

Professional Development Programme

Developing Students' Self-directed Learning Capabilities: Exploring the Use of Artificial Intelligence in the English Classroom

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Event 1: Key Components

1. Major principles and considerations for integrating the use of AI in supporting students' development of self-directed language learning skills within and beyond the classroom
2. Pedagogical approaches to AI in education in facilitating students' self-directed language learning and the implications on teachers' role in adopting the use of AI for effective learning, teaching and assessment in the secondary English classroom
3. Demonstration on effective strategies for integrating the use of a variety of applications/platforms/e-learning tools that employ the use of AI technologies to promote self-directed language learning

Event 1: Seminar

- A. Warm-up
- B. Revisiting Self-directed Learning
- C. AI is here for Self-directed Learning
- D. Theory, research, implications
- E. Applications
- F. Wrap-up, Q&A, and evaluation

A. Let's partner with AI

Instructions:

1. **Edit or generate an image** to introduce yourself to others using natural language prompts [*A tip:* Use detailed descriptions for more accurate results. Have fun 😊]
2. Share with your group **WHY** and **HOW** you created the image.
3. Also discuss what you learnt.

Pause and think: AI

Could you identify some pedagogical goals in the AI task?

Does AI...

- Promote creativity?
- Promote multimodality?
- Enhance motivation?
- Personalize learning?
- Cater for learner diversity?
- Promote formative assessment?
- Foster self-directed learning?

What have we learnt

Practical know-how:

- Some AI image-editing tools for teaching and administrative work
- Note variations of goal-setting (i.e. **WHAT** and **HOW**, via language prompts) that impact task outcomes
- **AI-generated outcomes for pedagogy**, e.g. follow-up tasks to build skills

Questions to ponder:

- *What is AI? Its power, limits, and risks?*
- *User perspective: Do you like partnering with AI tools as a learner/teacher? Any opportunity for enhanced English language learning and teaching in particular?*
- **Integrating AI with Self-directed Learning**: *How to foster students' SDL capabilities using AI in the English classroom and beyond?*

B. Self-directed Learning

As a process or method of learning: “a process in which individuals take the initiative, with or without the help of others, in diagnosing their learning needs, formulating learning goals, identifying human and material resources for learning, choosing and implementing appropriate learning strategies and evaluating learning outcomes” (Knowles, 1975, p.18)

Alternatively, as a personality trait: “a disposition to engage in learning activities where the individual takes personal responsibility for developing and carrying out learning endeavors in an autonomous manner without being prompted or guided by other people, such as teachers, parents or peers” (Brockett, 1983, as cited in Lounsbury & Gibson, 2006, p.16)

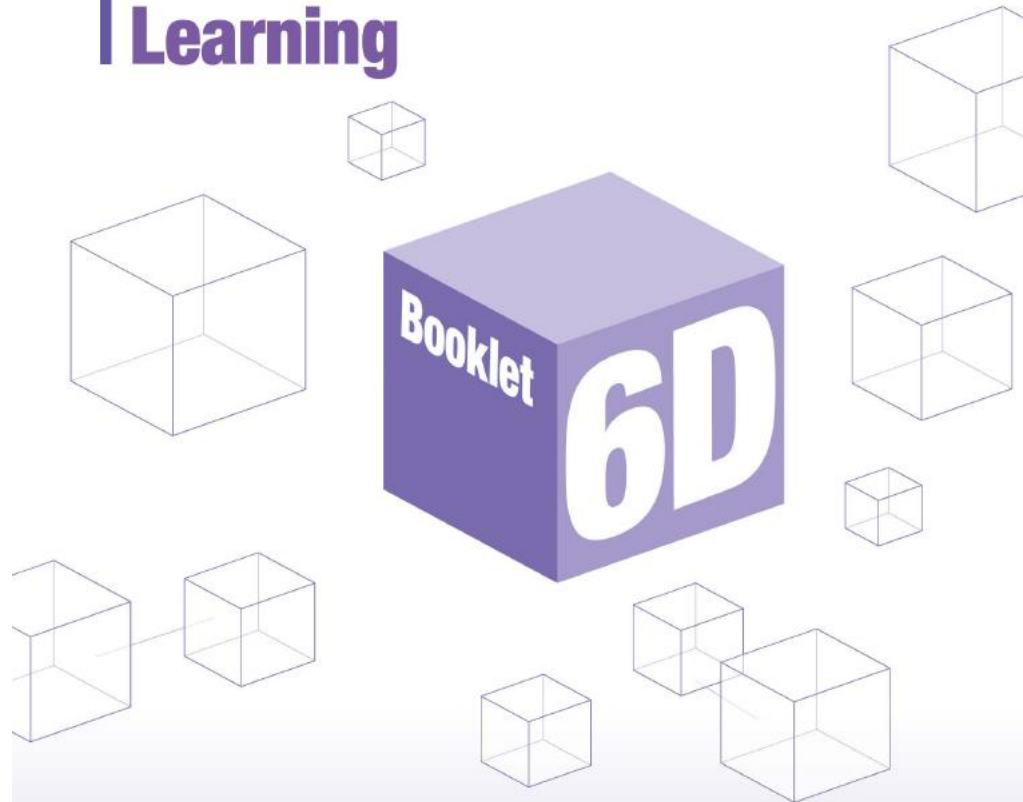
B. Self-directed Learning

- SDL “refers to both the **external characteristics of an instructional process** and the **internal characteristics of a learner**, where the individual assumes primary responsibility for a learning experience” (Brockett & Hiemstra, 1991, p. 24).
 - By contrast, *Self-Regulated Learning* tends to focus on learners’ mental state and process related to goal attainment (see Linkous, 2020; also literature on Self-Regulation Theory).
- **SDL is not new as a concept and as practice; it overlaps with notions of active learning, independent learning, self-learning, and learner autonomy.

Curriculum resources for SDL

- [Secondary Education Curriculum Guide 2017 \(Booklet 6D\)](#)
- [English Language Education Key Learning Area Curriculum Guide \(Primary 1 - Secondary 6\) 2017](#)
- [Supplement to the English Language Education Key Learning Area Curriculum Guide \(Secondary 1-3\) 2018](#)
- [HKEAA English Language Curriculum and Assessment Guide \(Secondary 4-6\) 2021](#)
- [Information Literacy for Hong Kong Students 2024](#)
- [A Guide on Self-directed Learning for Secondary Students 2024](#) [Key document]

Information Technology for Interactive Learning: Towards Self-directed Learning



https://www.edb.gov.hk/attachment/en/curriculum-development/major-level-of-edu/secondary/curriculum-guides-documents/SECG_booklet_6D_en.pdf

English Language Education

**Key Learning Area Curriculum Guide
(Primary 1 – Secondary 6)**



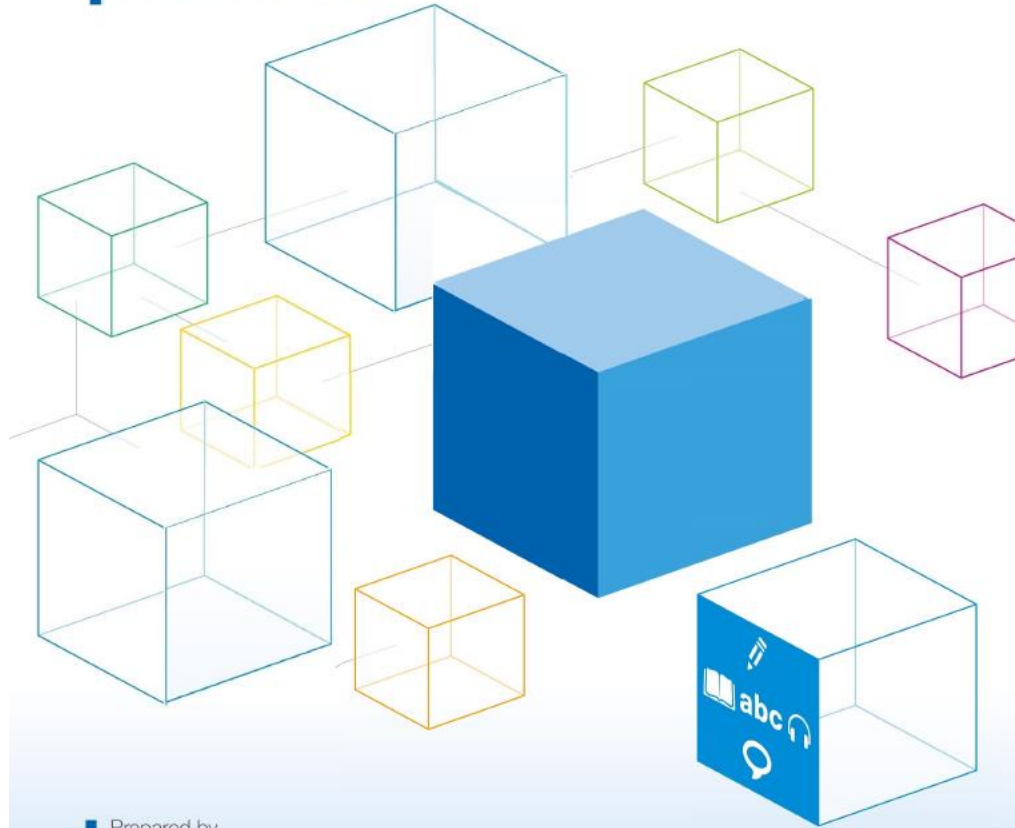
Prepared by
The Curriculum Development Council

Recommended for use in schools by
**The Education Bureau
HKSARG
2017**

https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/ELE%20KLACG_2017.pdf

Supplement to the English Language Education Key Learning Area Curriculum Guide

Secondary 1-3



Prepared by
The Curriculum Development Council

Recommended for use in schools by
The Education Bureau
HKSARG
2018

<https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/ELE%20JS%20Supplement%202018.pdf>

English Language Education Key Learning Area

English Language Curriculum and Assessment Guide (Secondary 4 - 6)

Jointly prepared by the Curriculum Development Council and
the Hong Kong Examinations and Assessment Authority

Published for use in schools by the Education Bureau
HKSARG
2021
Effective from Secondary 4 in the 2021/22 school year

[https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/English%20Language%20Curriculum%20and%20Assessment%20Guide%20\(Secondary%204%20-%206\)%20\(2021\).pdf](https://www.edb.gov.hk/attachment/en/curriculum-development/kla/eng-edu/Curriculum%20Document/English%20Language%20Curriculum%20and%20Assessment%20Guide%20(Secondary%204%20-%206)%20(2021).pdf)

“Information Literacy for Hong Kong Students” Learning Framework (2024)

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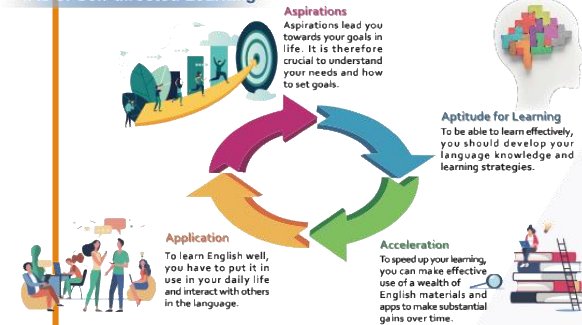
[https://www.edb.gov.hk/attachment/tc/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/Information-Literacy/IL_learningFramework/InformationLiteracyforHongKongStudentsLearningFramework\(2024\)_20250320_EN_G.pdf](https://www.edb.gov.hk/attachment/tc/edu-system/primary-secondary/applicable-to-primary-secondary/it-in-edu/Information-Literacy/IL_learningFramework/InformationLiteracyforHongKongStudentsLearningFramework(2024)_20250320_EN_G.pdf)

A Guide on Self-directed Learning for Secondary Students (EDB, 2024)

A Guide on Self-directed Learning for Secondary Students

English learning is no longer confined to the classroom. With more flexible learning time and resources, you can increase your exposure to English and improve your language skills anytime and anywhere through self-directed learning. Self-directed learning is a process in which you take the initiative, with or without the help of others, to identify your learning needs, set learning goals and plans, choose suitable resources and evaluate your learning progress. Good self-learning skills and habits can help you bloom into responsible, lifelong learners.

4As of Self-directed Learning



Understanding Needs and Setting Goals

Students may have different learning needs, ranging from learning English for fun to enhancing English proficiency. Based on your learning needs, you may set **SMART** goals on English learning with reference to the guiding questions below:

Goals should be:	Guiding questions
Specific	What will I achieve? What actions will I take?
Measurable	How can I measure how much I have achieved?
Achievable	Is the goal doable? What skills and resources do I need?
Relevant	Is this relevant to my needs and learning styles?
Time-based	How much time should I spend each day/week working on my goal?

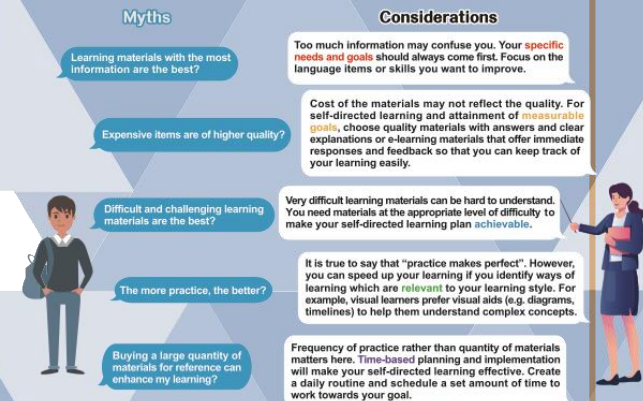
A Closer Look at English Self-learning Resources

Developing language knowledge from different English resources and using appropriate learning strategies is essential to language learning. The following section discusses how you can select appropriate English resources, make the most of them and learn effectively and efficiently.

English self-learning resources	Typical features	Remarks	How the resources can be used	Tips on English self-learning
	- Items usually grouped under different themes/categories - Sample sentences provided - Chinese translation and exercises sometimes provided for practices and easy understanding	- May not support the development of vocabulary learning skills and strategies - May fail to show the multiple meanings of certain vocabulary items and how they are used - May encourage rote learning	- Select vocabulary items to learn according to themes/functions/frequency of use. - Avoid words which are obsolete and too technical (e.g. beef-witted, masculine rhyme). - Focus on learning a manageable number of words each time.	- Pay attention to the meaning(s), pronunciation and usage instead of just memorising the spelling. - Look up the words in a dictionary for further information (e.g. parts of speech, word formation, word family, collocation, synonyms and antonyms). - Apply the newly learnt items in schoolwork and daily life. - Use graphic organisers/apps to facilitate memory and understanding of the items.
	- Explanatory notes provided on forms and functions of grammar items - Exercises with answers included for practice and consolidation	- May focus mainly on mechanical drilling of forms with grammar items not presented in context - May lack explanation of answers and opportunities for application	- Study the notes carefully to understand the functions served by the grammar items. - Think of contexts for suitable use of the items to create and add your own examples. - Find patterns of mistakes after checking answers and consult other reference materials or teachers.	- Learn the usage and functions in addition to the form. Make connections with grammar items learnt before (e.g. the past tense vs the present perfect tense). Highlight the target items when you encounter them in reading texts, and think about their functions in the texts. - Apply the grammar items purposefully in new contexts (e.g. in writing and speaking tasks).
	- Topic-related vocabulary and expressions included - Explanatory notes, examples on text structure and language use and Chinese translation of the target vocabulary/expressions sometimes provided	- May limit creativity - May encourage text memorisation or rote learning of "advanced" vocabulary/stock phrases/sentence patterns - May encourage over-reliance on Chinese translation in vocabulary learning	- Learn the format, structure and organisation of the text-types. - Highlight useful vocabulary items, expressions and sentence patterns. - Try to identify the tone and style and relate it to the task requirements (e.g. writing purpose, audience).	- Learn the features of the text-types, including the structure, register, tone and style. - Learn how to build coherence within a paragraph and across the text. - Apply your knowledge of text structure and language features to other tasks with similar requirements.
	- A wide selection of topics to choose from - More interesting and engaging - Authentic and colloquial use of English featured	- May be designed for entertainment rather than English learning and contain improper content and language - May not have any language focus for purposeful and structured learning - May encourage passive learning	- Use judiciously to enhance listening and viewing skills. - Learn some colloquial expressions in daily life. - Develop awareness of how English is used in different cultures.	- Pay attention to how English is spoken naturally (e.g. intonation, speed, use of pauses). - Note the use of language in natural speech and different contexts (e.g. contractions, idiomatic expressions). - Understand and appreciate different cultures, facilitating mutual and fair appreciation of cultures of different countries, building proper values and attitudes and enhancing our cultural confidence. - Develop awareness of how English is spoken or used differently around the world (e.g. accents, pronunciation, word choice).
	- Interactive and fun - Progress of learning often recorded - Adaptive and interactive features (e.g. read-speak, chat box with tutors, items generated matched to the level of students and answer-checking functions) embedded - Subscriptions often required	- Dependent on access to technology (e.g. devices, Internet connection, IT knowledge) - Other online activities (e.g. gaming, chatting, browsing other websites) can be distracting - May require fees for additional features and content	- Study the terms and costs of the subscription plans carefully. - Utilise the interactive features offered by the platform and develop a habit of regular practice. - Review progress with records/data provided by the platform.	- Research to understand the features and functions of different platforms and select those that match your learning needs. - Break everything down into small chunks and create notes and flashcards for revision using apps. - Choose platforms that facilitate interaction and exchange with other learners and online tutors if necessary.
	- May focus on exam skills and format - Explanatory notes, question analysis and answer key often provided	- Focus on assessment rather than development of skills - May be mechanical	- Use the materials to familiarise yourself with the exam format and question types. - Use the materials for structured practice to review and evaluate performance, and improve time management.	- Keep clear records of the results, identify areas of weaknesses from mistakes and devise follow-up plans. - Use the data for regular review of learning performance to inform next step of learning and seek timely advice from teachers.

What Should You Consider When Choosing English Self-learning Resources?

You may be puzzled at the variety of English resources or materials. Here are some tips to help you make **SMART** choices.



Some quality English learning materials are available for free. You can access them via the following web pages:



Parent Corner: How to GEAR your children up for success in English Learning?

Bear in mind the following tips:

- Guide** your children to understand their needs and set learning goals and plans.
- Encourage** careful selection of self-learning materials according to their needs.
- Arouse** your children's curiosity about how English is used in everyday life, which helps them develop greater language sensitivity.
- Reinforce** positive English-learning strategies and habits (e.g. reading books and listening to English news regularly).

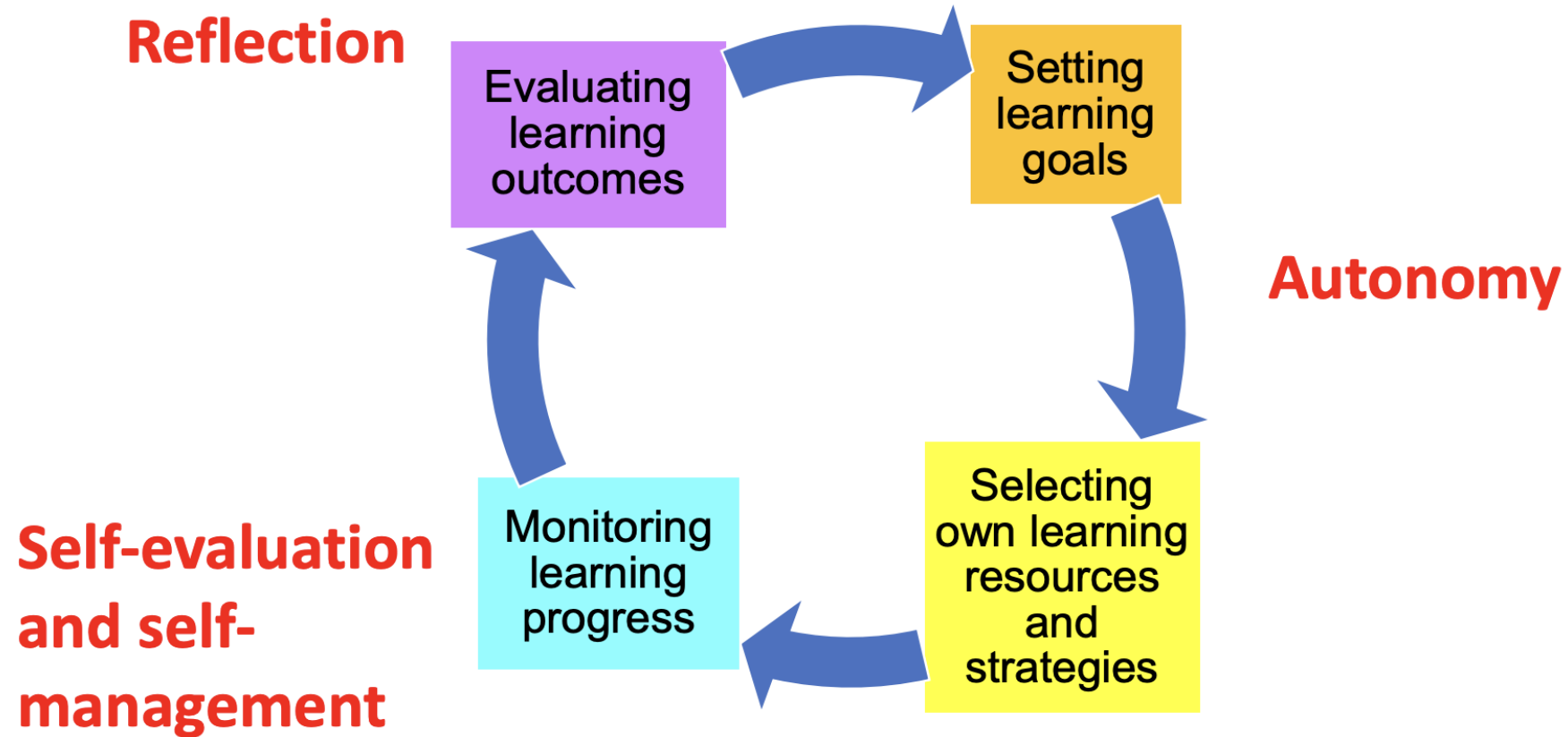


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Education Bureau
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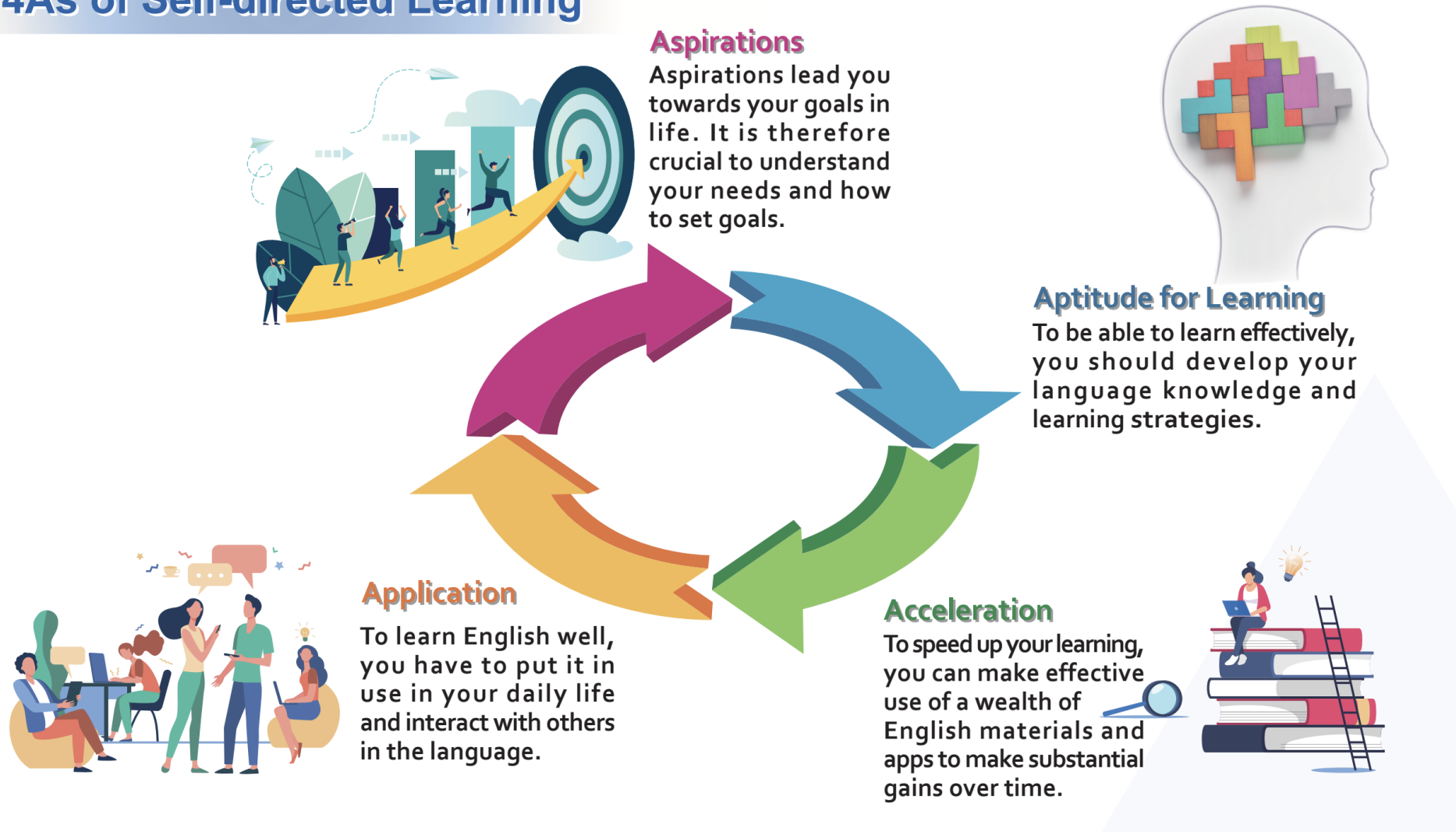
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4-stage Model of Self-directed Learning



4As of Self-directed Learning

4As of Self-directed Learning



SMART Framework

Understanding Needs and Setting Goals



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Measuring Self-directed Learning

- All learners have different levels of SDL (Brockett & Hiemstra, 1991)
 - Several scales to measure SDL, notably:
 - Self-Directed Learning Readiness Scale (SDLRS) (Guglielmino, 1977, 1997)
 - Oddi Continuing Learning Inventory (OCLI) (Oddi, 1986)
 - Self-Directed Learning Scale (SLS) (Mok et al. 2004, 2006)
 - Self-Directed Learning Scale (SDLS) (Zhoc & Chen, 2016) [next slide]

Self-directed Learning Scales (SDLS; Zhoc & Chen, 2016)

1. I regularly learn things on my own outside of class.
2. I am very good at finding out answers on my own for things that the teacher does not explain in class.
3. If there is something I don't understand in a class, I always find a way to learn it on my own.
4. I am good at finding the right resources to help me do well in school.
5. I view self-directed learning based on my own initiative as very important for success in school and in my future career.
6. I set my own goals for what I will learn.
7. I like to be in charge of what I learn and when I learn it.
8. If there is something I need to learn, I find a way to do so right away.
9. I am better at learning things on my own than most students.
10. I am very motivated to learn on my own without having to rely on other people.

Evidence: SDLS correlates with growth

See Zhoc and Chen (2016) for Hong Kong context, briefly:

- Positive correlations between SDL and secondary students' academic achievements (HKALE, HKDSE)
- Positive correlations between SDL and secondary students' self-reported social-, cognitive- and self-growth outcomes

Emerging opportunity: AI to nurture SDL

Disruptive AI

- AI meshes boundaries between formal classroom-based and informal self-directed learning
- AI affords more opportunities of personalised learning and feedback via virtual agents (e.g. chatbots)

Reinventing SDL with AI

- Untapped potential
- SDL fosters creative learning pathways catering to individual characteristics and aspirations
- SDL thrives in a fluid learning environment

C. AI is here for Self-directed Learning

To integrate AI or not — Are you ready?

C. AI is here for Self-directed Learning

Opportunities

- Personalised feedback
- Empowerment & ownership
- Efficiency
- Support for diverse learners

Challenges

- Over-reliance on AI
- Ethical use and digital literacy
- Teacher guidance needed
- Equity and access

Recommendations

- Develop AI literacy
- Balance with traditional methods
- Stay updated
- Monitor and evaluate
- Encourage collaboration

C. AI is here for Self-directed Learning

- AI tools are transforming English language learning and teaching by enabling personalised, efficient self-directed learning.
- However, successful integration requires ongoing support, technical training, ethical guidance and a collaborative approach among educators.
- Addressing challenges and sharing best practices will be key to maximising the benefits of AI for both teachers and students.

**Not *what* tools, but *how* to use them to facilitate
self-directed language learning**

C. AI is here for Self-directed Learning

How does AI support your students in taking ownership of their language learning?

- In what ways have you seen students use AI to set their own learning goals, monitor progress, or seek feedback independently?

What opportunities does AI create for fostering self-directed language learning in your classroom?

- Can you share examples where AI has helped students personalise their language learning, explore new language skills, or engage more deeply with English?

How do you guide students to use AI tools responsibly and ethically in their self-directed language learning?

- What strategies do you use to help students balance AI support with critical thinking, creativity, and authentic learning?

C. AI is here for Self-directed Learning

What skills do you think students need to become effective self-directed language learners with AI?

- How can you help students develop these skills (e.g., prompt engineering, evaluating AI-generated content, or reflecting on their own learning)?

How can you, as an educator, model and promote self-directed language learning with AI?

- What professional development or collaboration would help you better support students' independent language learning using AI?

Looking ahead, how do you envision the ideal role of AI in supporting self-directed language learning?

- What would a balanced approach look like, and how can you ensure students are empowered rather than dependent?

D. Theory, research, and implications

Knowles's (1975) theory informs the theoretical underpinnings of SDL in language learning, though emphases differ according to SLA approaches (behavioural, socio-cultural, psycho-functional), research areas, and contexts (CALL, MALL). Chiefly,

- **Learner autonomy** is a key premise
 - Knowles' motto: "Educators as mentors; learners as **leaders**"
 - Fostering SDL capabilities is to hone leadership
- **Motivation** also plays a significant role in teacher-guided and SDL of L2 (He & Li, 2023)
- **Strategy** (cognitive and metacognitive)

D. Theory, research, and implications

Self-directed Learning in CALL and MALL:

- CALL can positively affect SDL, particularly when it comes to mobile-assisted language learning (MALL) (Dizon, 2024)
- In investigating the use of AI-powered Duolingo, Li and Bonk (2023) found that learners' **intrinsic motivation** regulates their self-monitoring **learning strategies** (*content evaluation, feelings of knowledge, and judgements of available resources*), though learners also consulted non-AI digital resources such as YouTube and podcasts
- **Implication:** CALL and MALL studies shed light on L2 learner's perception and practice when it comes to SDL, notably on motivation and strategy

D. Theory, research, and implications

Empirical studies exploring the impact of AI on SDL capabilities remain very **sparse**. The bulk of existing AI-enhanced SLA research tends to focus on learner perception, assessment, and effectiveness of writing development (feedback).

Recent meta-analyses summarizing **AI chatbot affordances in SLA** include:

- A moderately positive effect on language learning (Zhang et al., 2023)
- Chatbots as accurate conversation partners amid voice recognition problems (Lee & Jeon, 2024)
- Benefits of personalisation, timeliness, interlocutor without the fear of being judged, noting the drawback of technological constraints, reduced novelty effect over time, and heightened cognitive load (Huang et al., 2022)

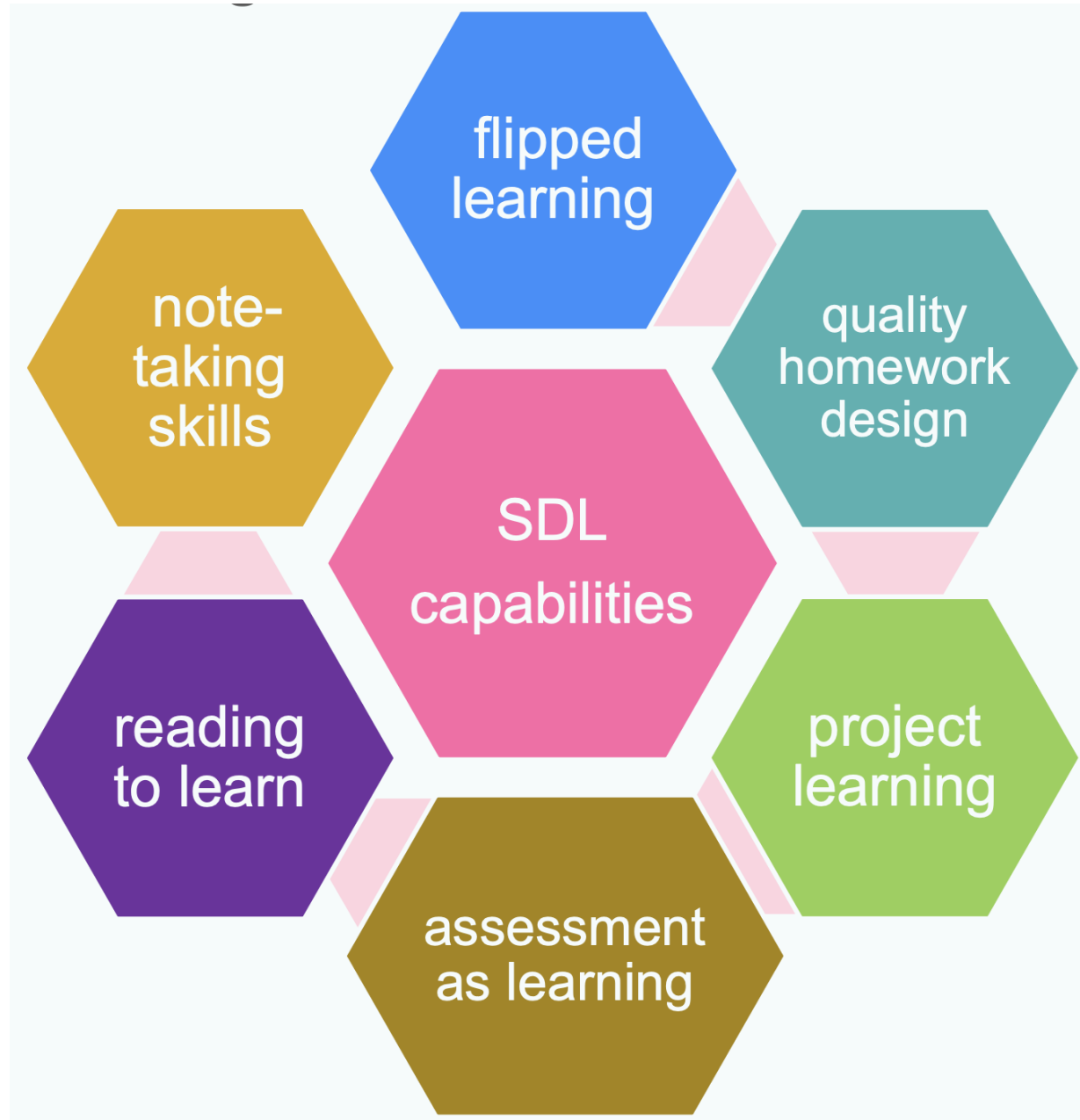
D. Theory, research, and **implications**

Research implication:

- **More (action) research is called for** exploring AI's impact on SDL capabilities
 - ~40% out of 1500 submissions are AI-related as per CALL Editor Glenn Stockwell

Pedagogical implications:

- Use of AI chatbots as a learning resource sounds promising, albeit mixed findings and variations due to learner motivation, attitude, strategy use
 - Domain general chatbots: ChatGPT, DeepSeek
 - L2-specific chatbots: Duolingo, LingoTask
 - Custom-made chatbots??



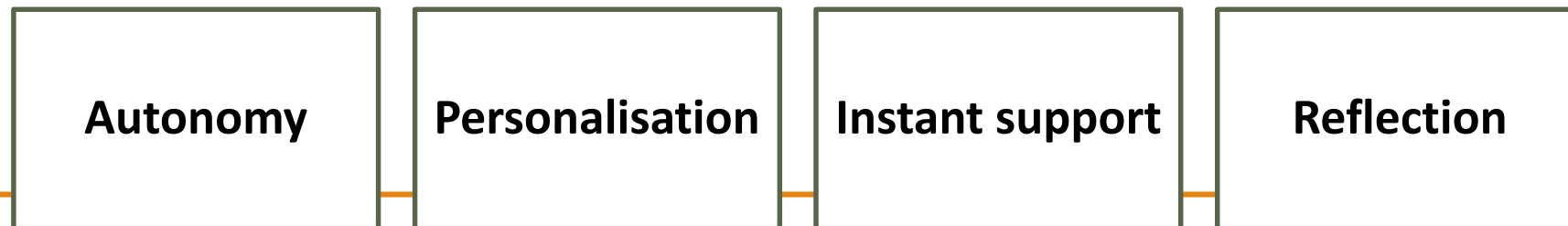
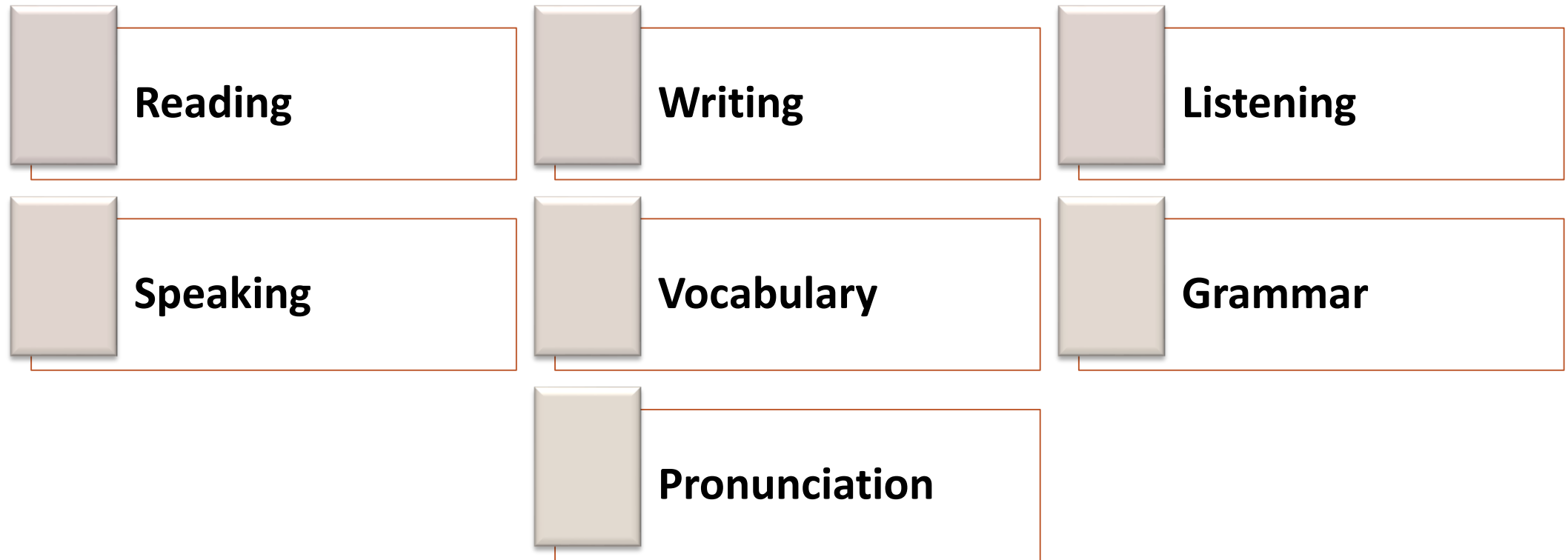
D. Theory, research, and **implications**

More implications to NEW pedagogical approaches:

- Curriculum and training programme design
- Assessment
- Educator and trainer preparation
- Resource development
- Learning environments

- Also in relation to how we conceptualise teaching and learning...

E. Applications: Self-directed Language Learning



Task 1



EVENTS

EXPLORE

PLAN

DEALS

Language

I am a visitor

I am a resident

Inside scoop: behind the scenes of the Tai Hang Fire Dragon Dance



Task 1

- **Target:** Secondary 3 students

- **Focus:** Reading

SDLL without AI vs. SDLL with AI

- **Task:** If you wanted your students to use this written text for self-directed language learning, what activities would you design?
 - How can the text be used as a springboard for students to take charge of their own learning?
 - What choices or options can students be given with the text?
 - How can students use the text to practise reading skills independently?
 - How can students reflect on their learning after working with the text?
 - What scaffolding or guidance would you provide to help students set their own learning goals with this text?

Task 2

- Now, collaborate with AI (e.g., DeepSeek)
- **Task: Ask AI for suggestions on how the text could be used for AI-enhanced self-directed language learning.**

Task 3

- Now, you have some suggestions/ideas about how AI can assist students with self-directed language learning (reading)
- **Task: How would you teach your students to use AI to engage in self-directed language learning using this text?**

Task 4

- **After using this text for self-directed reading practice, what further self-directed language learning activities would you suggest?**

Reflection

- Does AI-enhanced SDLL activity foster deeper cognitive, metacognitive and affective engagement?
- Does it cater for both weaker and stronger students?
- Do you foresee any potential challenges? What could be some possible solutions to these challenges?

F. When partnering with AI...

1. Craft clear, effective prompts to get the best results from AI
2. Use follow-up questions and feedback to refine AI-generated content
3. Combine multiple AI outputs to create a more comprehensive solution
4. Review and edit AI output to ensure accuracy and quality
5. Augment human creativity and problem-solving skills using AI
6. View AI as a partner rather than a replacement for human expertise

F. Closing remarks

- Today is the beginning of a marathon not a sprint of an AI era.
- We are in this together.
- For sure there will be challenges ahead.
- Importantly, let's form a positive mindset of growth in the emerging teacher-student-AI partnership educational model.
- A human touch is key to leading this innovation
- as we celebrate our evolving professional roles from educators to resourceful language architects, shifting pedagogical focus from teaching content to enabling learning, leveraging AI's opportunities to nurture students' self-directed learning capabilities in language development.
- Stay curious, stay informed, and stay tuned for Events 2-5. Thank you.

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