

Who Steers Learning — teachers or technology?



PRESENTERS

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40TH ASEAN COUNCIL
OF TEACHERS + KOREA
CONVENTION

NAVIGATING OUR FUTURE

STEERED BY TEACHERS;
ANCHORED IN RELATIONSHIPS;
PROPELLED BY AI



22-25 OCTOBER 2026 · D'MARQUEE, SINGAPORE



In the next 50 mins, **what we will do together**

01

Vote

Who is steering?

02

Name

What counts as
teacher
judgement?

03

Examine

What evidence
shows learning?

04

Redesign

How would this
work in my
context?

05

Commit

What decision will
I keep?

Vote – Who is holding the steering wheel?

Scenario A

The AI recommends the task, gives feedback, decides the next activity and generates the final answer.

Scenario B

The teacher sets the learning goal and success criteria; AI gives bounded feedback; students revise; teacher reviews evidence and decides the next move.

What made you decide?

Quick Check – Identify the role

SCENARIO

A Mother Tongue teacher uses an AI writing assistant to provide students with feedback on their compositions. The AI highlights language errors and summarises common difficulties across the class. The teacher reviews selected compositions, students' responses to the feedback and the class summary to decide what to reteach in the next lesson.

1

OPTION 01

Teacher-in-the-loop

2

OPTION 02

Teacher-over-the-loop



Emerging Evidence on the Use of AI in Learning

01

Teachers matter more, not less

Students trust their teachers more than AI. When quality of feedback by GenAI and teachers are similar, human feedback drives higher motivation to act.

(Burns et al., 2026; HP Inc., 2025)

02

Professional judgement is critical

Pedagogical understanding is key, especially when commercial AI used as-is can lead to implicit pedagogical biases.

(PISA, 2025; Burns et al., 2026; Chen et al., 2025)

03

Teacher AI literacy influences impact

Significantly better learning gains are achieved when teachers are explicitly prepared and trained prior to classroom AI adoption.

(OECD)

04

Literacy builds agency & outcomes

Students perform better when AI use is paired with AI literacy, enabling AI-ready users to engage more meaningfully.

(PISA, 2025; OECD, 2026; Shao et al., 2026)



Shift from Technology-Led Adoption to Pedagogy-First Integration

"AI may assist with navigation, but it should not determine where learning goes."



01

Destination
Learning goals

02

Route
Learning design

03

Dashboard
Evidence of learning

04

Co-pilot
AI

05

Driver
The teacher
as the accountable
professional

Key Applications of Technology (KATs)

01

Support Assessment for Learning

Design assessment and transform data into clear insights that help students advance learning.

assessment

02

Embed Scaffolding

Provide 'just-in-time' support to my students.

layers

03

Provide Differentiation

Analyse student data to tailor instruction for diverse learners.

alternative route

04

Enable Personalisation

Allow students to chart their own learning paths through interactive choices and tailored responses.

personalisation

05

Develop Metacognition

Support students in monitoring, organising, and refining their thought process.

psychology

06

Increase Motivation

Allow students to take ownership and persist in their learning journey.

bold

07

Foster Conceptual Change

Allow students to externalise and evolve their conceptual understanding.

transformation

08

Facilitate Learning Together

Allow students to collectively build on ideas within dynamic learning groups.

group



Two Teacher Roles to Look For

ROLE 01

Teacher-in-the-Loop

Actively shapes AI-mediated interactions during learning.

- Setting learning goals
- Designing AI prompts
- Providing scaffolds
- Defining success criteria
- Managing feedback cycles

ROLE 02

Teacher-over-the-Loop

Retains supervisory oversight across the whole system.

- Evaluating AI appropriateness
- Checking for quality & bias
- Interpreting evidence
- Protecting pedagogical integrity



CASE STUDY 1

AI AS A RESPONSIVE SCAFFOLD FOR FEEDBACK.



Case Study 1 How can AI help pupils improve without taking over the thinking?

CONTEXT

P6 pupils approaching PSLE need efficient writing improvement without becoming dependent on AI-generated rewrites.

STUDENTS 7-STEPS WORKFLOW

01

1. Understand

Unpack the PSLE composition rubric and success criteria.

02

2. Draft

Complete a pen-and-paper draft independently before interacting with any AI tools.

03

3. Reflect

Read through the completed work to isolate a specific target paragraph or micro-skill focus.

04

4. Scaffold

Access 3-tiered graduated support (L1: Notice gaps, L2: Strategic tips, L3: Modeled examples) strictly on an as-needed basis.

05

5. Evaluate

Critically judge the AI-generated suggestions to decide whether to accept or reject them.

06

6. Revise

Implement intentional, thoughtful improvements to the selected sentence or paragraph.

07

7. Articulate

Verbally or in writing explain *why* the new revision is superior to the original (locking in metacognition).

TEACHER NOTICING LENS

Teachers examine student artifacts to analyze feedback uptake: *Independent*, *Adapted*, and *Copied*.



Graduated AI support: The Feedback Pathway

One chatbot, three levels of support. Pupils are not pushed to take more help than needed.

Level 1: Notice (Diagnostic)

Action: The AI highlights a specific writing issue and its impact on the reader, providing **no** direct tips or rewrites.

Example: “读者知道他很紧张，但还不太能看见他的紧张。” (The reader knows he is anxious, but cannot yet visualize his anxiety.)

Level 2: Scaffold (Strategic)

Action: The AI provides a single, targeted pathway, cue, or frame to prompt independent direction.

Example: “你可从动作 / 表情 / 身体反应选一个。” (Choose one: physical action, facial expression, or bodily reaction.)

Level 3: Model (Exemplar & Application)

Action: The AI presents a modeled example, then challenges the pupil to craft their own unique version rather than copying wholesale.

Example: “看例子，不能直接抄；换一个反应写自己的例子。” (Study the example, do not copy it directly; change the reaction and write your own version.)

 **Key Principle:** Do not give more help than the learner needs.



SLS Learning Assistant Interface



Paragraph Improvement Station

D1

I want to improve the paragraph

LEARNING ASSISTANT (BETA)

SALIS will provide responses for this discussion and should only be used for learning. Student must complete the SLS module ([Upper Primary / Secondary & Pre-U](#)) before interacting with SALIS for the first time. Learning Assistant is only available for students Primary 4 and above.

Paste the sentence/short paragraph you selected into the AI.

The AI assistance has three layers, which you can use needed.

Level 1 | Read the hints first, then try it yourself.

Level 2 | Get a little tip when needed (**Can you give me a little tip?**)

Level 3 | Still don't understand? Let's look at an example (**Can you give me an example for reference? I won't copy it verbatim; I'll modify it myself.**)

 After understanding the method, write **your own version**; don't just copy it directly.

[Read Less](#)



[VIEW CLASS SUBMISSIONS](#)



Student Artefacts (Level 1: Notice)

I try it myself first!

01 1. Reflect

Initial self-reflection on focus area



事情经过更清楚 (Important Moment)

02 2. Scaffold 3. Evaluate

Level 1: AI highlights the gap. The learner decides how to revise.

The student selects a sentence to improve and adds actions to express the character's feelings after reading the AI feedback.

5/

SALT

Thank you for posting this! This sentence conveys David's concern, but it might not be entirely clear what his attitude and feelings towards the cat are. Think about it, besides him saying "It's okay," he might have had other reactions, such as facial expressions or body language. What do you think his expression was like at that moment?

You want to:

- A. Try it yourself first
- B. Give me a hint

17 Sep 2026 01:59 PM

"After hearing this, Dawei said it was good that the cat was alright, and told the boy to come to his house to find 'Xiao Hei' in the future." This is the sentence I most want to change.

What evidence suggests that the learner made their own revision rather than copied an AI rewrite?

02

2. Scaffold 3. Evaluate

Interacting with AI guidance and evaluating suggestions



SALT

You did a great job! This revision makes David's reaction much clearer to the reader. Through actions like "crouching down" and "letting out a long sigh," the reader can feel his relaxation and relief, which is more vivid than simply saying "it's good that the cat is okay." Now, do you think readers will better understand David's emotions after this revision? What were the main changes you made?

17 Sep 2026 02:02 PM

I mainly added some gestures to express how Dawei was initially worried about "Xiao Hei" and then relaxed after finding the cat was alright.

17 Sep 2026 02:03 PM



SALT

Excellent! Your revisions make David's emotions much more apparent! By adding actions, the reader can feel his worry and subsequent relaxation, enhancing the story's expressiveness. Now, could you briefly explain why these revisions are important for the reader's understanding of David's emotions?

17 Sep 2026 02:03 PM

Because they can empathize with me, but don't you think my sentence could be revised a little?



SALT

You're absolutely right; it's crucial that the reader can empathize! If you feel the sentence could be improved, we can continue the discussion. Consider whether there are other actions or expressions that could make David's emotions more explicit? This would help the reader understand his feelings more deeply. Would you like to try it

The learner responds to the identified gap, writes their own changes and explains how these help the reader understand the character's feelings.

03

4. Revise 5. Articulate

Applying edits and articulating changes made

原本的句子/段落

修改后的句子/段落

这

[VIEW DETAILS](#)

大伟听了后，表示猫没事就好，也让男生以后去他家找小黑

[VIEW DETAILS](#)

大伟听了后，担忧地蹲下来。发现猫没有受伤后，大伟才长舒了一口气，终于露出了笑容，说：“没关系，只要小黑安全就好，这次我就原谅你，也欢迎你到前面的那栋组屋的三楼来找我，和小黑”

[VIEW DETAILS](#)

这样修改后，读者更能体会到大伟的心情

With this revision, readers can better understand Dawei's feelings.

[VIEW DETAILS](#)

Student Artefacts (Level 2: Scaffold)

I try it myself first!

01 1. Reflect

Initial self-reflection on focus area



描写更生动 (Tell with FEAST)

02

2. Scaffold 3. Evaluate

Level 2: AI offers a hint. The learner develops the sentence.

The student requests more support. AI suggests a direction for describing the scene, while the student decides what to add.



SALT

Your sentences are very good! I can feel the teacher's gentle comfort and concern for Dawei. However, the reader may not yet be able to "see" the teacher and Dawei's emotional reactions at that moment. You could consider adding some specific actions, expressions, or even dialogue to make this moment more vivid.

Would you like to:
A. Try it yourself first?
B. Give me a hint?

17 Sep 2026 02:16 PM



SALT

Let's narrow it down and focus on one direction. You can choose:
A. Express the teacher's facial expression, such as smiling or waving.
B. Describe Dawei's actions, such as wiping away tears or bowing his head.
C. Write down what the teacher said to Dawei.

Choose a direction and then try to write a short sentence.

17 Sep 2026 02:16 PM



SALT

Okay, here's a little tip. You can consider describing the teacher's expression, such as: the teacher is smiling or speaking kindly, which will better convey their concern for Dawei. Now try writing a sentence that includes this detail!

17 Sep 2026 02:18 PM

B
17 Sep 2026 02:16 PM

B
17 Sep 2026 02:18 PM

How has the learner used the AI hint while keeping ownership of the revision?

03

4. Revise 5. Articulate

Applying edits and articulating changes made

待我回过神来，老师已经消气了。
他安慰了我和大伟，~~等~~大伟~~停~~
止哭泣。~~老师~~^{看到}大伟~~停后~~^{抹开眼泪}，老师^{语重心长}
地说：“这一次，我原谅你们。~~但是~~
~~下一次就不要重蹈覆辙了~~。我知道

原本的句子/段落	修改后的句子/段落	这样修改后，读者更能.....
	VIEW DETAILS	
待我回过神来，老师已经消气了。他安慰了我和大伟，等大伟停止哭泣。大伟停后，老师温柔地说..... VIEW DETAILS	待我回过神来，老师已经消气了。他安慰了我和大伟，等大伟停止哭泣。看到大伟抹开眼泪，老师语重心长地说：..... VIEW DETAILS	这样修改后，读者更能想象出人物的动作。 VIEW DETAILS

The learner uses the idea, then writes their own details. These details develop the AI's suggestion rather than copy a complete model sentence.

With this modification, readers can better imagine the character's actions.

[VIEW DETAILS](#)

Student Artefacts (Level 3: Model)

I try it myself first!

01 1. Reflect

Initial self-reflection on focus area



事情经过更清楚 (Important Moment)

02

2. Scaffold 3. Evaluate

Level 3: The learner requests an example to help them move forward.



SALT

Hello! You want to describe the events in more detail, which is a great goal! To make it clearer to the reader how things happened, you could consider adding some connecting words or describing some important details. Would you like to try it out first, or would you like me to give you a hint?

17 Sep 2026 02:00 PM

...



SALT

You can add more details using the following methods:

1. ****Describe the action:**** For example, describe Xiaowei's specific actions when he picked up the eraser; what were his gestures like?
2. ****Add environmental details:**** Describe the atmosphere in the classroom, such as the reactions of other students or the layout of the classroom.

I want to write more about what happened.

17 Sep 2026 02:00 PM



Can you give me a little hint?

17 Sep 2026 02:00 PM



I'd like to add some more details. How can I do that?

17 Sep 2026 02:05 PM



Which parts of the revision draw on the AI model, and which show the learner's own choices?

02

2. Scaffold 3. Evaluate

After receiving hints, the student asks for a model showing how to describe the character's feelings.

1. ****Describe your feelings at the time:**** Describe whether you felt nervous or excited before throwing the eraser.
2. ****Inner Dialogue:**** This can reveal what you're thinking, such as, "I hope he can discover this answer!"
3. ****Emotional Changes:**** After seeing David's reaction, describe your feelings of relief or happiness.
These details can help readers better understand your feelings at the time! Would you like to give it a try?

17 Sep 2026 02:11 PM

Can you give me an example?

17 Sep 2026 02:11 PM



SALT

Of course! Let's look at an example: You could write, "When I saw David pick up the eraser, I felt a little nervous, thinking he would find my answer. My heart relaxed, and a smile involuntarily spread across my face. This description allows the reader to more clearly feel my emotions. I think this example is helpful? Try adding such details to your own story."

17 Sep 2026 02:11 PM

The learner draws on the model and adds details to their own scene. The revision develops the emotional sequence in the AI example while adding classroom details and the character's own reactions.

03

4. Revise 5. Articulate

Applying edits and articulating changes made

我鬼鬼祟祟地用铅笔把几道题的答案写在了橡皮擦上，然后看准时机，把橡皮擦抛到了他的桌上。大伟发现一个橡皮擦从左边传来，便好奇地拿起来看，却发现写在背面上的答案。他的眼神亮了亮，随后朝我投来感激的目光。我们四目相对，不约而同地笑了笑。

[VIEW DETAILS](#)

我鬼鬼祟祟地用铅笔把几道题的答案写在了橡皮擦上，然后看准时机，/悄悄地/把橡皮擦抛到了他的桌上。/看到橡皮擦安全落在了桌上，我才松了一口气。/大伟发现一个橡皮擦从左边传来，便好奇地拿起来看，却发现写在背面上的答案。他的眼神亮了亮，随后朝我投来感激的目光。我们四目相对，不约而同地笑了笑。/与此同时，我们却都没意识到有人目睹了一切。/

这样修改后，读者能更加清楚周围的情况和我的心情。

[VIEW DETAILS](#)

With this revision, readers will have a clearer understanding of the surrounding situation and my feelings.

Scaffold without Taking Over

CORE IDEA

Use the least support needed; preserve student voice.

LEARNING FLOW



Students exercise learner agency to choose the support they need.

Table Task: Mark the Steering Points

01

POINT 01

What did the teacher decide before AI entered?

02

POINT 02

What did AI contribute?

03

POINT 03

What did the learner still have to think/do?

04

POINT 04

Where must the teacher exercise judgement?

Instructions: Work in table groups to identify and note down key steering points for each area.

Consolidation

01

POINT 01 • TEACHER DECISIONS

What did the teacher decide before AI entered?

Learning outcomes, AI roles, task design, dos & don'ts

02

POINT 02 • AI ROLE

What did AI contribute?

Different levels of support/scaffolding based strictly on teacher-defined success criteria; timely, dynamic, and adaptive feedback based on learners' needs

03

POINT 03 • LEARNER AGENCY

What did the learner still have to think/do?

Understanding AI feedback, making decisions, identifying areas for improvement, and adapting feedback into own revisions

04

POINT 04 • TEACHER OVERSIGHT

Where must the teacher exercise judgement?

Check whether AI feedback is accurate and suitable for the learner; review students' revisions to see whether they understand; decide when to guide, clarify or reduce support.

KEY IDEA: *AI serves as a feedback scaffold, not an automated teacher replacement.*



Critical Teacher Oversight

PRIMARY OVERSIGHT ROLE

Crucially, the teacher continually checks whether AI adaptations preserve the required cognitive demand.

CORE GUIDING PRINCIPLE

"AI modifies the scaffold, but the teacher safeguards the rigor."



CASE STUDY 2

AI SUPPORTS INDEPENDENT PRACTICE AND TEACHER NOTICING



任务 1 / 4 观察与发现

四种树，各有绝招

点选树木，观察会动的景象。遇到橙色词语，轻点查看拼音、词义和例句。每棵树还藏着一张“冷知识卡”！



雨树

已探索



青龙木

已探索



香灰莉木

已探索



炮弹树

已探索



青龙木

黄花 花只开一天 扁种子

青龙木 花是黄色的，散发出淡淡的香味。花只开一天，掉落后留下一地黄花。种子扁扁的，像荷包蛋。

形状联想：看见像“荷包蛋”一样扁的种子，你就可能想到青龙木。

点橙色词语，查看拼音、意思和例句。

Case Study 2: Looking Beyond the Score

AI Supports Independent Practice and Teacher Noticing

Learner A

Duration: 9 mins

Score: 210

AI Summary

Progress

芮同 completed all four sections, exploring all four trees, finishing the reading challenge, vocabulary practice, final assessment, and viewing the task report. The report recorded completion with the tour-guide name “小树.”

Response pattern

芮同 worked quickly and used clues frequently during the second pass, especially in vocabulary and the final assessment. They revisited the activity after the first report and completed another full run before returning to review options.

Replay highlight

Review 08:10-08:13, when 芮同 clicked “🔄 再玩一次” 12 times within 3 seconds; this repeated-click burst stands out from the otherwise purposeful navigation.

Learner B

Duration: 2 mins

Score: 215

AI Summary

Progress

艺珂 explored all four trees, completed 阅读挑战 and 词语运用, and reached the end of 最终测验. The session ended after viewing the task report.

Response pattern

Work was rapid overall, with most items answered in one click. 艺珂 used retries or hints on 阅读挑战 question 7, 词语运用 question 7, and several final-test questions, including revisions on questions 1, 2, and 5.

Replay highlight

Review 01:23-01:27, when the answer for final-test question 2 was revised three times before reaching the recorded successful choice; this stands out from the otherwise mostly single-attempt responses.



ACCESS

Open Link

Do you agree that similar scores can come from different learning processes?



Teacher design the support

trunk

POINT 01 • TIMING & CONTROL

The teacher decides when support appears and what it helps learners do.

branch

POINT 02 • PEDAGOGICAL GUIDANCE

Learning goals guide the questions, hints, feedback and retry rules.



AI helps focus the teacher's review

AI suggests patterns. The teacher checks them against the learner's actual interactions.

EVIDENCE 01 • ACTUAL INTERACTIONS

What the learner did

The screenshot shows the edcafe interface. On the left is a sidebar with navigation options like 'My Library', 'Businesses', 'Account', 'Settings', 'Community', 'Discover', 'Shared Files', 'Educators', and 'My Page'. The main area displays 'Session Details' for a session titled 'Library' with a duration of 2 mins and a score of 100. Below this is a table of items with columns for item number, name, and last action. The table lists 7 items, with the last item being 'J'.

#	Name	Last Action
1	yku	10 Oct 2026, 09
2	Teacher	10 Oct 2026, 09
3	教师	9 Oct 2026, 35
4	教师	9 Oct 2026, 35
5	教师	9 Oct 2026, 35
6	教师	9 Oct 2026, 35
7	J	9 Oct 2026, 10

EVIDENCE 02 • AI ANALYSIS

What AI suggested

Response pattern

成田 worked rapidly and used clues or revised answers on several items, especially in 阅读挑战 and the final assessment. The 词语运用 section included a dictionary lookup and several quick revisions.

Replay highlight

Review 01:31-01:38, when 成田 listened to the question, selected an incorrect sentence, then revised to "B. 公园有一棵高大的雨树。"; this was notably slower than nearby items.





Vote: How would you teach next, and why?

Use the evidence from this learner's session to decide the next step:

fact
_ch
eck

OPTION 01 • CHECK & STRENGTHEN

Check or strengthen understanding

- Ask for an explanation.
- Reteach the difficulty or change the scaffold.

tre

ndi

ng_

OPTION 02 • EXTEND OR ADJUST

Extend or reduce support

- Offer a new challenge or let the learner try independently.



Amplify, Extend, and Transform Learning

Under Pedagogical Control

ca

mp

aig

01 • AMPLIFY

Amplify

AI functions can amplify feedback, increasing the speed, detail, and responsiveness of support provided to learners.

op

en

_in

02 • EXTEND

Extend

AI functions can extend interaction beyond traditional limits, broadening opportunities for continuous practice and exploration.

aut

o_

aw

03 • TRANSFORM

Transform

AI functions can transform practice. Transformation depends entirely on the task design and the quality of learner thinking it enables.

ex

plo

re

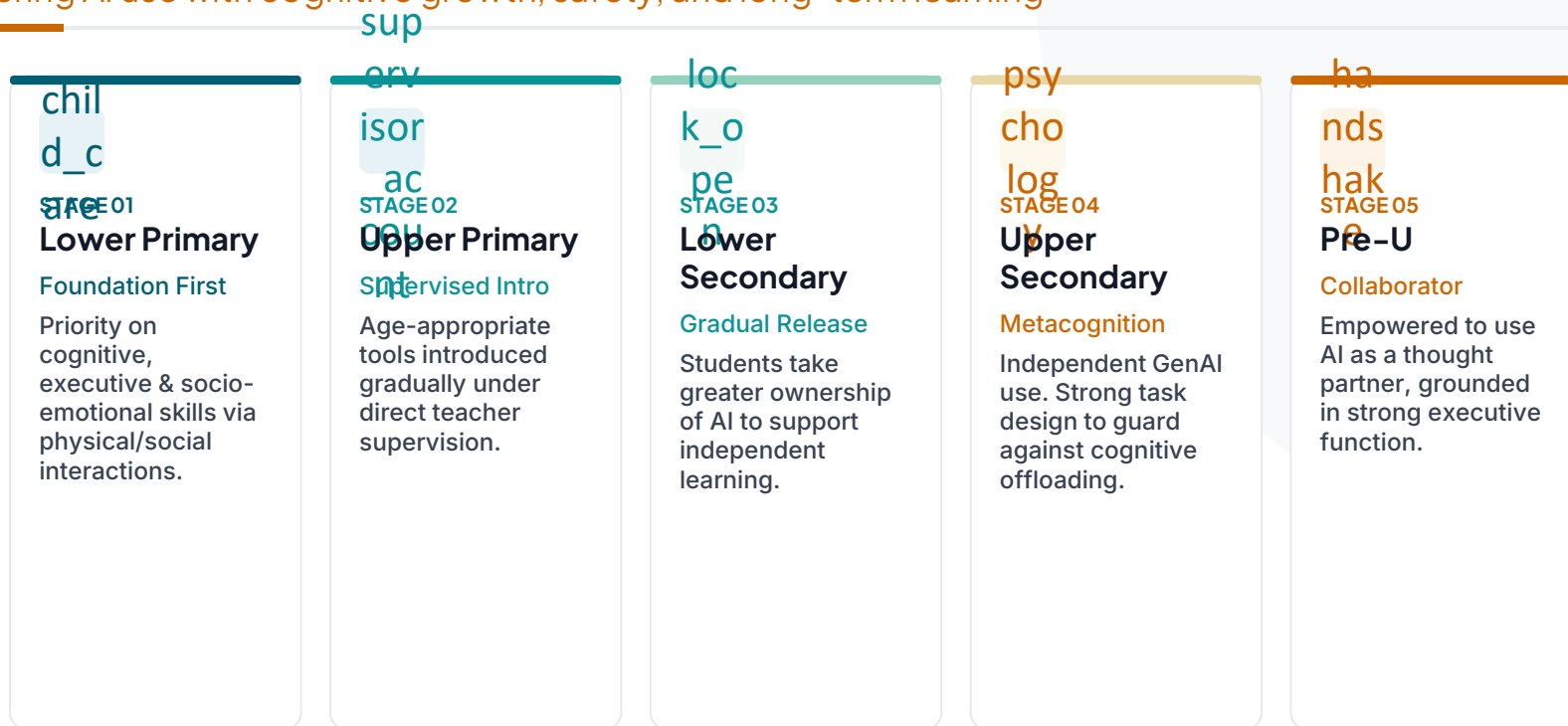
AI supports noticing.

Teachers steer the response.



Age Guidance for AI use

Steering AI use with cognitive growth, safety, and long-term learning



Design Challenge

“Take Back the Steering Wheel”

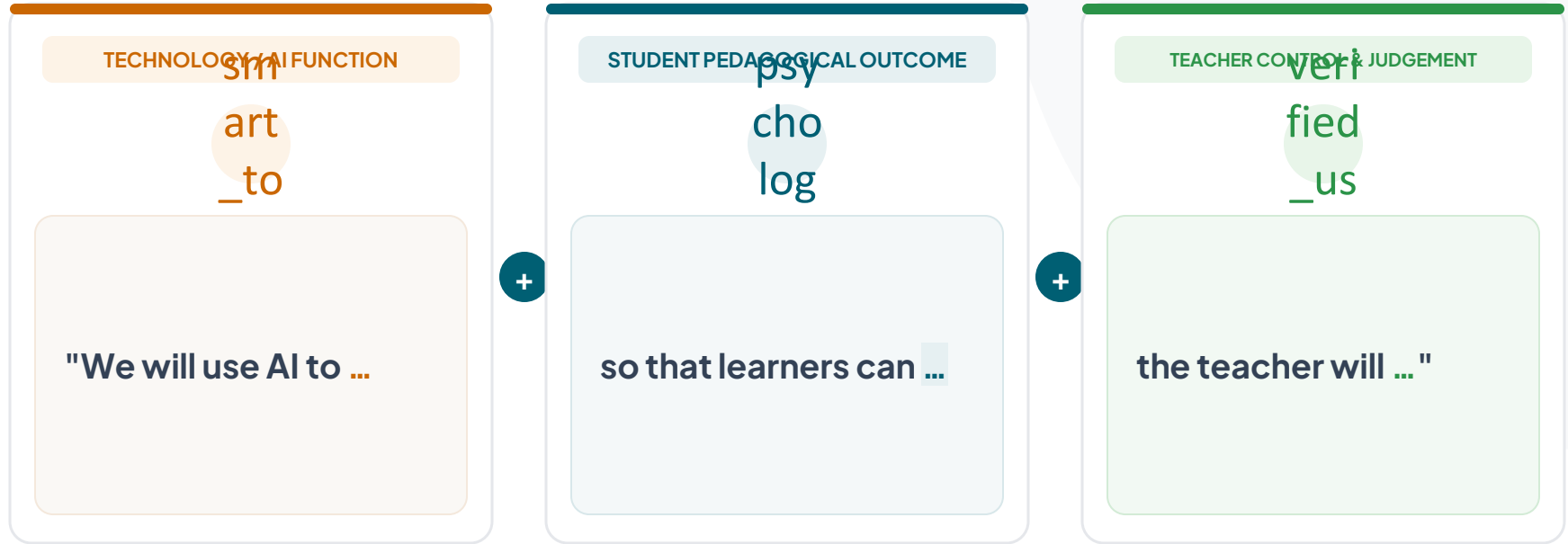
PAIR / TRIAD ACTIVITY

In pairs / triads:

Choose one familiar teaching task from your own context.



Draft a one-sentence redesign to define roles and maintain pedagogical control:



Apply the STEER Protocol to Determine AI's Role

S

Specify the learning: What must students learn or do?

T

Target AI's role: What specific pedagogical problem is AI helping solve?

E

Evidence learning: What will show that students, not AI, have done the thinking?

E

Exercise judgement: Where must the teacher check, interpret, or intervene?

R

Restrict or remove AI: What boundary is needed, and when is no AI the better choice?



Retain Pedagogical Authorship Through Concentric Oversight

ACTIVE INTERACTION

In-The-Loop Responsibilities

Set criteria

Shape prompts and scaffolds

Interpret learner responses

Intervene during learning

GOVERNANCE & OVERSIGHT

Over-The-Loop Responsibilities

Decide appropriateness

Validate quality

Monitor unintended effects

Make consequential decisions

Decide when to stop or not use AI



EXIT — “ONE DECISION I WILL KEEP”

REFLECTION PROMPT

LIVE WORD CLOUD

“Before I use AI for learning, I will first ask _ _ _ _ _ .”

1

REFLECT

Consider your core principle

2

DECIDE

Complete the sentence prompt

3

SUBMIT

Send response to Word Cloud

40TH ACT + 1 CONVENTION

Pedagogy Sets the Direction; AI Expands the Possibilities

Technology can widen the road. The teacher still decides the destination, the route, and when to take the wheel.

Teacher judgement keeps learning on course.



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