

## **“The Impact of Technology on Learning” - Webinar Connecting Science and Society**

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In recent times, technology such as generative AI has greatly transformed the way we learn, led to the evolution of different learning models, and opened up new possibilities for both students and teachers. There is a need to understand new technologies so that we may utilise them well to achieve desirable outcomes in education and learning.

As part of Science Agora, an annual open science forum, the Japan Science and Technology (JST) Singapore Office and the Asia Pacific Assistive Robotics Association (APARA) co-organised a webinar centred around the theme “The Impact of Technology on Learning” on 26 October 2023 which was open for the public to join. The purpose of the webinar was the promotion of engagement between science and society, not only to share about the current state of learning-related technology, but also to have an open discussion about the potential impact of the technology with both sides providing their perspectives. The live webinar saw about 100 participants joining from countries around the globe, including Indonesia, Ireland, Japan, Malaysia, Singapore, and Thailand.

There were three key presentations on the following topics featured in the webinar:

### **Technologically Driven Learning Models**

Presented by Mr Oliver Tian, Honorary Advisor for APARA, this segment focused on how the advent of new technologies has created the need for learning models to be modified such that they are more personalised and adaptive. The latest technologies in learning are no longer limited to processing text input, but are capable of processing speech, drawings and videos, analysing patterns and generating suggestions, all in real-time. The ability to utilise innovative technologies well thus becomes a very important skill that we need to keep up with changes in technology. For instance, when it comes to generative AI, being able to write effective prompts is crucial for generating outcomes of high quality. Other key skills that were highlighted include critical thinking, collaborative learning, and clear communications, which ought to be incorporated into education to prepare the younger generation for the future.

## **Emerging Models of Learning Leveraging Technology**

Mr Michael Chian, Chairman of EdTech startup BeED World, emphasised that new technology in education has its benefits, it must also be created in a way that is accessible to economically disadvantaged and differently abled children, in view of the global economic inequality. With more than half of the world likely to face challenges in terms of resources and infrastructure in implementing cutting-edge technology, edtech solutions ought to be flexible and focused on pedagogy and effective learning rather than aesthetics. Currently, BeED is in the midst of developing an edtech solution for a personalised learning experience that is scheduled to be released in 2024. The innovative technology utilises the power of face recognition AI to analyse microexpressions and gauge what the learner is having difficulty with, which allows the system to personalise its response to each learner to achieve pedagogical outcomes efficiently.

## **Technology Innovation in Learning & Development**

As a Learning Researcher from Learnovate, a centre of excellence for research and innovation in learning technologies hosted by Trinity College in Ireland, Ms Ilse White shared that research on how humans learn has progressed significantly in the last three decades, allowing us to evaluate more accurately how learning technologies add value to our learning process. However, she cautions that the decision to make use of learning technologies should be based on evidence and research. Rather than simply following the latest trends, it would be wiser to closely scrutinise how the new technology fits in with what is currently being done and start small when it comes to implementation before scaling things up. There must also be adequate support provided for both learners and educators alike to ensure the technology is used effectively in practice. Lastly, there also has to be an evaluation of implementation so that there is feedback and continual improvement in the learning experience.

Although the webinar has ended, the recording can be accessed via the link below:

<https://www.jst.go.jp/sis/scienceagora/2023/online/online/26a16.html>