

ISATE 2024: List of Learning Journeys, Workshops and Roundtables

ROUNDTABLE - COMPULSORY for Sep 26 (Thu): Participant is to **choose 1 event only**, as shown in **Table 1**. For planning purposes, you need to **indicate your preference at the time of registration**.

Table 1. List of Roundtables (choose ONE only)

Code	Name	Sub-Theme	Overview	Target Audience	Follow-ups (if any)
RT01	AI X Education – Designing for a more inclusive future of education	ST1: Artificial Intelligence in Teaching & Learning	<p>The facilitators will start the session presenting their research on the future of work and the future of education. Specifically, they will show why and how a focus on skills and skills-based approaches, still the dominant ways approaches in education and organizations, is limiting for how we design resilience, inclusion, innovation and trust in the age of AI. They draw on their research to offer several alternatives that can help future generations become more resilient in an AI dominated world. Examples include different approaches for understanding learning and teaching, as well as design interventions that have been tried and tested within SUTD.</p> <p>The second part of the roundtable will be a more open-ended discussion in which we collectively look at the opportunities and limitations our approaches provide, and how you may apply them (or redesign them) to fit your own educational context.</p>	No technical background regarding AI is necessary. We only expect you to engage with the materials provided in critically assessing how they apply to your own context. If you are: 1) worried about the impact of AI on teaching and learning; 2) thrilled by the opportunities AI may bring; or 3) a combination of the first two; then this roundtable will be an excellent platform to explore the above.	For those interested in our work and willing to experiment with the ideas provided in their own institution, we can organize follow-up sessions in tracking how these experiments went and how to draw lessons from them. We also have developed several survey instruments that can be used to track the effectiveness of interventions on students (e.g. on their willingness to innovate and create, which will become increasingly important in an age of AI).
RT02	Transforming Learning, Pedagogy, and Curriculum - A Competency-Based Approach	ST3: Pedagogical Innovation in Teaching & Learning	<p>The focus of this roundtable will be on shifting from traditional, content-driven teaching methods to a competency-based approach, which emphasizes mastery of skills and knowledge. The need to align curriculum with real-world competencies demanded by employers and society will be discussed together with the importance of fostering critical thinking, collaboration, communication, and creativity skills, essential for success in the 21st-century workforce.</p> <p>Key themes include personalized learning pathways tailored to individual student needs, leveraging technology for interactive and immersive learning experiences, and integrating real-world applications into the curriculum to enhance relevance and engagement. Challenges such as standardization versus flexibility, assessment methodologies, and teacher training will also be addressed. NYP will share contextualized examples in</p>	Educators or leaders in curriculum innovations.	Not at the moment

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			the areas of personalized learning pathways to guide the discussion.		
RT03	The BEVI (Beliefs, Events, and Values Inventory)	ST3: Pedagogical Innovation in Teaching & Learning	<p>Many engineering courses do not have a good measurement tool to track students' progress in their beliefs and values. This roundtable discussion will focus on the BEVI (Beliefs, Events, and Values Inventory), a robust analytic tool spanning education, research and leadership. With over 30 years of research backing, BEVI offers a comprehensive understanding of beliefs, values, and life events, fostering learning, growth, and transformation.</p> <p>Participants will explore its adaptability, reliability, and applicability across diverse settings, and delve into its theoretical underpinnings and practical benefits. Let's discuss how BEVI can empower individuals, groups, and organizations to navigate complex processes and outcomes, shaping a path towards personal and collective development.</p> <p>For more details on the BEVI, please go to: https://thebevi.com</p>	No background knowledge required. All are welcome.	Potential future collaboration between facilitators with participants, who are keen to explore the BEVI further.
RT04	Collaborative Lectures between Polytechnic Schools and NIT Colleges	ST3: Pedagogical Innovation in Teaching & Learning	<p>The aim of this roundtable is to delve into possible approaches for student guidance through Collaborative Lectures between Polytechnic Schools and NIT College.</p> <p>Students today study in a different way than in the past, thanks to technological advancements, particularly in the form of AI tools such as ChatGPT, Copilot, Gemini, and so on. As such, there is a need to shift from the current one-way imparting knowledge strategies to become two-ways or multiple ways, with greater student involvement in the lecture components.</p> <p>One of the key takeaways from this roundtable is to be a set of guiding questions for each pair of participating institution's planning and execution. Also, the pedagogy aspect and methodologies involved will be brought up for discussion as well.</p>	Lecturers, ISATE members and collaborators, Teaching and Learning Mentor/Specialist should attend this roundtable	<ol style="list-style-type: none"> 1. Set of guiding questions on the planning and execution 2. Potential research about the effectiveness of Collaborative Lectures 3. Sharing of knowledge/ideas in ISATE 2025.
RT05	Desirable Common Platform for ISATE Participants to be Connected	ST4: Stakeholder Engagement in Education	<p>In this roundtable, we will explore the key features of a common platform for ISATE participants to network, collaborate with and learn from each other throughout the year.</p> <p>Roundtable participants will be actively involved in contributing towards development of this platform by sharing their insights,</p>	ISATE members and collaborators	<ol style="list-style-type: none"> 1. Participation in working groups to contribute further to platform's development and refinement eg. design, user testing, feedback sessions.

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	throughout the Year		experiences and preferences so that the platform will reflect the diverse needs and perspectives of its intended users.		2. Setting up of communities of practice to foster a sense of community among platform users, and to share resources and best practices on using the platform.
RT06	Empowering Learner Diversity: Integrating Technology for Innovative Pedagogy in Technology Education	ST2: Technology in Education	<p>In this roundtable, we will explore innovative pedagogical approaches that leverage technology to empower learner diversity in technology education. By examining these methods, we aim to uncover practical strategies for creating inclusive learning environments where all students can thrive.</p> <p>Participants will have the opportunity to learn from examples of successful technology integration for innovative pedagogy from diverse educational institutions. These case studies will provide valuable insights into effective strategies and inspire educators with tangible ideas they can implement in their own teaching contexts.</p> <p>Through sharing of best practices in integrating technology to address learner diversity, as well as exploring challenges faced, we can work towards fostering equitable learning experiences for all students. At the end of the roundtable, participants will take away actionable insights and key takeaways to apply in their own classrooms and institutions.</p>	Educators, ISATE members and collaborators, Teaching & Learning Mentors/Specialists	<p>Suggestions:</p> <ol style="list-style-type: none"> 1. Potential action learning projects by educators. 2. Research collaborations between educators (intra- or inter-school tie-ups) to investigate emerging topics or questions identified during the roundtable discussion. 3. Setting up of communities of practice to facilitate ongoing discussions, share resources and best practices.
RT07	Empowering Student Success: Strategies for Motivation, Self-Concept, and Volition Control	ST3: Pedagogical Innovation in Teaching & Learning	<p>This roundtable delves into the intricate relationship between the three vital elements (motivation, self-concept and volition control) and self-regulated learning elements. It aims to explore how these three elements intersect with the principles of self-regulated learning to enhance students' academic performance and personal development.</p> <p>By examining the interconnectedness of these elements and sharing insights on fostering self-regulated learners, educators can develop comprehensive strategies to empower students to succeed academically and thrive personally.</p>	All passionate educators, driven to inspire and impact students' learning behaviors, particularly their self-concept, personal motivation and volition control.	NIL

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RT08	Infusing Sustainability into Education: Sustainable Development Goals (SDGs) and Curriculum Design – ideas for creating a meaningful learning experience	ST3: Pedagogical Innovation in Teaching & Learning	This roundtable seeks to interactively engage participants to discuss the best ways to introduce and infuse the SDGs into curriculum. How can this be done efficiently, yet sustainably and what would be some of the best ways we can ensure there is meaningful learning rather than the checking of boxes. Participants will also be given an opportunity to discuss possible approaches to measure the success of such integration, by engaging in critical discourse with fellow participants attending the roundtable.	Educators interested in infusing the SDGs in a meaningful and sustainable manner are welcome. A basic understanding of what the SDGs are is preferred and experience in integrating these goals are also welcome as we can learn from best practices as well.	While we expect there to be no follow ups, we, however would like to see if there are participants who may be open to the idea of potential collaboration in areas such as best practice sharing or joint curriculum development of modules that infuse the SDGs.
RT09	Ethical Considerations in the Integration of AI for Teaching and Learning	ST1: Artificial Intelligence in Teaching & Learning	<p>Artificial Intelligence (AI) has become a transformative influence in the education industry, reshaping the delivery of teaching and learning. It introduces both opportunities and challenges in this context. AI technologies, exemplified by tools like ChatGPT, have the capacity to revolutionize the creation of various content types, such as text, images, art, music, or programming code. This can result in the development of dynamic and interactive teaching materials designed to engage students more effectively. However, the same AI tools could be misused to generate academic work, such as assignments or final year reports, potentially leading to unethical behavior and academic misconduct when used without proper declaration or authorization.</p> <p>While AI technologies may pose a threat to academic integrity, they also offer significant advantages. AI enhances users' capabilities, both positively and negatively. Therefore, it is crucial for students and educators to receive guidance on the benefits and limitations of AI technologies, enabling ethical usage and upholding academic integrity. The objective is to strike a balance between harnessing the transformative potential of AI and safeguarding against unintended and unethical consequences. This requires collaborative efforts among stakeholders, including educators, to establish comprehensive frameworks aligning AI advancements with academic integrity, human values, ethical standards, and societal expectations.</p>	Educators with or without expertise/experience in AI	NIL

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Code	Name	Sub-Theme	Overview	Target Audience	Follow-ups (if any)
			<p>This roundtable session aims to foster discussions on ethical considerations in the implementation of AI for teaching and learning.</p> <p>The topics to be explored in this session include, but are not limited to:</p> <ul style="list-style-type: none"> • An overview of various AI technologies for teaching and learning • Potential academic threats and challenges associated with AI • AI Ethics and Governance in Education • Awareness of AI Ethics and Governance • Tools and technologies for AI Ethics and Governance 		
RT10	Student engagement and first-year experience	ST3: Pedagogical Innovation in Teaching & Learning	<p>The roundtable discussion will focus on the crucial topic of student engagement, the first-year experience in studies, and strategies for supporting incoming students to seamlessly integrate into the learning community. Recognizing the pivotal role of the initial year in shaping students' learning path and overall study experience, this discussion aims to explore innovative approaches, best practices, and challenges in fostering student engagement and facilitating a smooth transition for newcomers.</p> <p>Participants are invited to discuss and share insights on orientation programs, mentorship schemes, study support services, or any other practices aiming at enhancing student retention, satisfaction, and success.</p> <p>By addressing key issues and sharing practical solutions, this round table seeks to empower educators, administrators, and stakeholders to create inclusive, supportive environments that nurture the holistic development of all students within the learning community.</p>	Anyone interested in the topic is welcome to join the roundtable.	The aim is to initiate cooperation in developing student engagement and first-year experience.
RT11	Journey to Net Zero: Strategies, Challenges and Innovation in the Education Sector	ST4: Stakeholder Engagement in Education	<p>This roundtable discussion aims to bring together leaders, educators, researchers, and stakeholders from the education sector to share insights, strategies and experiences in the journey towards net zero emissions. The focus will be on understanding the importance of sustainability, exploring successful initiatives, addressing practical challenges and promoting climate action within educational institutions for a sustainable future.</p>	<ul style="list-style-type: none"> • Educational Leaders: Management staff who have the authority to drive policies and allocate resources toward sustainability initiatives in their institution. • Sustainability Officers and Coordinators: 	NIL

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Code	Name	Sub-Theme	Overview	Target Audience	Follow-ups (if any)
				<p>Staff members responsible for designing, implementing and managing sustainability programmes within educational institutions.</p> <ul style="list-style-type: none"> • Facility Managers and Operations Staff: Individuals responsible for campus infrastructure, maintenance and operations, and who can implement energy efficiency and waste reduction measures. • Faculty and Researchers: Academics who teach or conduct research on sustainability, environmental science, renewable energy and related fields, and who can integrate sustainability into the curriculum. 	

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LEARNING JOURNEY OR WORKSHOP - OPTIONAL for Sep 27 (Fri): Interested participant is to **choose 1 event only, either** a LEARNING JOURNEY (shown in **Table 2**) **or** WORKSHOP (shown in **Table 3**). Due to the limited capacities of such events, and planning of logistics (as transport will be provided for venues outside of SP), **allocation of places will be done on a first-come-first served basis**. You need to **indicate your preference at the time of registration**, and you will be informed of the outcome at a later date. If you are not successful in your selected event, you may be offered another event subjected to availability.

Table 2. List of Learning Journey (choose ONE only; Otherwise, please choose a Workshop from Table 3)

Code	Organization	Title	Details	Min Pax	Max Pax	Time	Duration (hours)
LJ01	Ngee Ann Polytechnic (NP)	Visit to Robotics Research & Innovation Centre (RRIC) & Synergy.Lab	<p>At RRIC, the participants will be introduced to robotic projects that collaborate with industries (NParks, SingHealth, Moovita). These robotic projects are to support industry needs and to optimize commercial operations.</p> <p>At Synergy.Lab, the participants will learn the integration of solar energy and Electric Vehicle charging infrastructure. The Synergy.lab serves as an integrated ‘control centre’ for the various smart mobility technologies on campus, incorporating advanced data analysis and simulation capabilities. The lab facilitates research to enhance the ecosystem’s efficiency by monitoring and analysing data such as solar power generation, as well as EV charging load and energy consumption.</p>	10	30	0930 – 1130	2
LJ02	Nanyang Technological University (NTU)	Visit to Gaia Sustainability Building @ NTU	<ol style="list-style-type: none"> 1. Tour of Nanyang Business School (NBS) and Net Zero emission building 2. Sharing of NBS philosophy for the design of the Net Zero Emission Building 	10	25	0900 – 1200	3
LJ03	National University of Singapore (NUS)	Sharing by Centre for Teaching, Learning and Technology (CTLT) and AI Singapore (AISG)	<p><u>Part 1 – CTLT:</u></p> <ul style="list-style-type: none"> • Major functions supported by CTLT (Professional Development, Instructional Technology) • NUS AI + TEL initiative <p><u>Part 2 – AISG:</u></p> <p>Participants will get to deepen their knowledge and understanding of the latest AI methodologies, facilities, tools, and applications, from both the industry and government’s perspectives.</p>	1	35	0900 – 1200	3

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Code	Organization	Title	Details	Min Pax	Max Pax	Time	Duration (hours)
LJ04	Singapore Polytechnic (SP)	Pedagogical Innovation at SP Energy & Chemicals Training Centre (ECTC)	The SP Energy & Chemicals Training Centre is an integrated training hub comprising of a suite of chemical engineering laboratories, which houses key unit operations typically found in the Energy & Chemicals sector. Participants will be able to learn how authentic hands-on training are crafted for students to apply knowledge into real practice in a simulated safe environment. Participants will also learn the various digital tools that are used to support the training.	3	15	1000 – 1200	2
LJ05	Singapore Polytechnic (SP)	Visit to SP 5G & AIoT Centre and Smart Classroom from School of Electrical & Electronic Engineering (SEEE)	<p><u>Part 1 – 5G & AIoT:</u></p> <ul style="list-style-type: none"> Learn interesting concepts through topics like 5G Overview, Introduction to AIoT Get to know the top 5G & AIoT uses cases and explore how features such as ultra-low latency, high speed connectivity, massive sensor data of 5G & AIoT can enable key drivers such as real time cloud computing, intelligent control and AI that are transforming your industry Engaging discussions on how 5G & AIoT together can benefit the company and workforce <p><u>Part 2 – Smart Classroom:</u></p> <p>Explore the smart learning space at EEE - an educational ecosystem that integrates advanced technology to facilitate a dynamic, interactive, and personalized learning experience. It is characterized by its adaptability, responsiveness, and ability to cater to the individual needs of students. This learning environment fosters a culture of connectivity, creativity, and innovation, which not only enhances the learning process but also prepares students for the digital world, making education a truly transformative experience.</p>	10	25	0930 - 1200	2.5
LJ06	Singapore Polytechnic (SP)	Advanced Manufacturing Learning Journey (AMLJ) including AeroHub Visit	<ol style="list-style-type: none"> Gain an insight into Singapore's manufacturing industry landscape in terms of harnessing smart manufacturing technology Learn about how SP-AMLJ is bridging the skill gaps between Industry and IHL by fostering partnership with Industry Learn about how AeroHub facilities are used to support the Diploma in Aeronautical Engineering. 	10	20	0900 – 1130	2.5
LJ07	Grundfos Singapore	Grundfos Sustainability Journey & Tour of Grundfos Innovation Hub	<p>Demystifying Grundfos' sustainability spirit, inherited from a Danish company and thrive in Singapore.</p> <ul style="list-style-type: none"> Get to know Grundfos, be inspired by its sustainability journey, plus Q&A with Grundfos' colleagues Understanding of tool (Sizing + Energy Check) to optimize pumping systems Tour of Grundfos Innovation Hub to Experience new technology from Grundfos (2 applications / demo units) 	1	20	0930 - 1130	2

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Table 3. List of Workshop (choose ONE only; if not choosing a Learning Journey from Table 2)

Code	Organization	Title	Details	Min Pax	Max Pax	Time	Duration (hours)
WS01	Republic Polytechnic (RP)	Employing Game-Based Learning to Engage Students for Effective Learning in National Education and Current Affairs	<p>Imagine a world where students are engaged in learning difficult subjects and appreciate the value of what they are learning. In reality, students are inundated with National Education (NE) messaging and current affairs topics since young, and have the impression that such lessons are dull and irrelevant to their lives.</p> <p>Our team found a solution that is working for us. “Diplomats... in Space!” is an innovative multiplayer card game that is designed to change this impression by immersing students in strategic and thought-provoking Game-Based Learning. Students will interact with game elements and gain insights into how their decisions can affect the outcomes, which mirror scenarios and events in the real world, as well as illustrate national and international initiatives and frameworks.</p> <p>In this workshop, participants will get to experience the game, appreciate how Game-Based Learning helps students understand complex issues and they will hear from the designers of the game, their experience and tacit knowledge in designing the game from concept to delivery.</p>	8	40	0900 – 1200	3
WS02	Temasek Polytechnic (TP)	Create an AI-enabled Chatbot for Personalized Learning	<p>This hands-on workshop aims to explore how AI-enabled chatbots can engage learners in a personalised and human way, serving various educational purposes like knowledge acquisition, formative assessment, administrative tasks, and project guidance. The activities will focus on creating and deploying chatbots using Dialogflow without the need for any form of coding or programming skills. This training demonstrates the use of some basic features in Dialogflow and how to integrate the chatbot through Telegram, enhancing student engagement and achieving personalised learning. Join us to discover how to utilise rich media responses, like emojis, images, and hyperlinks, for a more meaningful chatbot experience.</p>	3	12	0900 – 1200	3
WS03	Temasek Polytechnic (TP)	App in a Jiffy - for Educators	<p>In this workshop, participants will gain knowledge on how to develop a secure and customizable mobile app using Microsoft Power Automate and Power Apps.</p> <p>Currently, for some of the academic, project, and student-related routine tasks, human intervention is still necessary. Furthermore, the tasks are time-consuming, require a lot of manpower, and must be repeated every semester. The messages conveyed to the users—in the form of mass emails, reminders, and warnings—are also not personalized.</p> <p>By adopting end-to-end cloud automation platform technology in education, repetitive tasks and personalized messages can be automated and sent to users</p>	3	12	0900 – 1200	3

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			<p>respectively. Additionally, less human intervention is required, thereby saving man-hours, minimizing errors, and increasing scalability. Furthermore, as this platform can be accessed anytime, anywhere, efficiency and productivity are improved to new heights.</p> <p>Pairing seamlessly with Power Automate, these tools become a powerhouse for automation. Say goodbye to repetitive tasks and hello to newfound efficiency.</p>				