help. Perhaps this could be an ideal direction to lead less outgoing students to climb over their barriers to reach higher levels of education.

Furthermore, the lecturer believes that students cheat because they do not see the value in their assignments and suggests educators explain why assignments are designed the way they are to encourage seriousness. He also suggests encouraging transparency by allowing students to indicate portions of their assignments generated by ChatGPT and expanding the plagiarism-detection repository with AI-generated outputs.

Regarding measures to prevent cheating using AI, the Education Minister said that the country's higher education institutions have diverse assessment modes, including exams, presentations, and projects, which require analytical skills, field notes, and observational details that cannot be generated easily by AI technology.

For instance, universities in Singapore employ software like Turnitin to detect academic dishonesty. Turnitin uses a database of around 2 billion student papers and internet content to detect plagiarism, and it also employs a "fingerprint" technology to identify a student's writing style. This technology can be useful in identifying instances of academic fraud, such as papers written by ghostwriters, and the software is being upgraded to detect essays generated by chatbots. If a student's work is suspected of being generated by AI, universities will initiate an investigation, and penalties for academic dishonesty may include a grade reduction, course failure, or, in severe cases, suspension or expulsion.

On a side note, Singapore is the first country in the world to express a clear policy in favor of implementing AI tools such as ChatGPT into its education system. Its education has ranked first in math and science subjects in the Trends in International Mathematics and Science Study (TIMSS) since 2015, administered by the non-profit research cooperative International Association for the Evaluation of Educational Achievement based in Amsterdam. Additionally, the National University of Singapore is the highest-ranked university in Asia and 11th globally, according to QS World University Rankings 2023.

Implications

Singapore's response to developing AI tools is quite different from that of other nations. While acknowledging the potential benefits that can be drawn from using ChatGPT, the nation's educators are continuously contemplating establishing appropriate measures to prevent the abuse of the tool that could undermine individual learning. Nevertheless, this is a notable act by the Singaporean government as the adoption of an AI tool by one of the forerunning education could eventually impact the decisions of other countries in the future when it comes to integrating AI tools into education.

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Bridging the Education Gap: OVERMUGGED's Affordable and Accessible Tuition Revolution

#TuitionRevolution #EdTechInnovation
#InclusiveEducation #OVERMUGGED

Mr. Wooyong Shin / Yonsei University



Darrell Er founded OVERMUGGED as an online community that has evolved into an affordable tuition brand offering online subscription services for 'O' Level subjects. With experienced tutors, they focus on exam skills and content mastery. Despite challenges, the company has grown and plans to leverage artificial intelligence and machine learning to enhance the learning experience, while prioritizing affordability and accessibility.

01

OVERMUGGED: Singapore's First Online Tuition Subscription Service

Darrell Er, a graduate of Nanyang Technological University in 2020, embarked on a career with the Singapore Tourism Board as a management associate. However, his entrepreneurial spirit soon took hold, and after a little over a year, he made the decision to become a full-time entrepreneur. This marked the birth of his first official business venture, OVERMUGGED.

During his time at university, Darrell had ventured into various small business endeavors. However, it was with OVERMUGGED that he found his true calling. Passionate about making a positive impact on students' lives, Darrell, who had been a tutor for nine years, was driven by a vision of providing quality education to all, regardless of their socioeconomic background.

Founded in 2021, OVERMUGGED is a tuition brand based in Singapore that offers comprehensive learning experiences for both 'O' and 'A' Levels, both online and in-person. The brand's mission is to make quality education affordable and easily accessible, which led them to launch an innovative online subscription tuition service. For a monthly fee of just S\$99, students gain access to 16 to 18 online lessons covering all core 'O' Levels subjects. The pricing strategy was deliberate, aiming to make the cost per class as low as S\$5.50. By setting the price lower than the average Singaporean household's monthly expenditure on private tuition, which stands at S\$112, OVERMUGGED ensures affordability for a wider range of students.

Moreover, the subscription plan includes weekly learning resources to supplement students' education and grants them access to past lesson recordings, enabling them to review lessons at their own pace. The comprehensive coverage of subjects is a key aspect of OVERMUGGED's offering, as they strive to be a one-stop learning hub catering to the needs of most students.

Darrell acknowledges that the competitive pricing of their online classes might not be the most financially viable approach. However, he sees it as a way of giving back to the community and ensuring that every student in need of tuition can access it. To support this endeavor, most of their tutors teach for free or receive a low payout. Furthermore, the subscription service is provided for free to their own group tuition students, ensuring they receive support in subjects where they may not have access to regular tuition.

The team at OVERMUGGED consists of 18 tutors from diverse backgrounds, including experienced instructors from top tuition centers, individuals with a Master's Degree in education, and even former MOE teachers. Each online lesson lasts for 1.5 hours, with a minimum of two lessons per subject. The focus of the lessons is on exam skills, including answering techniques and content mastery.



The introduction of the online subscription plan has garnered positive feedback from students. They appreciate the convenience and accessibility it offers, allowing them to learn comfortably from home. The flexibility to choose specific areas of focus rather than attending lessons for all subjects is also well-received.

The success stories shared by students who have benefited from OVERMUGGED's services are remarkable. Many have seen significant improvement in their academic performance, with a notable increase in the percentage of students achieving top grades. For instance, the 2022 batch of students achieved outstanding results, with over 70% attaining A1/A2 grades and over 90% scoring at least a B3 at the 'O' Levels.

To ensure students' progress is consistently monitored, OVERMUGGED tracks their performance through weekly worksheets, topical tests, and mock exams. These assessments not only aid in identifying areas for improvement but also help students prepare effectively for the actual exams.



Darrell, despite his young age, has faced doubts and criticisms due to his unconventional approach to running the company. OVERMUGGED's policies, such as an unlimited leave policy for tutors and investing in free educational resources, were questioned by some who believed it would hinder profitability. However, Darrell has remained steadfast in his commitment to his mission and vision, prioritizing social impact over short-term financial gains.

OVERMUGGED has thrived as a bootstrapped startup, achieving a 20% enrollment growth every quarter and generating a six-figure revenue in its first year. The COVID-19 pandemic presented challenges, but it also opened up opportunities for the company to make a positive difference. During the circuit breaker period, when physical classes were not possible, OVERMUGGED provided free educational resources to students and conducted free webinars to guide them in making informed decisions about their post-secondary education. These initiatives helped build strong relationships with students and parents, further establishing OVERMUGGED as a trusted brand.

Looking ahead, Darrell believes that artificial intelligence (AI) and machine learning will play a significant role in creating personalized learning experiences for students. OVERMUGGED aims to expand into the edu-tech space, leveraging technology to provide even more engaging and intuitive learning experiences. The company is actively seeking seed funding and venture capital to support its growth and reach a wider audience.

Implications

By offering a low-cost subscription-based tuition service, OVERMUGGED has made quality education accessible to a broader range of students, especially those from lower-income backgrounds. This approach has the potential to bridge the educational gap and provide opportunities for students who may have otherwise struggled to afford private tuition.

By exploring personalized learning approaches, the company aims to cater to individual student needs and provide a more effective and engaging educational experience. This implication highlights the potential for technology to revolutionize the way education is delivered and personalized, opening doors for more effective and inclusive learning environments.

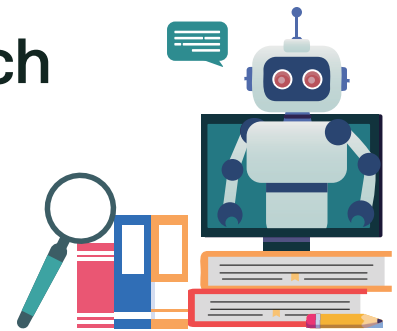
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Embracing AI in Education: Singapore's Approach and Edtech Startups Harnessing ChatGPT

#Chat GPT #Edtech Startups
#Personalized Learning #Artificial Intelligence

Mr. Wooyong Shin / Yonsei University



In the Singaporean education sector, impact of ChatGPT, an AI-powered tool, is quite notable. While some institutions globally have banned chatbots due to concerns of misuse, Singapore is embracing AI and edtech startups are leveraging ChatGPT to provide personalized learning experiences and support to students, indicating a diverse approach to integrating AI in education.

01

Edtech Startups Rapidly Growing in Singapore

The introduction of ChatGPT has sparked contentious discussions in the field of education. As educational institutions and educators grapple with the implications of this transformative technology, there are significant concerns regarding its use in classrooms.

These concerns are not unfounded, as a survey revealed that approximately 26 percent of teachers have already caught students using ChatGPT for illicit purposes.¹ In response to these risks, some educational institutions worldwide have swiftly imposed bans on chatbots due to fears of students misusing them for activities such as cheating and plagiarism.

However, Singapore's education landscape presents a different perspective. While there is some apprehension towards AI, the focus is on coexistence and harnessing the potential of AI tools. Institutions like Singapore Management University and Nanyang Technological University are embracing ChatGPT and similar technologies while seeking to implement measures to regulate their usage.

Furthermore, there has been a surge in educational technology (edtech) startups in Singapore that leverage AI to disrupt the education sector. These platforms, including JustAskProf, Higgz Academia Technology's TutorEva, Geniebook, and Explico, offer various AI-powered solutions to assist students in different subjects and examinations.

JustAskProf, founded by industry veterans Keith Carter, Amaline Lim, Emmanuel Carter, Ian Hai En, and Jess Uy, is a free-to-use AI tutor platform that utilizes OpenAI's ChatGPT. It aims to help parents prepare their children for various exams and industry certifications by providing assistance in subjects like economics and biology. The platform's unique feature is its ability to translate content from English to multiple languages, benefiting expats and individuals with limited English proficiency.

Higgz Academia Technology, initially founded in Beijing and later registered in Singapore, developed TutorEva, an app that scans math problems and offers step-by-step solutions through an AI tutor. The app can solve high school and university level math, including algebra, math modeling, and geometry. The company recently integrated ChatGPT into TutorEva to provide more human-like responses and enhance students' understanding of math concepts.

Geniebook, founded by Zhizhong Neo and Alicia Cheong, employs AI technology to identify students' academic strengths and weaknesses. It delivers targeted practice questions and generates personalized revision plans to accelerate learning outcomes. The platform also offers live online classes and facilitates teacher-student interactions.

Explico, founded by Ashutosh Shukla and Sandesh Shetty, utilizes AI and machine learning to customize learning modules according to students' specific needs. It also provides adaptive assessments, performance feedback, and benchmarks students against local and international standards.

While AI-powered tools and platforms offer valuable support and personalized learning experiences, they are not intended to replace educators. Instead, they aim to complement traditional teaching methods and create a symbiotic relationship between technology and educators. AI can provide instant assistance, adaptive learning, and virtual reality experiences, but it lacks the capacity to instill moral and ethical principles, which remain essential aspects of education.

Implications

The global education landscape is responding differently to the integration of AI in classrooms: while some educational institutions around the world have implemented bans on chatbots due to concerns of misuse, Singapore's education landscape is taking a different approach. Singapore is embracing AI tools like ChatGPT and exploring ways to regulate their usage in order to harness their potential. Through such, we can realize that different regions and institutions have varying perspectives on the integration of AI in education, leading to diverse approaches and strategies.

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Singapore's MOE Empowering Tomorrow's Leaders: Education's Evolution in the Digital Age

#EdTech2030 # DigitalLiteracy

#21stCenturySkills #EducationTransformation

Mr. Wooyong Shin / Yonsei University



Singapore's Minister for Education, Chan Chun Sing, introduced initiatives at the Schools Work Plan Seminar to prepare students for a changing world. These include technology integration, better learning environments, and 21st-century skill development. The event tackled global challenges, emphasized adapting to uncertainty, and introduced the EdTech Masterplan 2030, focusing on digital literacy and teacher support. Efforts to address tech-related mental health concerns and enhance school spaces were highlighted, along with updates to the 21st Century Competencies framework.

01

Revolutionizing Education: Preparing Students for a Rapidly Changing World

Singapore's Minister for Education Chan Chun Sing unveiled a series of initiatives aimed at preparing students for the swiftly evolving world of today. Speaking at the Ministry of Education's Schools Work Plan Seminar held at the Singapore Expo, he outlined measures that included the integration of technology into education, the revitalization of school environments to enhance students' learning experiences, and the development of 21st-century skills.

The event, which brings together over 1,600 school leaders and educators, was centered on the theme "Shaping The Future Of Learning" and addressed key challenges like a changing global landscape, economic disruptions, and the rapid advancements in generative artificial intelligence (AI).

Mr. Chan expressed concerns about the growing uncertainty students may face in the future, emphasizing the need to adapt to these changes. The Ministry of Education introduced the Transforming Education Through Technology (EdTech) Masterplan 2030, scheduled for gradual implementation in schools from 2024. This plan aims to harness education technology to cater to diverse learning needs while assisting teachers in managing the pace of change.

He stressed the importance of using technology to enhance teaching and learning, aiming for a breakthrough in education. To support this mission, the Ministry will strengthen students' digital literacy, particularly in the realm of AI, educating them on its strengths and limitations and how to effectively utilize it for learning and work.

Aaron Loh, divisional director of MOE's educational technology division, highlighted the significance of students staying informed about emerging technologies, given AI's increasing influence in various aspects of their lives.

The Ministry will offer resources, including self-paced lessons on the Singapore Student Learning Space (SLS), and enhance the SLS with more AI features to personalize learning experiences and complement teacher guidance. Starting December 2023, two tools, the Language Feedback Assistant for English (LangFA-EL) and the Short Answer Feedback Assistant (ShortAnsFA), will be available on the SLS, aiding teachers in providing timely feedback and focusing on higher-level skills.

To provide tailored support, two EdTech officers will be assigned to each school cluster, and professional development opportunities will be offered to equip teachers for effective e-pedagogy.

Addressing concerns about the potential mental health risks associated with technology and social media, MOE will reinforce students' cyber wellness through the Character and Citizenship Education curriculum, promoting healthy digital habits and respectful online interactions.

Additionally, a \$64 million School White Area and Canteen Grant was introduced to enable schools to adapt physical spaces to evolving educational needs. Schools can use the grant for various enhancements, including makerspaces and indoor farms, to create multi-functional learning environments.

From January onwards, MOE will provide additional funding for schools to adopt new furniture and equipment, further enhancing the functionality of learning spaces and supporting a broader range of learning approaches and programs.

Another significant announcement was the enhancement of the 21st Century Competencies (21CC) framework, which now places greater emphasis on adaptive and inventive thinking, communication, and civic literacy. Minister Chan emphasized the importance of developing values and competencies critical for students to navigate a world characterized by information overload and rapid change, highlighting how AI literacy aligns with 21CC, specifically in fostering inventive thinking.

Implications

Minister Chan Chun Sing's initiatives signify a crucial shift in education, focusing on technology integration, enhanced learning environments, and 21st-century skills. These efforts recognize the urgency of adapting to an evolving world, emphasizing digital literacy and AI education to prepare students for uncertainty and rapid change. Additionally, the initiatives prioritize teacher support and mental health awareness while investing in flexible learning spaces and an upgraded competency framework. Singapore's approach serves as a noteworthy example for global education systems, underscoring the need to evolve in response to the dynamic challenges of the 21st century.

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