



NOVEMBER 2023

RESEARCH PULSE

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Welcome to Research Pulse

Hello everyone.

Thank you for following our research news throughout the year.

This being the final issue for 2023, I will like to take the opportunity to highlight the relentless development of Curtin Singapore's research capacity and capability development in 2023.

Following from what I said in the final issue of Research Pulse in 2022, we are a small campus and in the early stages of developing our research movement. Despite our constraints, we have managed to pull in new and value-added research initiatives in 2023. These include hosting high-profile symposiums such as the Roundtable in Rare and Undiagnosed Diseases, the annual SDG symposium, the AI and Data for Business Conference, starting the bi-weekly research writing group sessions, and launching the Singapore PhD program. We also continued to build research capability with book and paper publications for journals and conferences, as well as convening the inaugural Curtin Singapore Research Symposium for academics to share and develop their research.

I would like to take the opportunity to thank all professional and academic staff who continue to contribute to bring Curtin Singapore's research development journey to life. In particular, I wish to acknowledge and thank Mrs Hayyu Ritter for her dedication and assistance in producing Research Pulse for all to read.

Enjoy the updates for this November 2023 issue and stay tuned for 2024!

Best Wishes,
Dr Adrian Tan
Research Director
Curtin Singapore

Curtin Singapore Research Symposium



The inaugural Curtin Singapore Research Symposium was held on 27th September 2023. It brought together 15 academics who presented their research profiles and projects in eight minutes duration to an audience which included colleagues from the Perth campus. As part of the research capability development roadmap, the aim of the symposium was to provide the opportunity for Curtin Singapore researchers to present their research, network and stimulate new research ideas. It was overall a very inspiring session as the attendees found their networks for potential research collaboration. We hope to organize another research symposium in 2024!



Squaring up to a Giant

Contributed by Mr Felix Cheong

Introduction

In December last year, I was foolhardy enough to go bravely where my creative writing had not ventured before – inside the headspace of a VVIP. Not just any eminent person but that of Dr Goh Keng Swee (1918-2010), one of Singapore’s founding fathers, the man credited with building so many institutions we now take for granted – the SAF, EDB, JTC, GIC, MAS, DBS Bank and even the Singapore Symphony Orchestra.

To say I was intimidated is, to put it mildly, an understatement.

But ten months later, *Goh Keng Swee: A Singaporean for All Seasons*, my graphic novel in collaboration with artist Cheah Sinann, is finally out in bookshops. It will be launched on 14 November 2023 at 6.30pm at the Central Library.



Squaring up to a Giant

Contributed by Mr Felix Cheong

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How did this David square up to this Goliath of a politician?
Three steps: Research, Selection, Assimilation.

1. Research

The entry point, as always, is literature review. I dug up and read as many sources as I could on Dr Goh, especially qualitative data such as anecdotes, for they are the very soul from which writers create full-bodied stories. More importantly, I found out that Dr Goh was once an aspiring writer who published a poem when he was in Anglo-Chinese School. This fact would prove crucial later in my writing process.

2. Selection

Obviously, I had to filter the research down to a narrative, one that my collaborator could bring to life in his illustrations. I homed in on Dr Goh's plan to turn the swamplands of Jurong into a shiny industrial estate. This grandiose project – costing \$100 million and involved levelling eleven hills, dumping seven million cubic meters of earth into the Jurong River to dam it up – was nicknamed by his critics as “Goh's Folly”.

At that time, the stakes could not be higher for the PAP government. If foreign investors did not build factories here as expected, it would have cost the party votes in the next election. This gambit was the starting gun I needed for my story. It had high stakes and drama, and for Dr Goh, the self-confessed reluctant politician, it was the crucible to see what he was made of.

3. Assimilation

Even though I had found the narrative, writing it still proved challenging. First, given the complexity of the subject matter, I had to decide what to exclude, so as to percolate a clearer, cleaner plotline. The second challenge lay in the very nature of the genre, creative nonfiction. This term, coined by American writer Lee Gutkind, refers to the application of creative writing ...

Squaring up to a Giant

Contributed by Mr Felix Cheong

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... techniques in narrating a true story. It also gives permission to writers to take certain liberties in creating scenes, even characters – as long as they remain *emotionally true*.

For instance, I found it necessary to create several fictional characters, such as an aide for Dr Goh whom I named Hwang Cher Tong.



Such fictional characters serve as a foil for me to flesh out Dr Goh's personality, like his sense of humor, integrity and frugality. While the scenes featuring their interactions are purely fictional, they go a long way in being true to him as a person.

The final challenge was finding the voice of the book. For the first few drafts, I tried using the omniscient third-person narrator, which did the job of moving the plot from point A to B. But it felt flat and lifeless. I then recalled that Dr Goh had a poem published before – what if that poetic voice was still in him? With that insight, the book wrote itself.

Squaring up to a Giant

Contributed by Mr Felix Cheong

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I finally managed to bring Goliath to heel and, despite my initial misgivings, became less awed by the size of the man's achievements.

To Chat or not to ChatGPT?

Contributed by Mr Leo Kee Chye

The Large Language Model (LLM) known as ChatGPT, developed by OpenAI, achieved a remarkable milestone after just two months of its formal release. By January 2023, it had amassed an impressive user base of 100 million individuals, solidifying its position as the most rapidly expanding active subscriber community. In contrast, Instagram required a span of one year to amass a user base of 10 million individuals.

ChatGPT, also known as Chat Generative Pre-Trained Transformer, is a specific variant of GenAI that undergoes pre-training using an extensive collection of textual data. This pre-training enables ChatGPT to produce text responses that closely resemble human-generated content. These types are characterized by their versatility and proficiency in various jobs. Advanced chatbots such as ChatGPT and the most recent iteration, GPT-4, provide students with immediate feedback that is available at all times. AI learning platforms have the capability to customize information according to the specific needs of individual learners, hence improving their level of engagement and overall learning outcomes.

The potential utility of GenAI LLMs as a significant resource for students and scholars in higher education is undeniable; nonetheless, it is imperative to address the associated constraints and obstacles in a comprehensive manner. For instance, it is imperative to acknowledge the significance of concerns pertaining to excessive dependence, safeguarding of data privacy, and ethical implications, since they hold substantial importance in the given context.



To Chat or not to ChatGPT?

Contributed by Mr Leo Kee Chye

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Understanding the manner in which individuals view the function of Artificial Intelligence (AI) in the field of education is crucial in order to shape learning environments that are both effective in terms of education and ethically sound.

Led by Dr Chen Zheng and under the guidance of Associate Professor Rachel Sheffield, I am fortunate to be recruited by them for this project. The present study aims to conduct a comprehensive survey encompassing students and instructors affiliated with Curtin University, spanning across multiple campuses including Curtin Perth, Singapore, Malaysia, Mauritius, Dubai, and other Offshore Partners.



This initiative aims to make the following contributions:

1. Cultural sensitivity is an important consideration in education since students from many nations often bring with them unique cultural backgrounds and learning styles. Gaining insight into individuals' perspectives can facilitate the customization of artificial intelligence systems to be culturally attuned and efficacious among heterogeneous student demographics.
2. Language Proficiency: Generative artificial intelligence (AI) tools such as ChatGPT and Bard can prove highly advantageous for students who possess a non-native command of the language used for instructional purposes. Gaining insight into individuals' views can inform enhancements in language support and aids for comprehension.

To Chat or not to ChatGPT?

Contributed by Mr Leo Kee Chye

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3. The customization of GenAI technologies can be achieved through a knowledge of students' views, enabling educators and policymakers to address their needs and concerns in order to enhance learning results. Potential strategies for addressing this issue encompass several approaches, such as fine-tuning the AI's capability, offering supplementary assistance or training, or altering the integration of the AI into the educational curriculum.

4. In response to the matter at hand, students have also articulated apprehensions pertaining to the veracity of information, safeguarding of personal information, ethical considerations, as well as the potential ramifications on individual growth, professional opportunities, and societal principles. It is imperative for educators and policymakers to comprehend these difficulties in order to effectively tackle them and guarantee that the utilization of GenAI in education is responsible and advantageous.

5. Policy development can be informed by gaining insights regarding students' perceptions, which can help guide the incorporation of GenAI technologies into higher education. The utilization of GenAI tools can contribute to the development of informed protocols and approaches for the responsible and efficient integration of such technologies, hence augmenting the quality of teaching and learning encounters within higher education.

To Chat or not to ChatGPT?

Contributed by Mr Leo Kee Chye

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Research Opportunity: To the authors' knowledge, this study may be the first comprehensive qualitative survey investigation that explores user impressions of GenAI tools such as ChatGPT or Bard in the context of learning. The study specifically focuses on a varied group of students from the diverse nationalities across all Curtin campuses worldwide.

It is crucial to comprehend the perspectives of students from varied demographic backgrounds regarding generative artificial intelligence (AI) to optimize its advantages within an educational setting and effectively tackle any associated obstacles. The utilization of a more customized strategy towards the integration of technology facilitates educational achievements for students in terms of learning and academics in terms of teaching.



Spotlight



Curtin University academic and former ISEAS Visiting Fellow, Adjunct Professor Michael Schaper, was quoted in two recent Business Times articles on the Black Economy in South-East Asia and the region.

The two articles published in the Business Times are:

- Working closely with foreign counterparts key to Singapore's money laundering fight: observers
(article date: 5th October 2023)
- When money laundering leaves a stain on the economy
(article date: 6th October 2023)

In one of the articles, Michael stresses the importance of education, detection and regional collaboration for the mitigation of money laundering for a financial hub.



Upcoming Events



These are events planned for the rest of the year. Full details of the events will be made known through official communication channels.

22
NOVEMBER
2023

**AI and Data for
Business Conference**

