40TH ACT+1 CONVENTION & PRE-CONVENTION SEMINAR

The Teacher as the Architect of Learning

Strategic AI Integration in Tamil Language Education

Danapal Kumar

President
Singapore Tamil Teachers' Union (STTU)
& Senior Teacher for Tamil Language, Serangoon Secondary School



AI in Tamil Language Education

From AI User to AI Decision-Maker

Who is steering the ship?

REGIONAL EDUCATIONAL CONTEXT

The AI Acceleration in Language Classrooms

Expanding Pedagogical Reach

AI tools offer unprecedented speed in content creation, differentiation, and student practice.

The Critical Question

Increased capability demands higher pedagogical discernment from the language educators.



Who Is Steering the Ship?

If AI can plan, generate, explain and assess...

What decisions must remain with the teacher?

AI can assist the journey. The teacher decides the destination.



What Can AI Do for Teachers?

01 Generate learning materials

02 Adapt and simplify texts

03 Create questions and activities

04 Translate and rephrase

05 Give feedback

06 Simulate conversations

07 Provide differentiated practice

What is teacher's role in steering the learning ?

01 Define pedagogical goals

02 Preserve heritage nuances

03 Ensure student ownership

04 Build human connections

05 New ideas

06 Imagination

The Two Questions Every Teacher Should Ask

?

CAN AI do this?

≠

?

SHOULD AI do this?

Capability is not the same as appropriateness.

From AI User to AI Decision-Maker

Move beyond:

"What can AI do for me?"

Ask instead:

"What should I ask AI to do— and why?"

The teacher's professional judgement remains central.

3. KEY QUESTIONS

The fundamental question in AI adoption is not "Can AI do this?"

"What SHOULD AI do in this learning experience?"

1. KEYNOTE REFLECTION

Who Is Steering the Ship?

AI Engine Capabilities

- **Plan:** Draft lesson outlines instantly
- **Generate:** Produce passages and exercises
- **Explain:** Break down complex grammar
- **Assess:** Evaluate syntax and mechanics

Teacher Steering Duties

- **Intent:** Define pedagogical goals
- **Culture:** Preserve heritage nuances
- **Ethics:** Ensure student ownership
- **Care:** Build human connections



4. IDENTITY EVOLUTION

From AI User to AI Decision-Maker

STAGE 1

Passive Consumer

Adopting AI outputs directly into class without pedagogical filters.

STAGE 2

Tactical Operator

Using AI to save administrative time and generate quick worksheets.

STAGE 3

Learning Architect

Strategically assigning tasks to AI while protecting student thinking.

5 The Five Decisions Before AI

1	2	3	4	5
PURPOSE	**VALUE**	**OWNERSHIP**	**AUTHENTICITY**	**RESPONSIBILITY**
What am I trying to achieve?	Will AI genuinely add learning value?	Whose thinking and voice should this be?	Does this reflect the learner's real ability?	What remains my responsibility?

DECISION 1: PURPOSE

What Do I Want Students to Learn?

Task Completion vs Cognitive Mastery

If the goal is merely getting an answer, AI will do it faster. If the goal is developing communication skills, the student must engage in the process.

Architect's Check:

Is AI facilitating student language practice, or is it taking over the learning task entirely?

DECISION 2: VALUE

Will AI Genuinely Improve the Learning?

Genuine Pedagogical Value

Provides instant differentiated feedback or 24/7 conversation practice.

Digital Novelty Distraction

Adding AI complexity without improving language fluency or understanding.

DECISION 3: OWNERSHIP

Who Should Be Doing the Thinking?

Cognitive Effort

Learning happens where the cognitive struggle takes place.

If AI generates the ideas, structures the essay, and picks the vocabulary, the student becomes an audience to their own education.



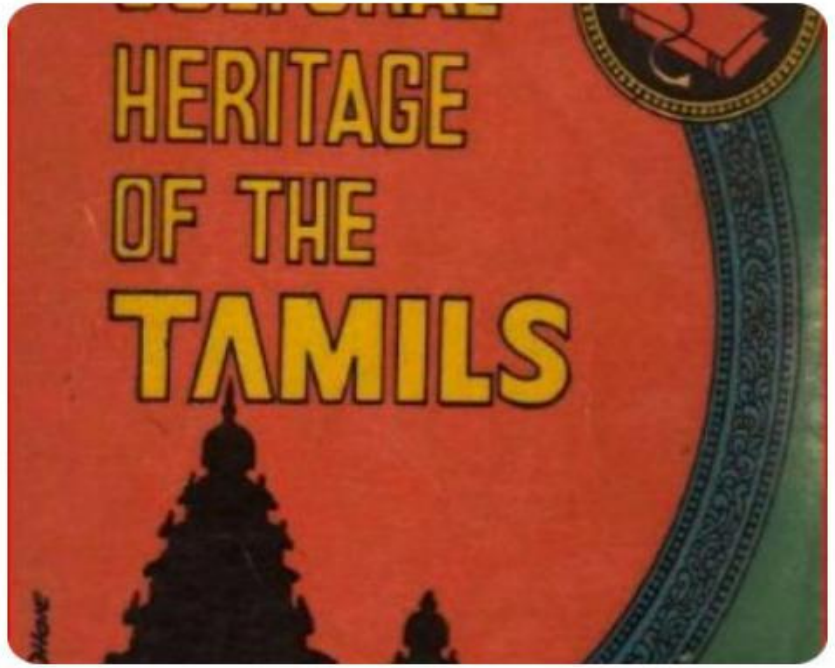
DECISION 4: AUTHENTICITY

What Does Authentic Tamil Learning Require?

Cultural Idioms
Preserving heritage context and idiomatic depth (*Marabuthodargal*).

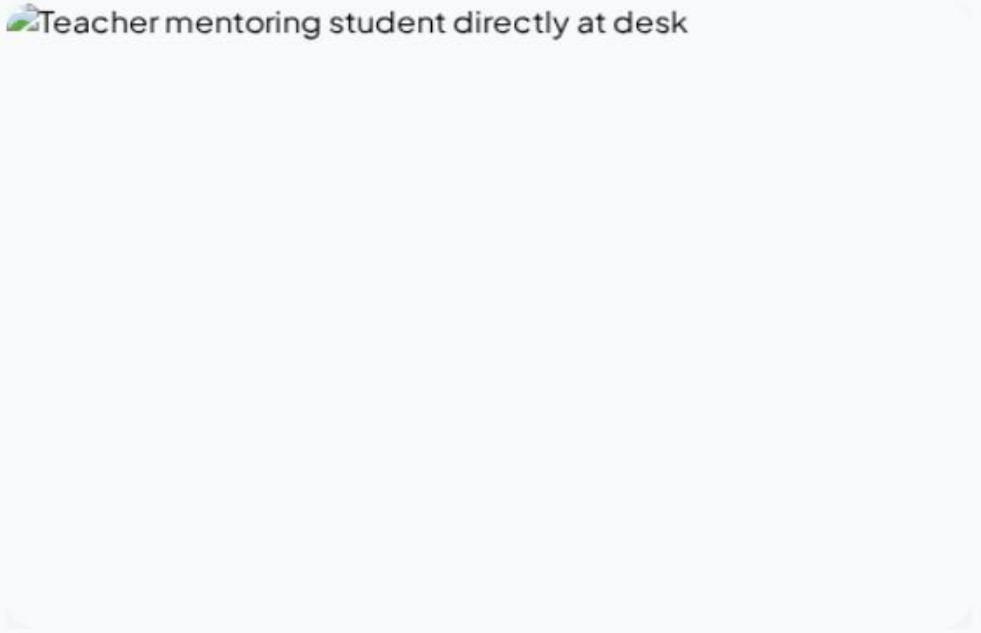
Personal Voice
Fostering authentic self-expression and emotional connection in Tamil.

Human Dialogue
Building empathy through peer interactions that technology cannot mimic.



DECISION 5: RESPONSIBILITY

What Remains the Teacher's Professional Duty?



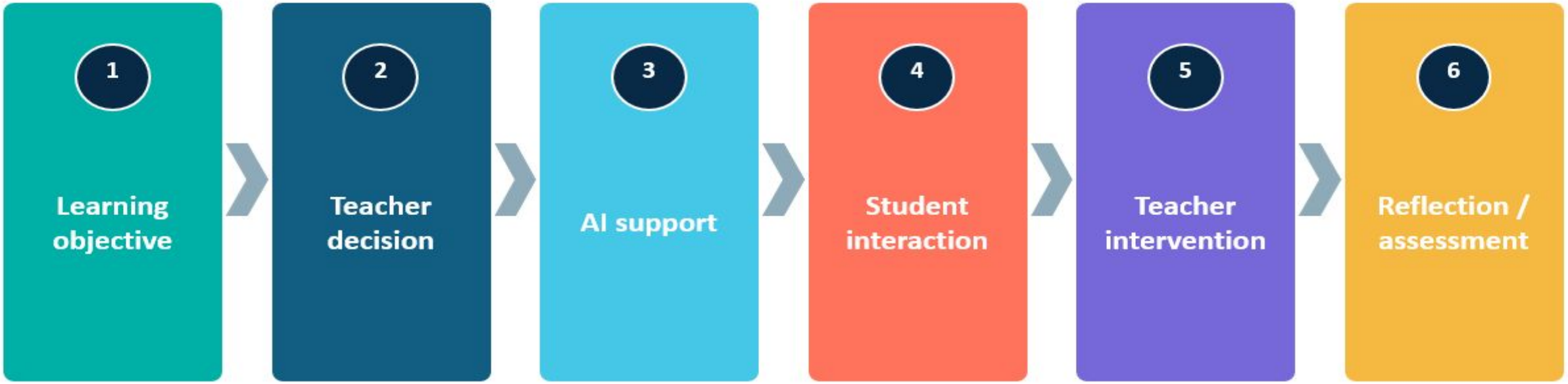
Ethical Stewardship

Guiding students on appropriate, honest, and critical AI usage.

Holistic Assessment

Evaluating genuine growth, emotional depth, and critical understanding.

6 A Tamil Lesson Using AI



AI is integrated into the lesson—not placed at the centre of the lesson.

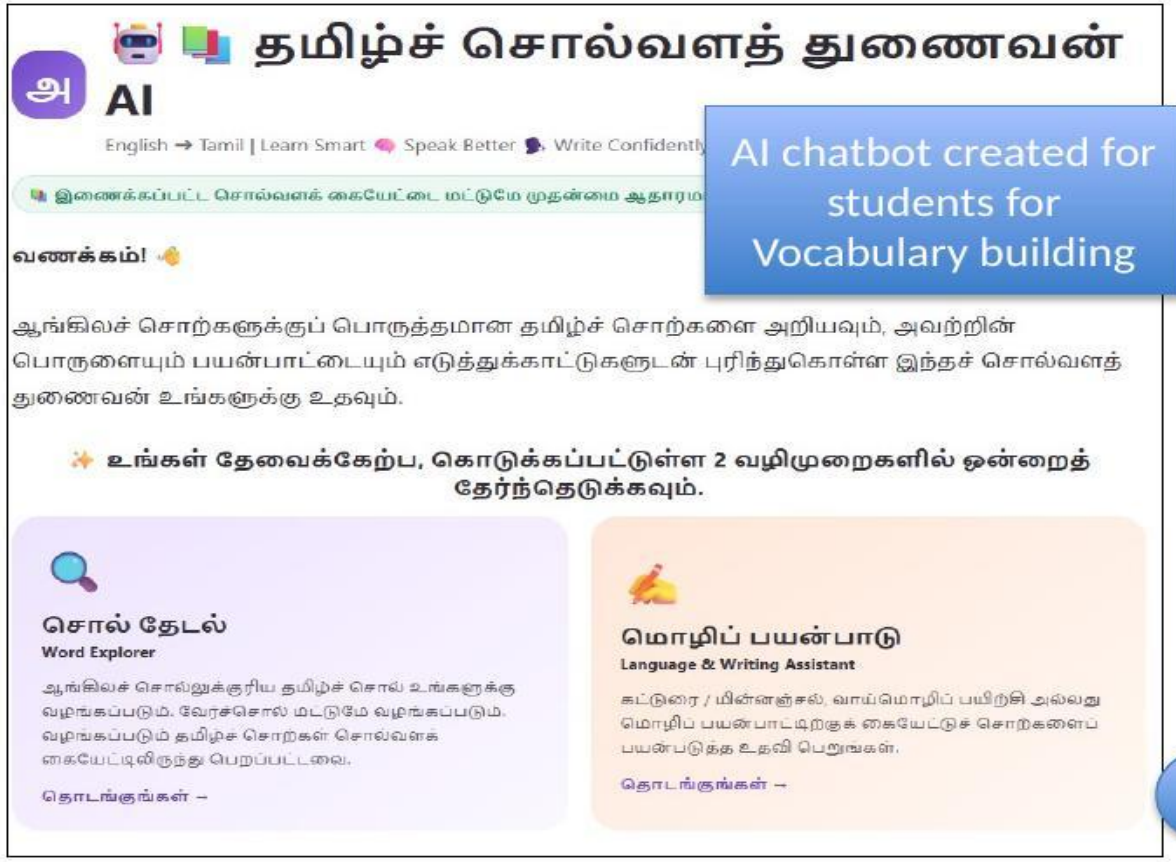
Let us look at some practical examples – Chatbot for Spoken Tamil, Chatbot for Vocabulary and Chatbot for written Tamil

PARTICIPANT GAME • 3-MINUTE CHALLENGE

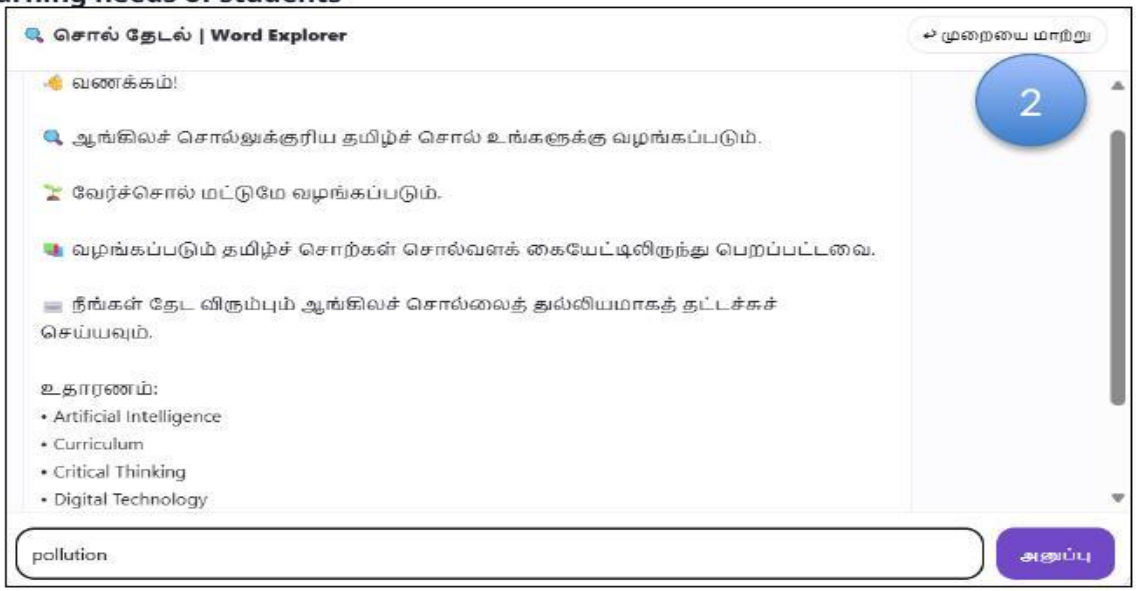
Architect or Automator? You Decide!

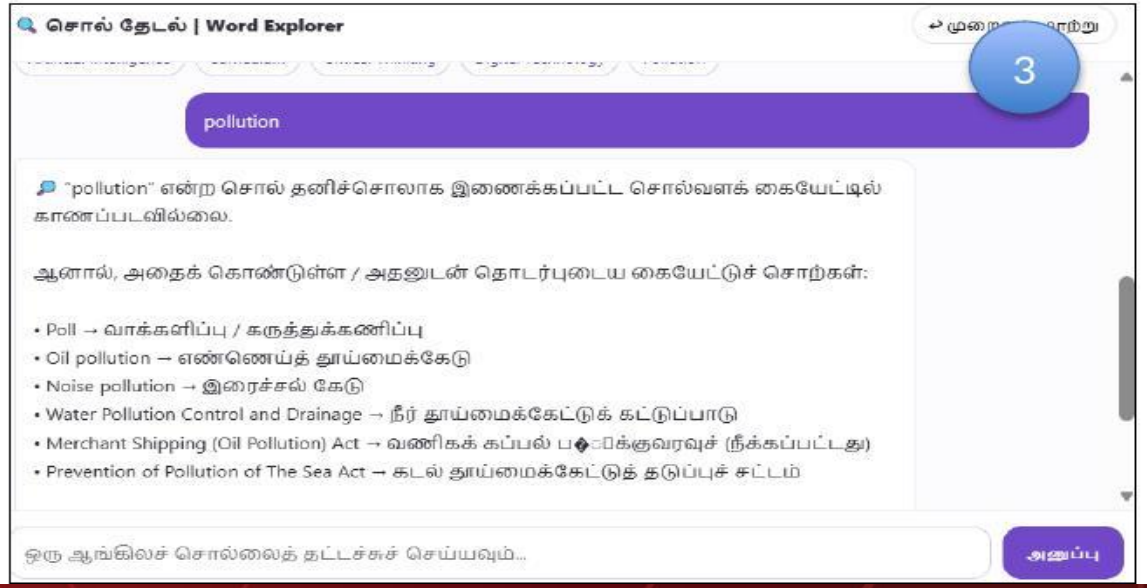
Case study A	**Differentiating Spoken Tamil for different learning needs of students** Generating 3 difficulty levels of a Tamil story on hobbies.	Automator (AI Task)
Case study B	**Evaluating Personal Reflection & Cultural Values** Assessing student's heartfelt speech about family traditions.	Architect (Teacher Task)
Case Study C	**Simulated Roleplay Partner** Teacher designs prompt & context; AI conducts live student dialogue.	Co-Pilot (Hybrid Task)

STEP 1. PRACTICAL LESSON – LESSON PREPARATION **Differentiating Spoken Tamil for different learning needs of students**



AI chatbot created for students for Vocabulary building





Students can also explore **example phrases and contexts** to understand how these terms can be applied appropriately. This promotes **self-directed learning**, as students can independently explore, understand and apply new vocabulary according to their learning needs.

STEP 2. PRACTICAL LESSON – LESSON PREPARATION – Scaffolding and Contextual Knowledge provide by Teacher

மொழித்துணைவன் (LangBuddy) 2026: பொழுதுபோக்கு

வகுப்பு விவரங்கள் (Class Context)

வகுப்பு: 2G2 (8 மாணவர்கள்)
தொகுதி: 2
கருப்பொருள்: பொழுதுபோக்கு (Hobbies)

இணைப்புச் சொற்கள் (Target Connectives)

ஏனெனில், அதனால், இதன் காரணமாக, இதன் விளைவாக, ஆகையால்

கற்றல் நோக்கம் (Learning Objective)

பிடித்த பொழுதுபோக்கைப்பற்றித் தமிழில் சரளமாக LangBuddy துணைகொண்டு காரணங்களை விளக்கிப் பேசுதல்.

வளங்கள் (Resources Used)

Language Buddy (AI Tool), படவில்லைகள், ClassPoint, சொல்வளப்பட்டியல்.

STEP 2. PRACTICAL LESSON – LESSON ENACTMENT

படிநிலை 1 & 2: ஆசிரியர் & மாணவர் உரையாடல்

படிநிலை 1 (10 min)

ஆசிரியர் வழிநடத்தல்

படங்களைக் காட்டி (புத்தகம் வாசித்தல், தோட்டம் அமைத்தல், சமையல்கலை, ஓவியம் வரைதல்) நன்மைகளையும் காரணங்களையும் விவாதித்தல்.

நோக்கம்: வெறும் தகவலாகச் சொல்லாமல் காரண காரியங்களுடன் பேச வைத்தல்.

Using pictures (e.g., reading books, gardening, cooking, and painting) as prompts for students to discuss their benefits and explain the reasons behind them.

Objective: To encourage students to speak by explaining **cause-and-effect relationships and reasons**, rather than merely stating information.

படிநிலை 2 (10 min)

மாணவர் கலந்துரையாடல்

மாணவர்கள் இணையாகச் சேர்ந்து தங்களுக்குப் பிடித்த பொழுதுபோக்கைப் பற்றிப் பேசுதல்.

பயன்பாடு: 'ஏனெனில்', 'அதனால்', 'இதன் காரணமாக', 'இதன் விளைவாக', 'ஆகையால்'.

Students work in pairs and talk about their favourite hobby.

Language use: Use of appropriate use Conjunction words in Tamil when saying the phrases in Spoken Tamil (இணைப்புச் சொற்கள்)

STEP 3. PRACTICAL - LESSON ENACTMENT : Use of a chatbot as a learning companion to guide students through role-play scenarios and familiarise them with sentences and expressions used in daily communication.

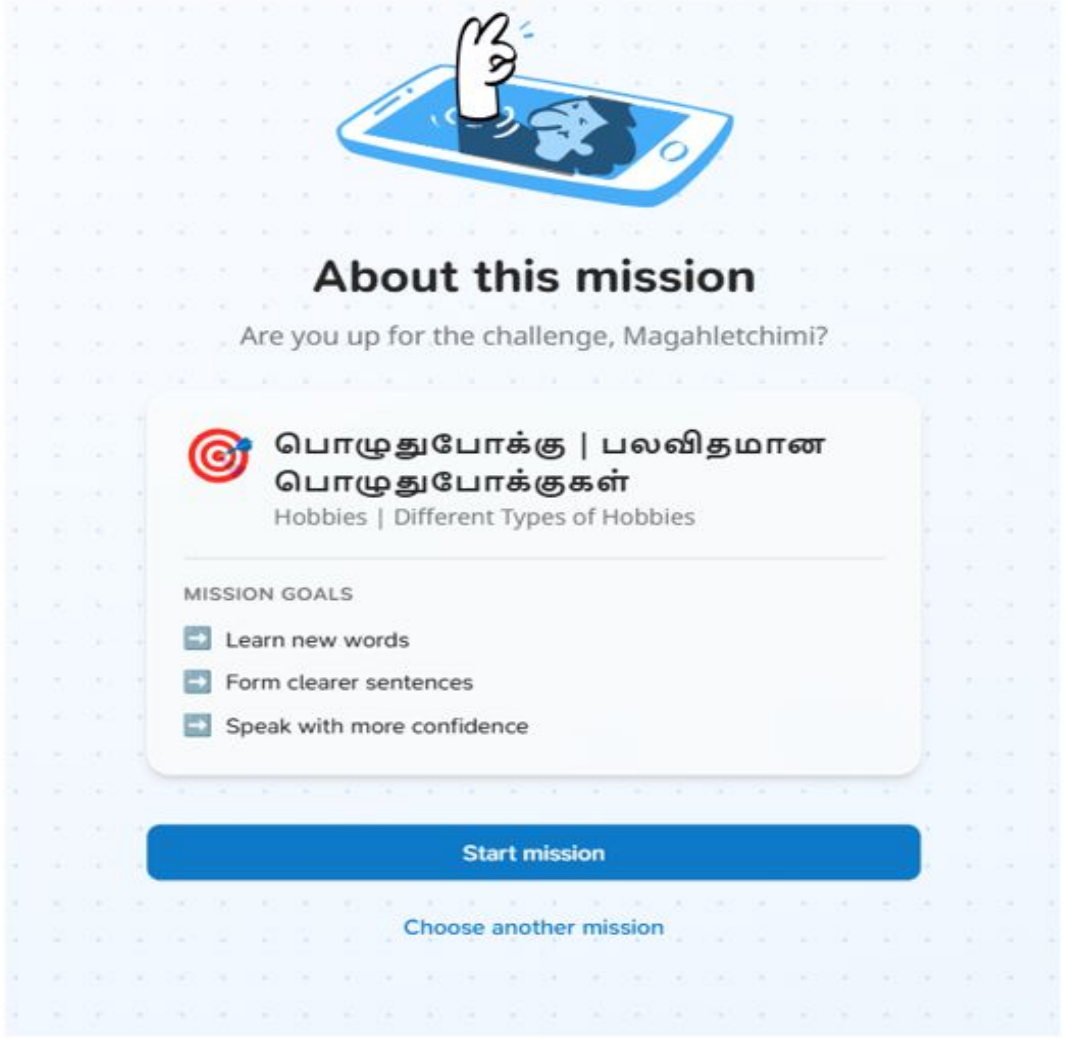
படிநிலை 3: Chatbot for Spoken Tamil practice (20 min)

AI சூழல் (AI Scenario Task in Chatbot)

Based on the theme "Hobbies", students will select a suitable scenario and engage in a conversation with their friend *(Chatbot)*, who wishes to take up a new hobby.
Students will recommend an appropriate hobby, explain its benefits, and provide reasons to support their recommendation..

மாணவர் செயல்பாடு (Student Activity)

Students engage in a live discussion with the Chatbot by asking questions and responding to information shared. They identify key ideas and record them as brief notes in the Chatbot.



STEP 4: ASSESSMENT and REFLECTION OF STUDENTS

மதிப்பீடு & பாட நிறைவு

வீட்டுப்பாடம் (Homework Assignment)

நண்பன் புதிய பொழுதுபோக்கைத் தேர்ந்தெடுக்க அறிவுரை கூறும் வகையில் மின்னஞ்சல் (Email) எழுதுதல்

Write an email to a friend suggesting and advising on a suitable new hobby to take up. ✍️

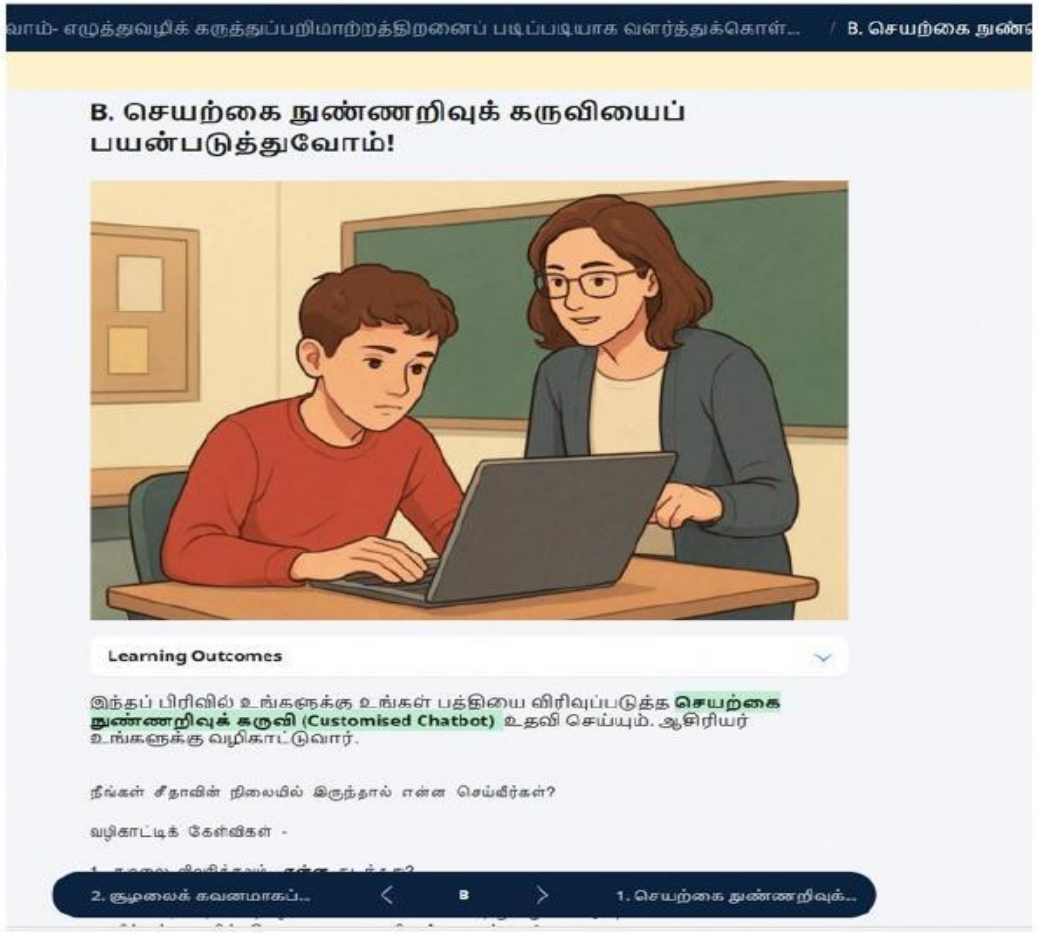
மதிப்பீடு அட்டை (Exit Card Reflection)

இன்றைய பாடத்தில் கற்றுக்கொண்ட இணைப்புச்சொற்கள் செயற்கை நுண்ணறிவு தொடர்பான உரையாடல் பற்றிய மாணவர் சுய மதிப்பீடு

Students go through a self-assessment exercise created by the teacher, on their use of conjunction words learned in the lesson while engaging in a discussion on Langbuddy Chatbot.

Example 3 – For ideas generation (Essay writing)

An example of how AI Chatbot is infused in a SLS lesson package



- Students saw a structured way of building on responses using the 5W and 1 H framework

- Answered questions with few guided words when needed.
- Observed how their own ideas were preserved and consolidated.
- Used topic words and sentence starters to add on.
- LR students tend to give a one word answer
- Chatbot followed the structured way of asking questions
- (Eg What was the incident, how did you feel
- Tamil chatbot interaction

Title :
Write a simple paragraph on an incident where you were forced by your friend to participate in an activity which you did not like. How did you manage the situation?

- Chatbot question
- Student response

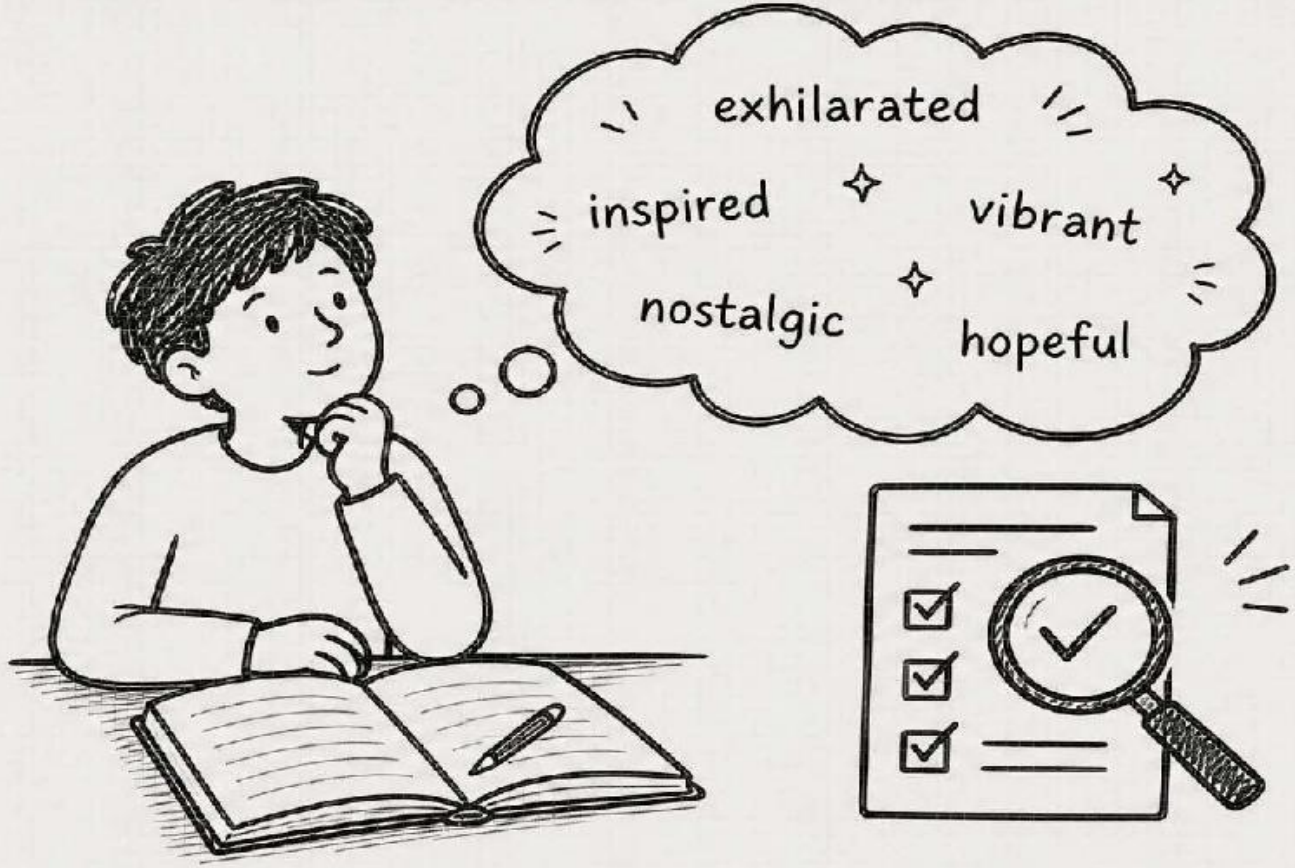
ADDING DEPTH AND EMOTION

1. **EMOTIONAL ENRICHMENT:**
   AI provides 5 words to express specific emotions.

2. **STUDENT CHOICE:**
   Selecting 3 words to elaborate the paragraph.

3. **EVIDENCE INTEGRATION:**
   AI suggests 3 pieces of evidence for credibility checks.

4. **LOCAL CONTEXT:**
   Adapting evidence to Singapore and adding personal experiences.



Example 3 – For ideas generation (Essay writing)

AI & DIGITAL GUARDRAILS

Digital guardrails preserve originality and student agency

THE CHATBOT SHOULD

- Conduct the entire interaction and final output in Tamil.
- Ask exactly five open-ended, non-leading questions.
- Build the final paragraph strictly from the student's five responses.
- Improve only grammar, sentence flow and transitions.
- Retain full fidelity to the student's original ideas.

THE CHATBOT SHOULD NEVER

- Answer its own questions or provide leading options.
- Supply examples that students can copy directly.
- Insert external facts, background knowledge or outsourced information.
- Invent characters, scenarios, details or unsupported elaborations.
- Reward an irrelevant response with uncritical praise.

QUALITY TARGETS **100% input fidelity** **0 direct-answer leaks** **Completion of all 5 questions**

Example 3 – For ideas generation (Essay writing)

Students using the Chatbot to generate ideas in a structured manner

Students saw a structured way of building on responses using the 5W and 1 H framework

- Answered questions with few guided words when needed.
- Observed how their own ideas were preserved and consolidated.
- Used topic words and sentence starters to add on.
- LR students tend to give a one word answer
- Chatbot followed the structured way of asking questions
- (Eg Where did this incident happen? How did you feel, are you able to explain in your words what does a school mean to you?)





Example 3 – For ideas generation (Essay writing)

EVIDENCE

Guided questions – step by step to build on the student's response

Predefined questions
How did your friends forced you to do something you did not like

Why did you not like doing the activity which you did not like?

Chatbot builds on the student's responses

INCIDENT AND REASON

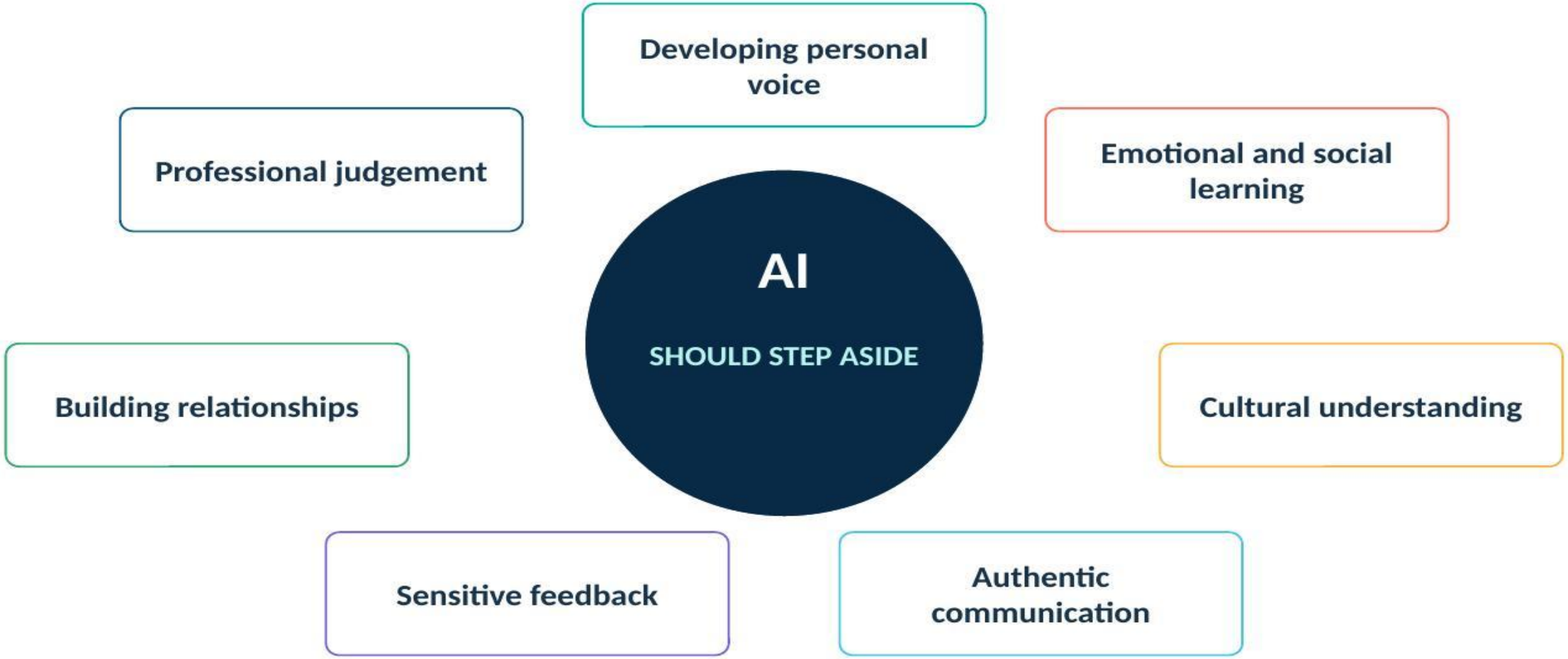




Consolidated paragraph by the Chatbot

7

When AI Should Step Aside



7. PEDAGOGICAL BOUNDARIES

Scenarios Where AI Should Step Aside

Core Thinking
Initial brainstorming and personal opinion formation.

Ethical Analysis
Contextualizing literature like *Thirukkural* values.

Empathetic Exchange
Peer feedback, personal storytelling, and emotional connection.



Interactive Activity — "Should AI Be Here?"

? Generating vocabulary exercises

CAN SHOULD

? Improving a student's draft

CAN SHOULD

? Writing a personal reflection for a student

CAN SHOULD

? Simulating a Tamil conversation

CAN SHOULD

? Assessing a student's oral performance

CAN SHOULD

? Giving feedback on a student's personal experience

CAN SHOULD

8. INTERACTIVE REFLECTION

"Should AI Be Here?" — Scenario Evaluation

Essay Outline Draft

Verdict: Limit AI. Protect student reasoning.

Grammar practices

Verdict: AI may suggest but student still needs scaffold on practical examples

Cultural Storytelling

Verdict: Teacher-Led. Requires authentic voice.

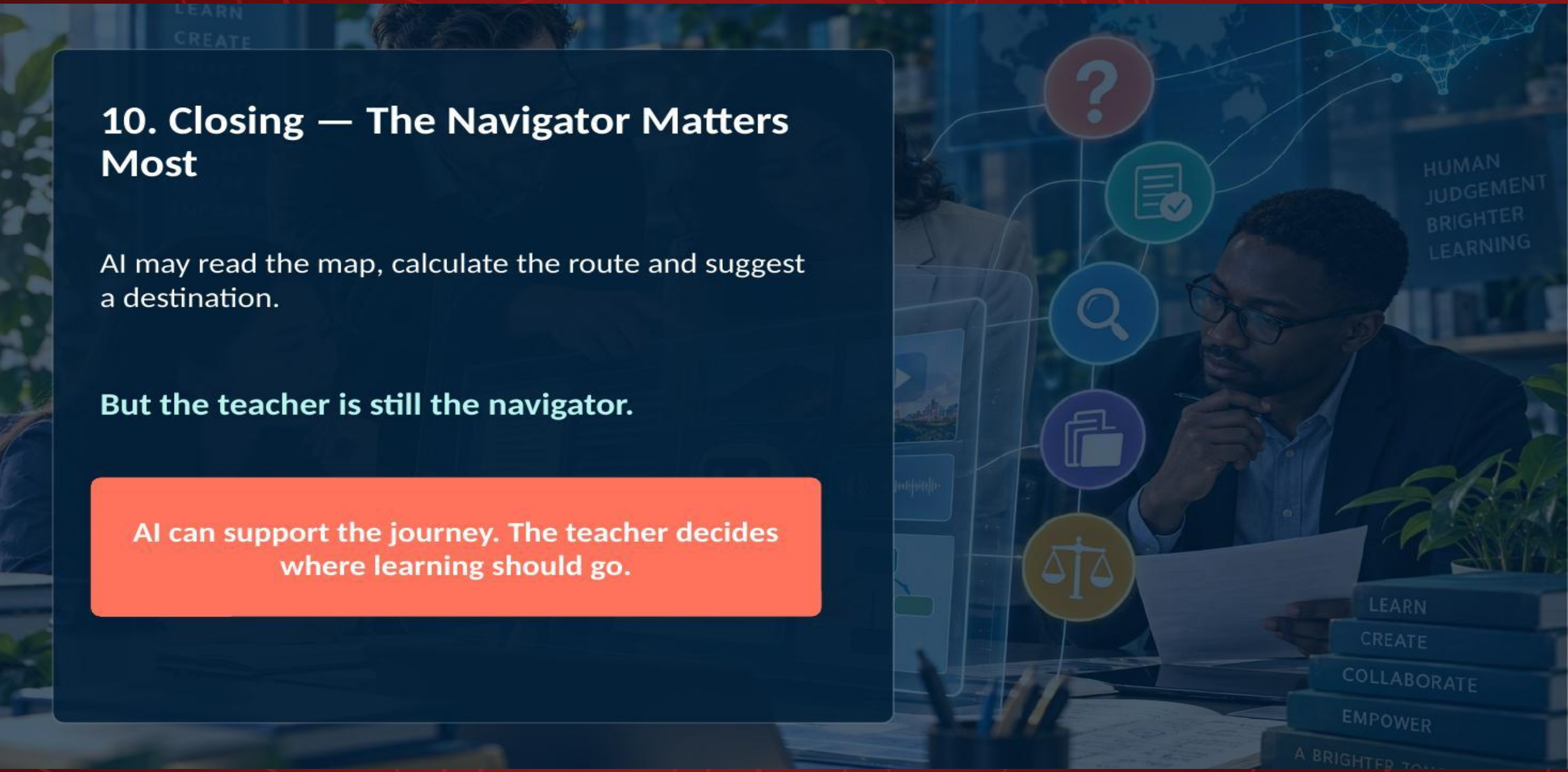
Vocabulary Expansion

Verdict: Partnered. AI suggests, student uses the appropriate examples

9 The Teacher's New Professional Competency

1. Questioning AI
2. Evaluating AI
3. Curating AI-generated content
4. Designing meaningful learning experiences
5. Knowing when to use AI—and when not to
6. Making professional judgements



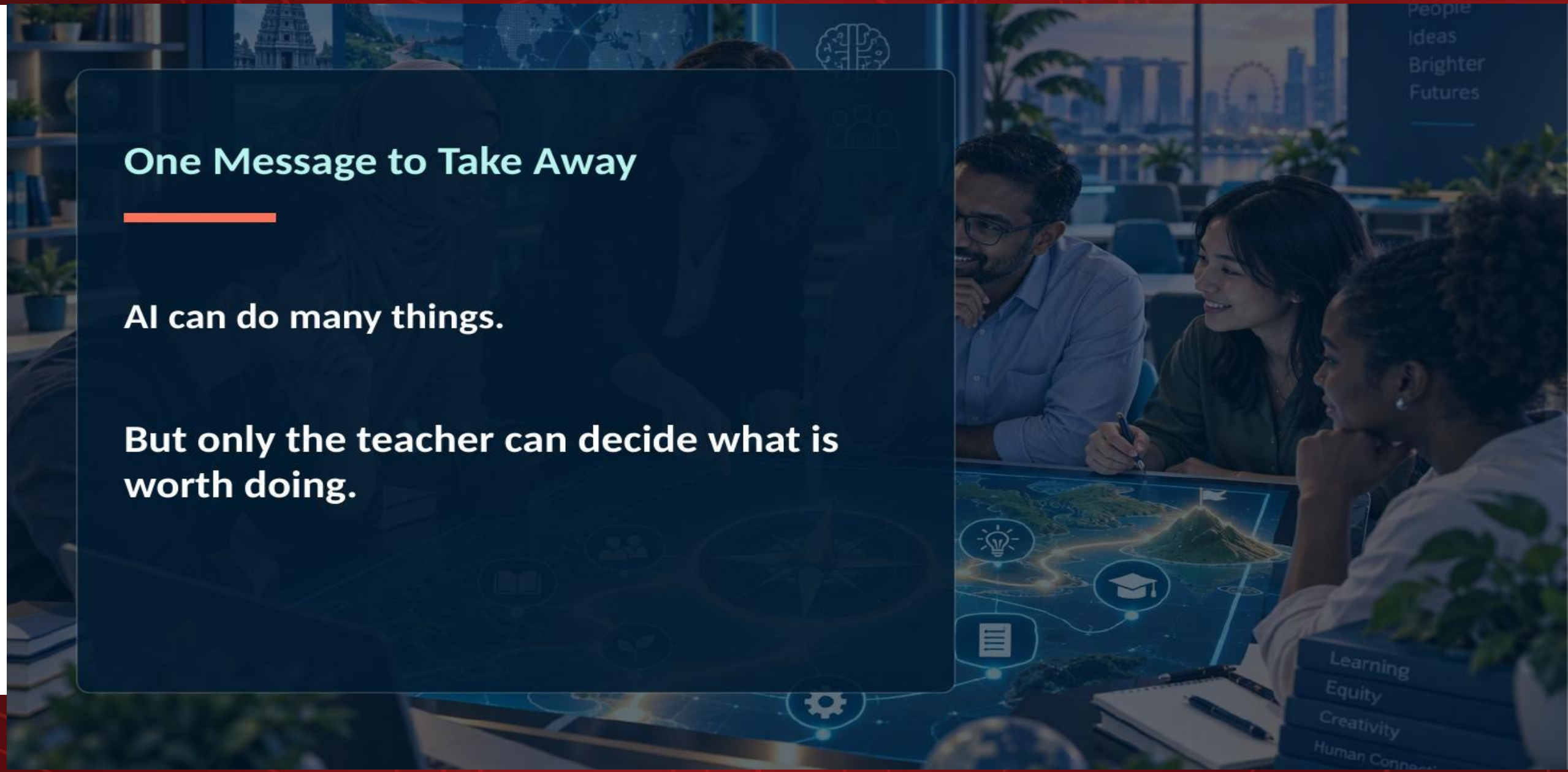


10. Closing — The Navigator Matters Most

AI may read the map, calculate the route and suggest a destination.

But the teacher is still the navigator.

AI can support the journey. The teacher decides where learning should go.



One Message to Take Away

AI can do many things.

But only the teacher can decide what is worth doing.

9. PROFESSIONAL COMPETENCY

The Teacher's Modern Competency

100%

Pedagogical Control Belongs to the Educator

1. Strategic Curator
2. Ethical Guide
3. Learning Architect

10. CLOSING REFLECTION

"AI can expand what is possible, but teachers must determine what is worthwhile."

The Teacher Remains the Navigator.

Danapal Kumar
40th ACT+1 Convention & Pre-Convention Seminar

Image Sources



https://onlinedegrees.sandiego.edu/wp-content/uploads/2019/12/teacher-centered-vs-student-centered-learning.jpeg
Source: onlinedegrees.sandiego.edu



https://media.easy-peasy.ai/4835c2fa-1766-4829-8a22-be1dd1f69cc3/6eb1f246-05f1-4de4-988d-1d01412564ef_medium.webp
Source: easy-peasy.ai



https://as1.ftcdn.net/v2/jpg/06/68/60/98/1000_F_668609855_S3nCES6DrDql36bHJHbJ2TW87cvgNJd2.jpg
Source: www.ukposters.co.uk



https://tamildigitallibrary.in/assets/cover/TVA_BOK_0017890_Cultural_Heritage.jpg
Source: tamildigitallibrary.in



https://www.edresearch.edu.au/sites/default/files/styles/product_hero/public/2024-11/Peer%20mentoring%20report.jpg?itok=Yl9rK0Sx
Source: www.edresearch.edu.au



https://miro.medium.com/1*DttaSW--lrmbBxbeoNpOWw.jpeg
Source: medium.com