



SEQUOIA CON 2024

AI-ENHANCED LESSON DESIGN (AI-ELD) PROCESS



NG_EE_NOCH@MOE.EDU.SG
BOON LAY GARDEN PRIMARY SCHOOL
SINGAPORE





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AI-ENHANCED LESSON DESIGN (AI-ELD) PROCESS

Why?



CREATING EFFECTIVE LESSON
PLANS IS CHALLENGING AND
TIME CONSUMING!

THE
STRUGGLE
IS
REAL



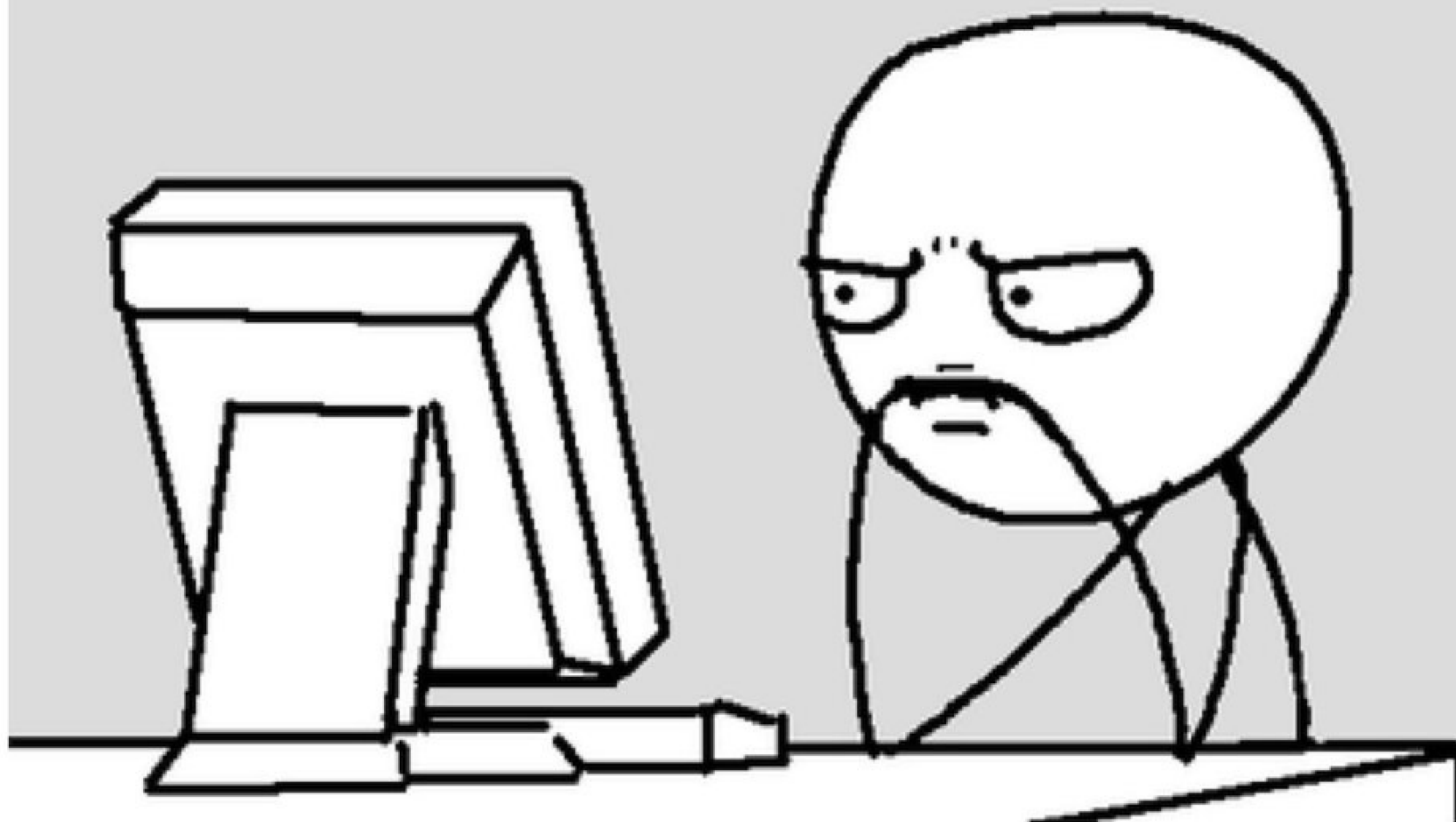


Lesson planning is the **cornerstone**
of effective teaching





**IF I STARE AT MY SCREEN LONG ENOUGH, MAYBE
MY LESSON PLANS WILL WRITE THEMSELVES.**






YES AND NO....

not so

AI'S EFFECTIVE LESSON PLAN

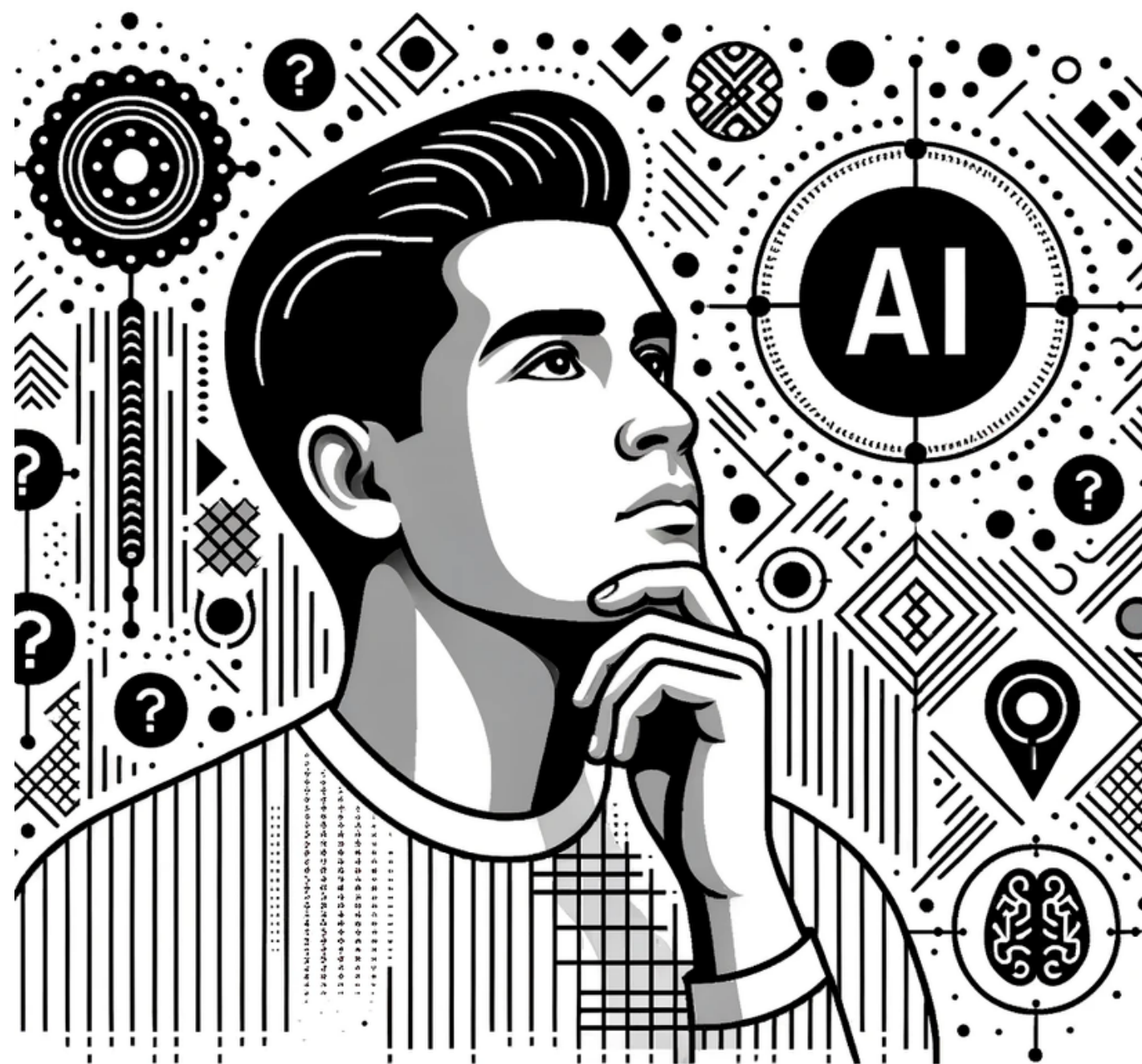


Launchpad





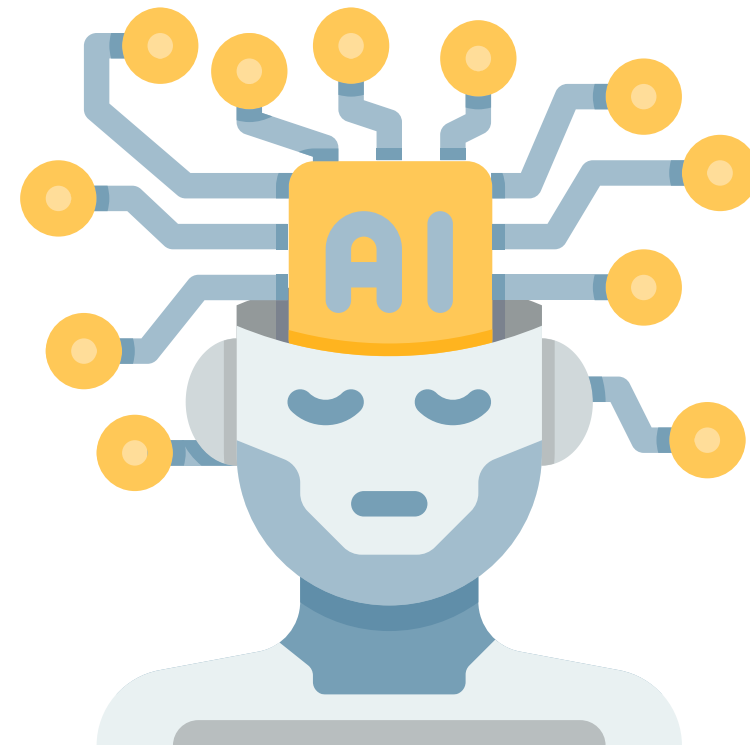
UNDERSTANDING AI





AI has access to very large

DATA SET

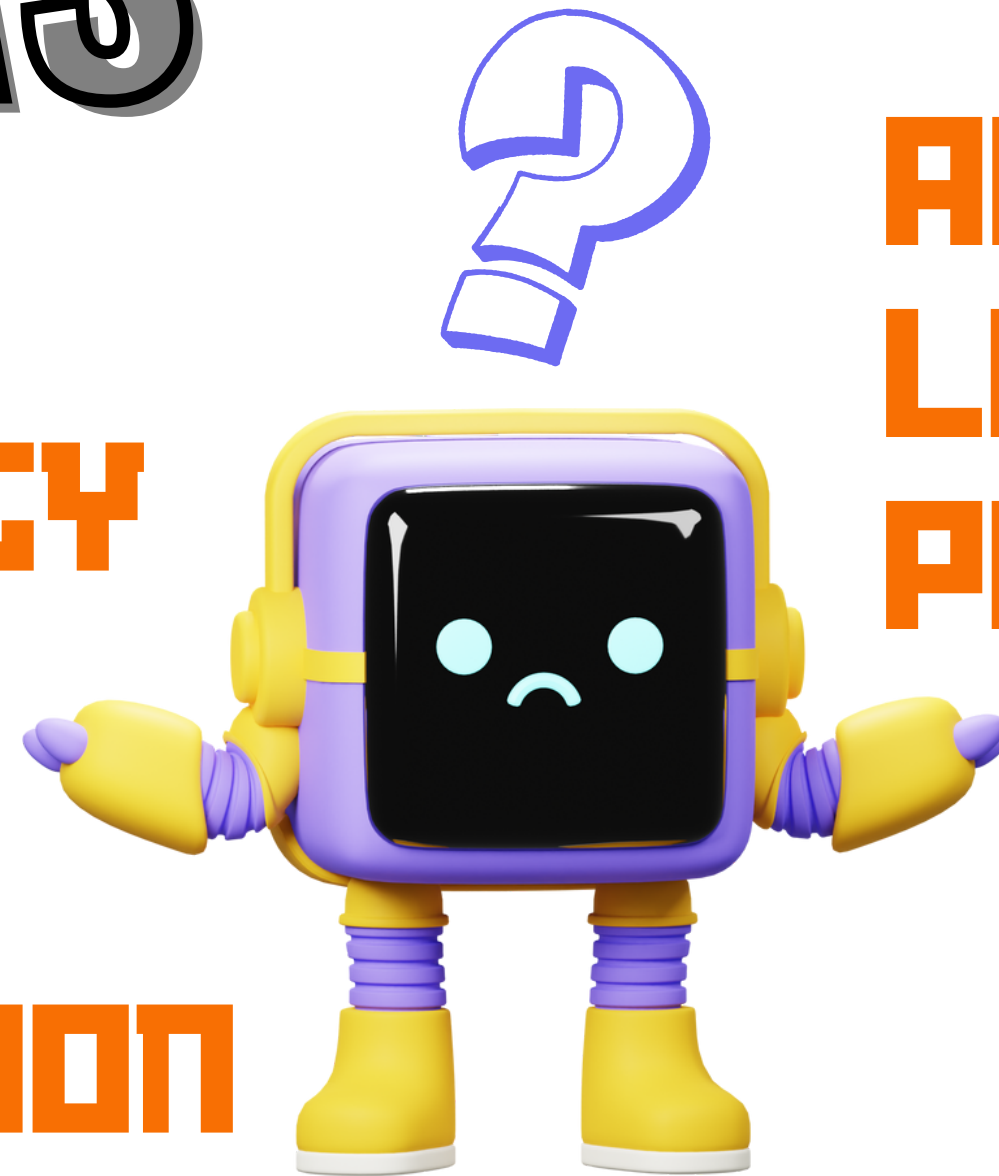




DATA BIAS

E-PEDAGOGY

KEY APPLICATION
OF TECHNOLOGY



ACTIVE
LEARNING
PROCESSES



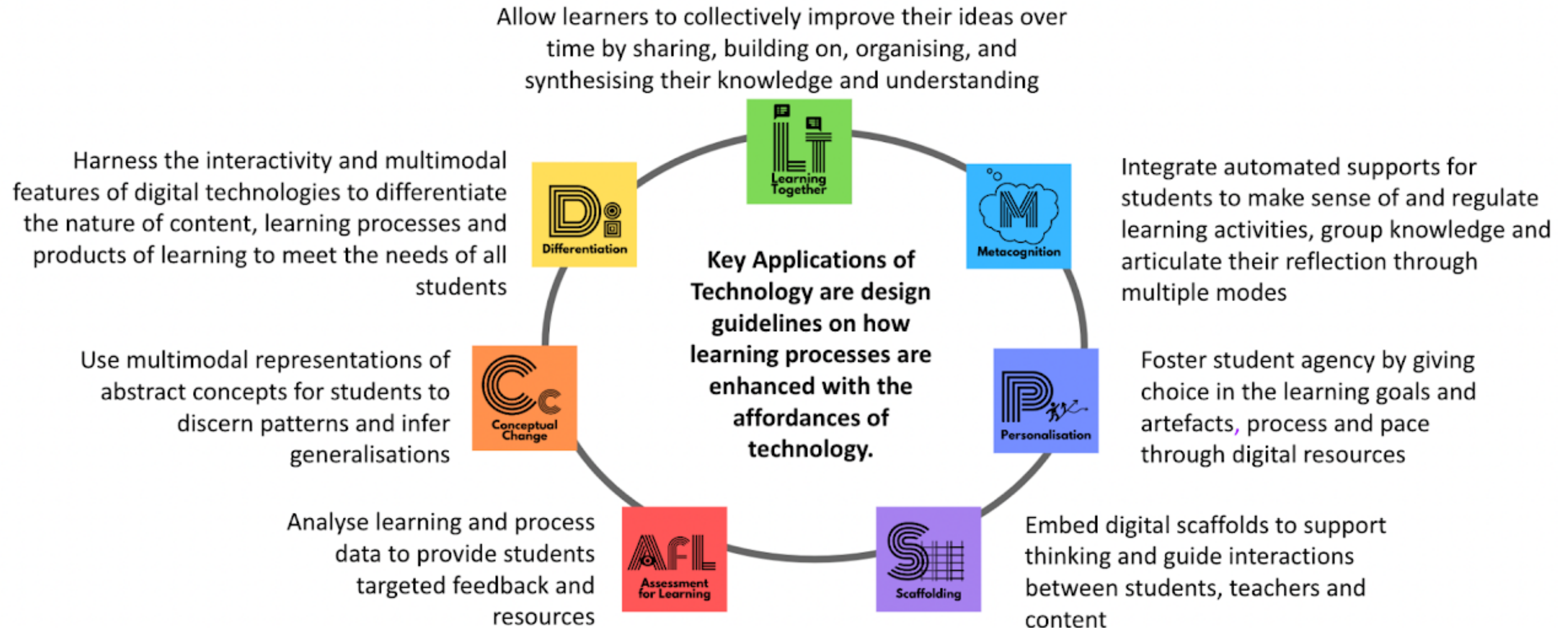
E-PEDAGOGY

e-Pedagogy is the practice of teaching with technology for active learning that creates a participatory, connected, and reflective classroom to nurture the future-ready learner.





KEY APPLICATION OF TECHNOLOGY

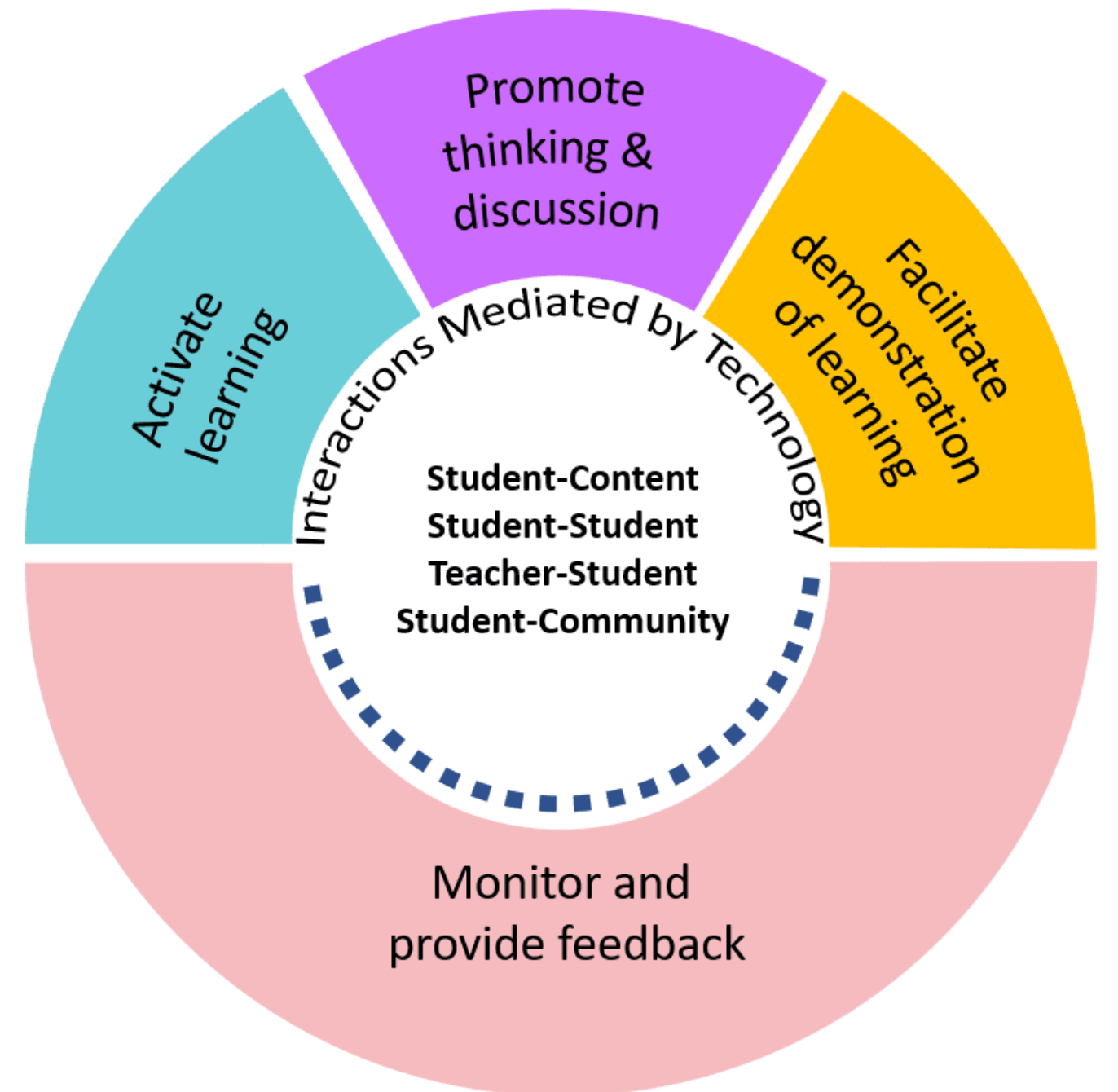




ACTIVE LEARNING PROCESSES (ALPS)



Plan and sequence learning experiences to help students make sense of information to achieve deep understanding and/or develop a skill.





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What?



FULBRIGHT DAI RESEARCH ROJECT



Dr. Brian Sharp
Math Dept



Dr. Holly Rougeaux
Math Dept

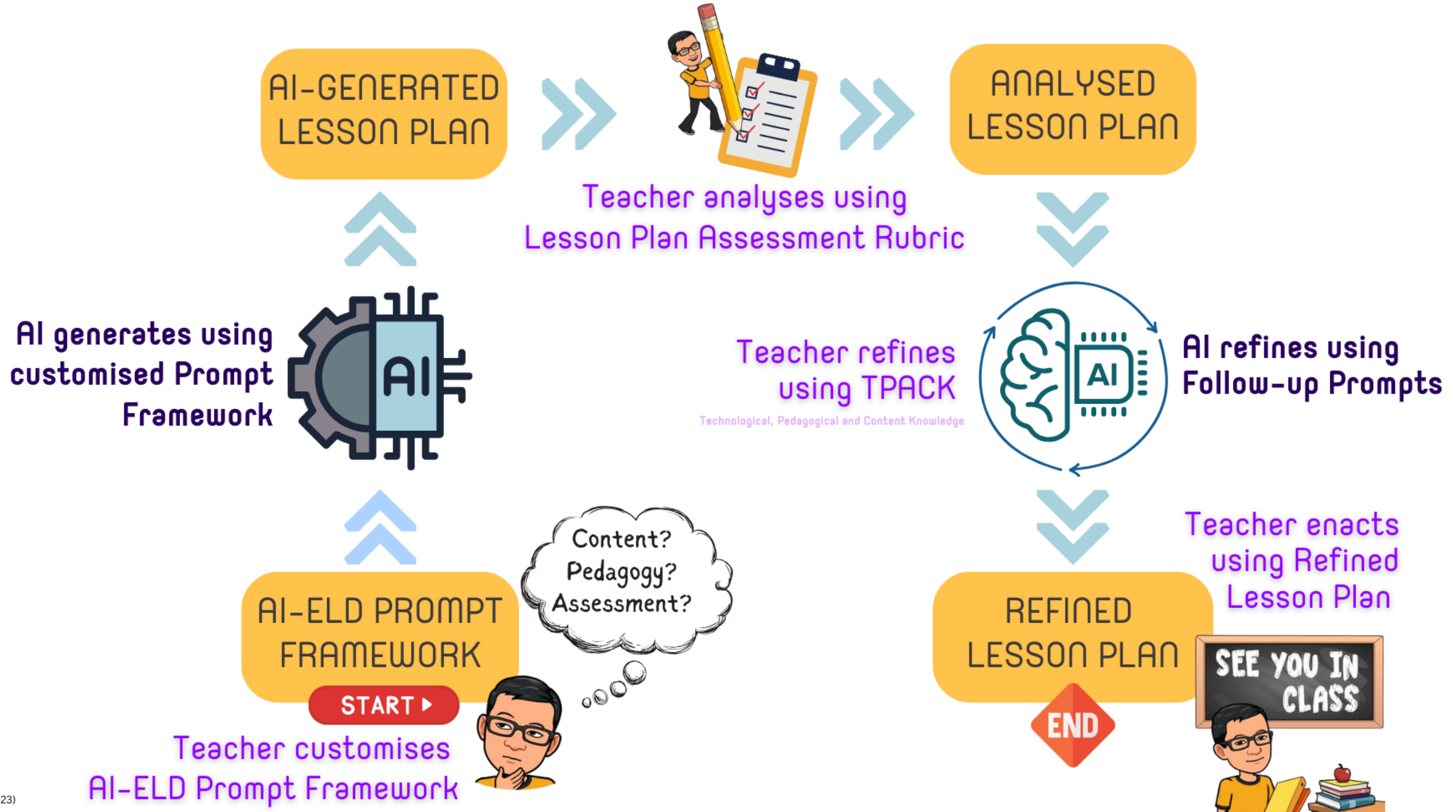


AI-ED PLANNERS

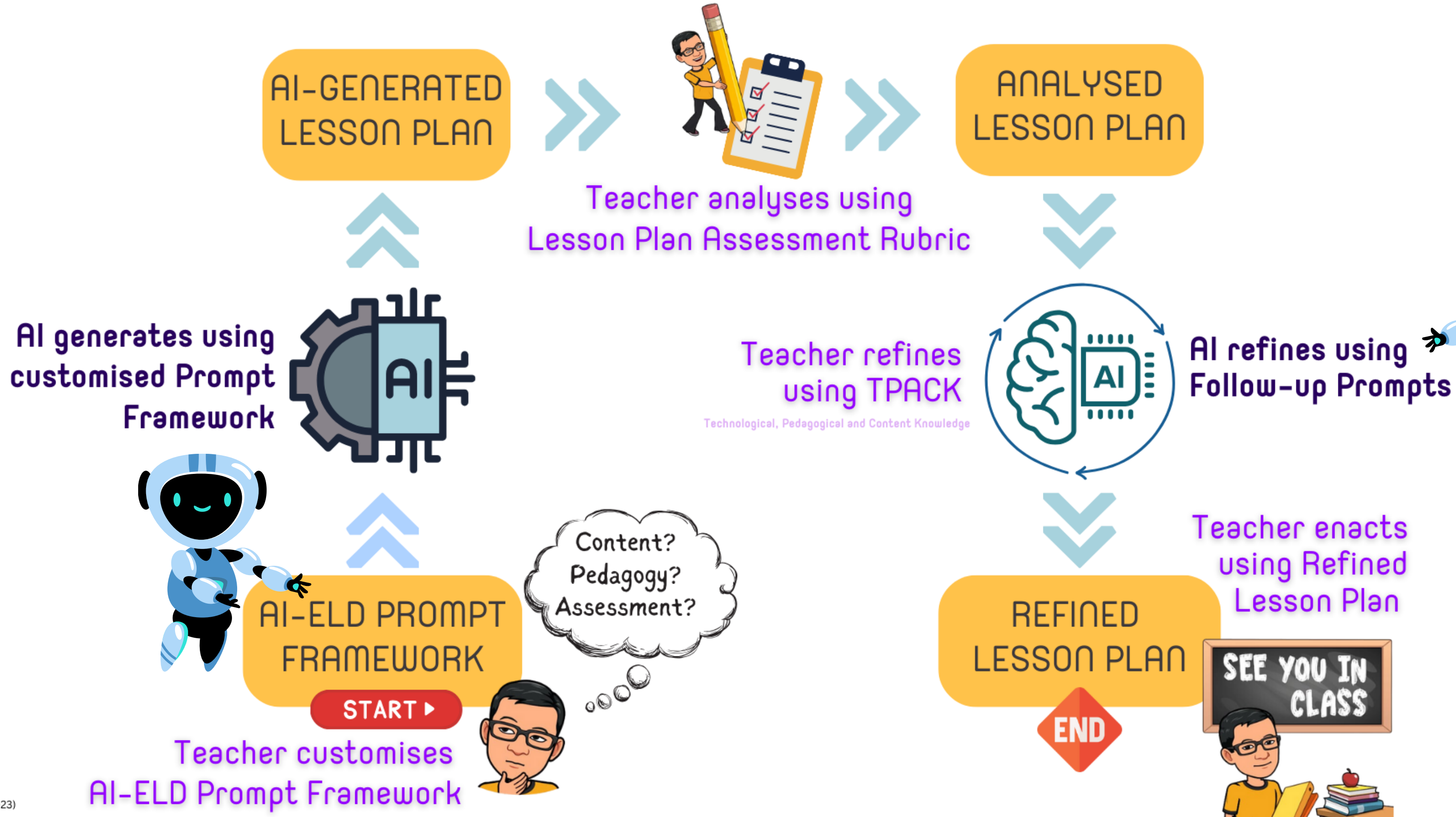
 Ng Ee Noch Boon Lay Garden Pri Sch	 Nicole Yeap Boon Lay Garden Pri Sch		
 Faith Mavis Lim Mei Ting Paya Lebar Methodist Girls' School (Primary)	 Lau Sze Hui Corporation Pri Sch	 Nurul Amirah Binte Ghazali Catholic High School (Sec)	 Tong Jin Sui Boon Lay Garden Pri Sch
 Quah Li Zhen Kong Hwa School	 Kai Le NorthLight School	 Liew Zhi Jun Yuhua Pri Sch	

Indiana University of Pennsylvania (IUP)

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REFERENCES

Act as an expert in ... or world class in...

Context (a lot!)

Deep think (think deeply about...)

Questions



Jen Bryan

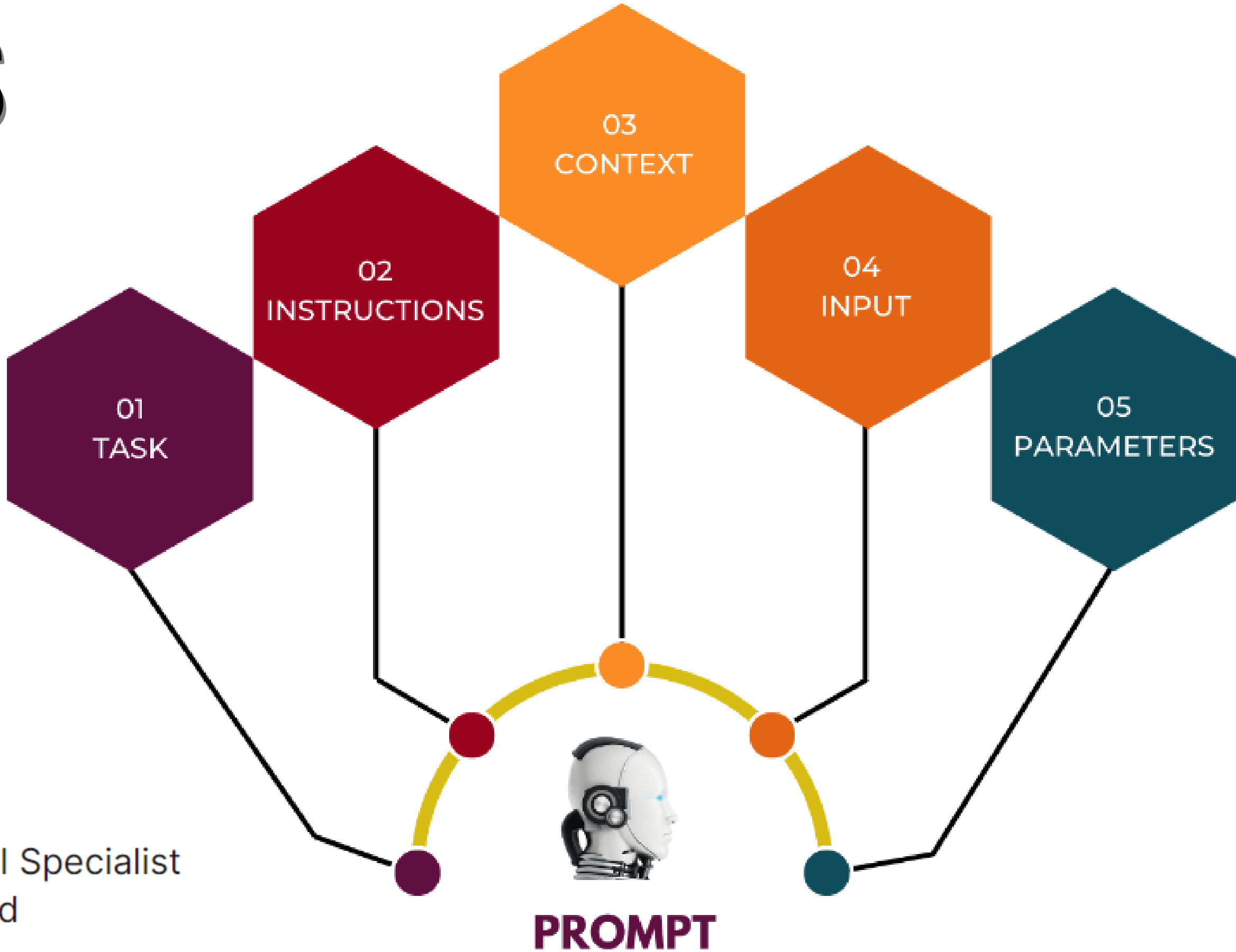
@JenBryan_ 35 subscribers 35 videos

Hey! I'm Jen. 🍌 I'm a marketer who specialises in Paid Advertising, turned... >

twitter.com/jenbryan_ and 1 more link



REFERENCES



Sunil Ramlochan - Enterprise AI Specialist
April 5, 2023 — 14 minutes read



ChatGPT x AI-ELD Prompt Framework - Google Docs

docs.google.com/spreadsheets/d/17JHfAaWq4KYJs65WuO2X6eSTK2hREgqPkZA6Sa0kJQs/edit#gid=1677417846

AI-ELD Prompt Framework

File Edit View Insert Format Data Tools Extensions Help

100% | \$ % .0+ .00 123 | **B** I A

	A	B	C	D	E	F
6		Qualities of output	The lesson plan should be simple yet detailed enough for any teacher to understand and carry out the lesson.			
7		Do's and don'ts	Don't start designing the lesson until I give you the context to my lesson			
8	Context	Subject	The subject is	Math		
9		Topic	The topic is	Area of composite figures		
10		Grade level	My students are in	primary 4, 10 years old		
11		Class size	My class size is	40		
12		Class ability	My students abilities are	insert any notable learning differences, abilities or needs		
13		Duration	Duration of my lesson is	insert duration		
14		Learning Outcomes	Learning outcomes for the lesson:	insert learning outcomes		
15		Success Criteria	At the end of the lesson, students will be able to	insert success criteria		
16		Pedagogy	Use the following pedagogy to design the lesson:	insert specific pedagogy (e.g. Blended Learning, Concrete-Pictorial-Abstract (CPA), Flipped Learning, etc)		
17		Key Application of Technology (KAT)	Integrate technology where necessary and meaningfully to	insert the KAT(s) for your lesson (e.g. support Assessment for Learning, foster Conceptual Change, provide Differentiation, facilitate Learning Together, develop Metacognition, enable Personalisation or Scaffold the learning)		
18	21CC	Integrate the acquisition of the following 21st-century skills:	insert 21st-century skills to be integrated			
19	Evidence of Learning	I want to students to show me evidence of their learning using	insert evidence of learning (e.g. online responses, group discussion and workbook/worksheets)			
20	Prerequisite knowledge	My students already know	insert any prerequisite knowledge			
21	Resources	Use the following resources in your lesson plan:	insert resources (e.g. Chromebooks, iPads)			

Main (DUPLICATE THIS TAB) Video Eg (Math)



ChatGPT 4



You

"You must act as an expert teacher teaching in Singapore. I will provide you with details about my lesson, and it will be your job to think deeply and write a detailed lesson plan. I want you to design a lesson where students make sense of information and knowledge to achieve deep understanding through interacting with content, their peers or teachers and reflecting on their learning. Ask me any questions that you need so that you can write a very well designed lesson. Organize the information in a table with 4 columns.
Column #1 - Duration
Column #2 - Name of these four categories: Activate Learning, Promote Thinking and Discussion, Facilitate Demonstration of Learning and Monitor and Provide Feedback.
Column #3 - Detailed description of activities and questions that can promote students' critical thinking according to the four categories stated in Column #2.
Column #4 - Justify the reason why you chose those activities and questions. The lesson plan should be simple yet detailed enough for any teacher to understand and carry out the lesson. Don't start designing the lesson until I give you the context to my lesson"



ChatGPT

Absolutely, I can help you with that. To design a lesson plan tailored to your needs, I would need some additional details: ●

Message ChatGPT...

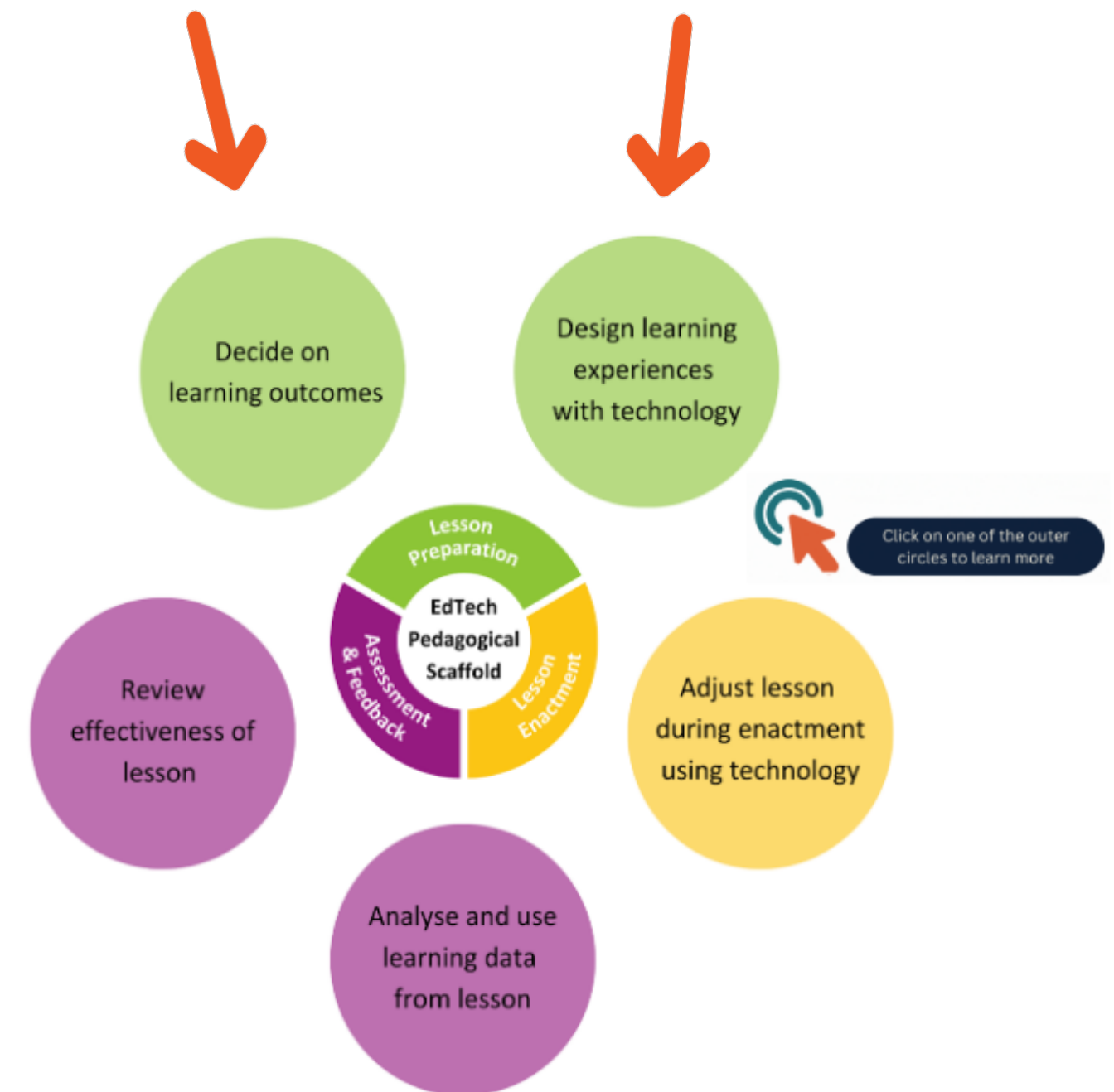


LESSON PLAN ASSESSMENT RUBRIC

Lesson Plan Assessment Rubric

Single-Point Assessment Rubric

Grow Areas that need work	Criteria	Glow Areas that exceed the criteria
	<p>Learning Objectives The lesson plan includes:</p> <ul style="list-style-type: none"> <input type="checkbox"/> key concepts, skills, attitudes and values (including 21CC) that are essential to my students' understanding of this topic and important for my students to develop? <input type="checkbox"/> prior knowledge/concepts and skills my students have? <input type="checkbox"/> difficulties that my students may experience? <input type="checkbox"/> students' learner profiles that may require differentiation in my design of the activity or lesson? 	
	<p>Success Criteria</p> <p>The lesson plan includes success criteria that:</p> <ul style="list-style-type: none"> <input type="checkbox"/> are specific statements that define what success looks like when learning outcomes are met. <input type="checkbox"/> includes what students will do, say or write to demonstrate how well they have learned. 	





FOLLOW-UP PROMPTS

- **Abstract:** Calculation of area through worksheets and digital submission of responses.

21st-Century Skills Development:

- **Communication:** Group discussions and video explanations foster clear and effective communication.
- **Collaboration:** Group activities on Chromebooks encourage teamwork and idea sharing.
- **Technology Use:** Integration of digital tools (Chromebooks, interactive software, online platforms) for learning and assessment.

This lesson plan aims to balance technology integration with hands-on activities, ensuring that students understand the concept of finding the area of composite figures while also developing essential 21st-century skills. The use of familiar technology like Chromebooks and class projectors makes the lesson accessible and engaging for students.



 Message ChatGPT...





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How?



BIT.LY/AIELD

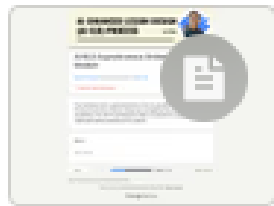


AI-Enhanced Lesson Design (AI-ELD) Process



9 bookmarks

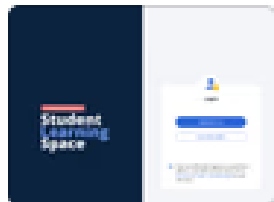
⇅ Custom sorting



Asynchronous Online Learning Module (Google Form)

Learn about the AI-ELD Process via Google Form.

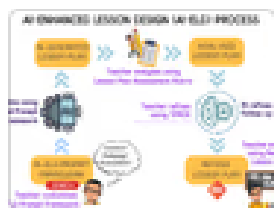
forms.gle · Nov 8, 2023



Asynchronous Online Learning Module (SLS)

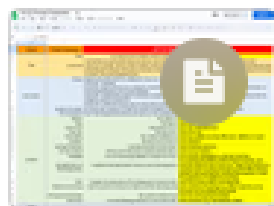
Learn about the AI-ELD Process via Singapore's Student Learning Space (SLS).

vle.learning.moe.edu.sg · Nov 20, 2023



AI-Enhanced Lesson Design (AI-ELD) Process

up.raindrop.io · Nov 8, 2023



Part 1: AI-ELD Prompt Framework

Use this prompt framework to generate lesson plans using AI.

docs.google.com · Nov 4, 2023






WHAT TO DO?

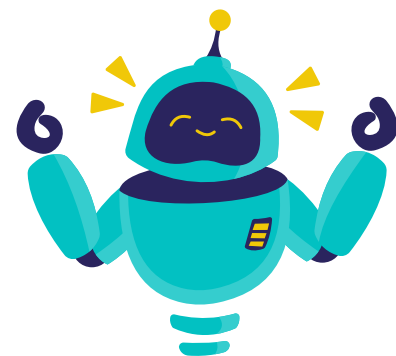
1. Create your own AI-generated lesson plan!
2. Share your questions, comments or feedback.





SHARE YOUR THOUGHTS

What aspect of using AI to generate lesson plans **EXCITES** you the most?



What was the **MUDDIEST** point of today's session?



Session feedback survey

We believe in the value of feedback.
Share how it went at:

bit.ly/seqcon2024

