

Part B Project Summary

Project Title: Promoting Self-directed Learning Capacity – A Focus on Chinese Online Reading Competencies for Primary and Secondary School Students	Project Number 2024/0271 (Revised)
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Name of Organisation: Centre for Advancement of Chinese Language Education and Research, Faculty of Education, The University of Hong Kong

(1) Goals and Objectives: (i) Establish a theoretical framework for online reading competencies for secondary education; (ii) Provide a set of interactive Chinese online reading resources through a learning platform; (iii) Empower teachers to teach and assess students' Chinese online reading competence; (iv) Promote the practice of online reading activities in Chinese language classrooms

(2) Targets: (i) Expected Number of direct beneficiaries: A total of 322,512 students and 840 teachers from participating schools; (ii) Expected Indirect beneficiaries: Over 60,000 students and 6,500 teachers in total.

(3) Implementation Plan

(i) Duration: 24 months (From March 2026 to February 2028)

(ii) Process/Schedule

Timeline	Milestones
Mar 26 - Jun 26	Primary schools: revise the construct theoretical framework; improvise online tasks; design online reading platform; conduct teacher workshops; school practices and tests; dissemination to 160 schools etc.
May 26 - Nov 27	Secondary schools: construct a theoretical framework; draft online tasks; design online reading platform; conduct teacher workshops; school practices and tests, intensive school support, etc.
Nov 27 - Feb 28	Dissemination of findings: attend seminars/ conferences; promote on the CACLER website; write reports and academic papers

(iii) Collaboration with other parties/partners: A total of 322,512 students and 840 teachers from 160 participating primary schools and 8 secondary schools.

(4) Products: (i) Deliverables/outcomes: online reading platform, workshop materials, guides for schools, Dissemination materials; (ii) Dissemination of deliverables/outcomes: promoting on CALCER Website, participating in seminars/ international conferences, and publishing academic papers; (iii) Commercialization potential of deliverables/outcomes: The online reading platform can be developed into an educational technology product.

(5) Budget

Budget Items	Budget Amount (HK\$)
(a) Staff cost	\$3,287,408
(b) Services	\$1,521,900
(c) General expenses	\$807,792
(d) Contingency	\$30,000
Total:	\$5,647,100

(6) Evaluation

(i) Performance indicators: Reading test for students, workshops for teachers, survey of students and teachers' perceptions and feedback, survey of schools, focus group of students and teachers.

(ii) Outcome measurements: Instrument, validation, students' reading competencies and perceptions, teachers' pedagogical content knowledge, effectiveness of supplement resources and platform, effectiveness of competency framework.

Part C Project Details

Project Title: Promoting Self-directed Learning Capacity – A Focus on Chinese Online Reading Competencies for Primary and Secondary School Students

Needs Assessment and Applicant's Capability

(1) Importance of cultivating online reading skills

With the continuous development of the Internet, online reading is becoming an indispensable part of academic life, serving as a valuable tool for learning and research. However, online reading is particularly challenging for students because:

- Online reading often involves engaging with multiple texts simultaneously, necessitating students to synthesize information across various web pages and organize their learning in a coherent manner (Kerr & Symons, 2006; Sanchez & Wiley, 2009).
- Online texts frequently incorporate multimodal features, such as images, animations, videos, tables, and diagrams, which are interspersed throughout the text and serve different purposes. Readers must identify the relationships between these multimodal elements and the accompanying text, decipher the information they present, and integrate it to achieve a comprehensive understanding (Clinton, 2019; Delgado et al., 2018; Kong et al., 2018; Rasmusson, 2015; Sanchez & Wiley, 2009).
- Online world is filled with an overwhelming amount of information that requires readers to strategically and critically search for, select, and evaluate the trustworthiness of sources (Barzillai et al., 2018).

All these new features require the mastery of online reading competencies. If students lack proper guidance, they could become distracted and the continuous flow of online information could result in only superficial understanding, particularly among young readers (Wolf, 2018). Thus, reading researchers have urged for change in the content and pedagogy of reading literacy (New London Group, 1996) to adapt to diverse communication channels and media. In the curriculum, multiple text reading and multimodality (figures, tables, graphs, etc.), which are distinguishing online reading features, have been incorporated into language curricula in countries such as Singapore (Ministry of Education, 2020) and New Zealand (Douglas et al., 2009). International large-scale assessments such as PISA and PIRLS have also included the testing of such online reading skills to measure students' deep reading competencies across various reading modes, multiple texts, and multimodal formats.

(2) Unsatisfactory performance of self-directed learning and reading-related initiatives in schools

To promote self-directed learning and deep reading, the Education Bureau (EDB) rolled out a number of information literacy and deep reading initiatives (EDB, 2022a). However, these efforts have yet to achieve the desired outcomes as recorded in annual school inspection reports:

- Taking the cultivation of students' information literacy (IL) as an example, ... (schools) are unable to make holistic planning at the school level to systematically integrate IL into the curriculum of various subjects and LWL activities, for the purpose of effectively fostering students' abilities and attitudes in using information technology. (EDB, 2021, p.2)
- The promotion of "Reading across the Curriculum" (RaC) also needs to be strengthened. At present, only a small number of schools can further promote RaC by building on the foundation of using different strategies to promote reading. (EDB, 2021, p.2)
- The quality of teachers' feedback has yet to be improved as most of the time it does not facilitate, improve or deepen student learning. (EDB, 2022b, p.10-11)

(3) Highly relevant track record and strong commitment in reading research

On one hand, the vast and complicated Internet environment resulted in superficial understanding among young readers; on the other, the unsatisfactory performance of self-directed learning and deep reading initiatives indicated that schools need additional support. These issues open a significant gap between what is desired of our students and their current lack of capacity to access the Internet world. This project aims to address the above issues. The applicant, who is an experienced and committed researcher in reading will lead the project. She has the following experiences which are highly relevant:

- Completed a highly related QEF project entitled 'Developing a digitalized reading platform to enhance primary school students' online reading competence' as the Principal Investigator (PI). This project successfully found a theoretical framework with 18 indicators and a set of tasks to describe and assess the online reading competencies of primary school students. Drawing from the outcomes of the previous QEF project, we have acquired valuable experience in managing learning platforms and creating materials that align with essential online reading competencies. These outcomes, on one hand, will be applied in

disseminating to other primary schools, and on the other, extend to secondary schools to empower the schools in promoting students' deep reading and self-directed learning.

- Involved actively in international large-scale reading research, such as PIRLS 2021 as a Co-I. Extensive knowledge about and experience in the design of reading assessment frameworks and tasks will ensure that the interpretation and illustrations of PIRLS and PISA frameworks are carried out efficiently. Relatedly, the PI has regularly engaged in academic exchanges with experts from various regions, presented in numerous seminars, workshops and conferences, and prepared publications on related topics.

Goals and Objectives

i. Establish a theoretical framework for online reading competencies for secondary education

In our previous QEF project (2022-2024), we identified 18 indicators for assessing online reading among primary students and initiated the learning of these skills for primary school students. We found that students struggle most with multimodal and multiple-text reading. To facilitate a smooth transition to secondary education, it is essential to determine the indicators for assessing online reading competencies at that level. Our framework will integrate three cognitive stages from PISA—locating information, understanding, and evaluating—while also considering multimodal and multiple-text reading and strategies for navigating in complex online contexts. By reviewing existing literature, the framework will inform the development of reading tasks and instructional strategies, help students succeed in digital learning and future academic challenges. Understanding the learning trajectory from primary to secondary education will enable schools to identify knowledge gaps for timely interventions, and hence facilitate students' building of foundational skills and develop over their educational stages.

ii. Provide a set of interactive Chinese online reading resources through a learning platform

To enhance students' online reading competencies, this project will provide online reading tasks for primary and secondary schools.

For primary schools, we will improvise four online reading tasks (see Appendix A) and two online reading exercises (see Appendix B) based on the reading tasks that developed in the previous QEF project to ensure they: 1) align with current teaching resources used in schools and EDB recommended reading passages, making them more convenient for teachers to use, 2) focus on developing students' competencies in reading multiple texts and multimodal formats, and 3) fit within the PIRLS context for valid and reliable assessment of reading competencies. Additional resources will also be developed to facilitate learning and teaching. These resources will be provided to 160 schools in order to cultivate online reading competencies among a larger group of primary school students.

For secondary schools, we will develop six tasks (the outline of the new reading tasks is presented in Appendix C) based on a newly established framework, enabling students to explore engaging reading materials through a simulated Internet environment. These resources aim to validate the theoretical framework of secondary school online reading competencies and study the practice of secondary school students.

To attain the objectives of this project, we will follow the guidelines below while designing the tasks and materials: (1) We will make sure that all tasks align with students' learning needs, levels, ages, and abilities, while also ensuring that the content is accurate, comprehensive, objective, and fair. To achieve this, we will consult teachers about students' current reading levels, interests, and specific learning requirements and create tasks that are age-appropriate, ensuring that themes and language are relevant and engaging for students. Additionally, we will regularly collect feedback from both students and teachers to continuously improve and adapt the tasks based on real classroom experiences. (2) Include a mix of literary and informative texts as reading materials, ensuring that the designed tasks align with current teaching resources used in schools and EDB-recommended reading passages, while avoiding direct duplication of textbook content.

iii. Empower teachers to teach and assess students' Chinese online reading competency

The teaching and assessment of online reading competencies is relatively new to many frontline teachers, and they still face challenges in developing effective teaching strategies and implementing assessment criteria. To address this, we will conduct teacher workshops for both primary and secondary school teachers to help them learn the concepts related to online reading instruction and assessment and turn these concepts into practice and material-building skills and processes to facilitate learning and teaching. Besides, reading activity design for specific reading indicators and different types of reading materials will be posted on the online platform for teachers to download and use (three samples of reading activity design are presented in Appendix D).

iv. Promote the practice of online reading activities in Chinese language classrooms

The project aims to enhance classroom online reading activities by providing intensive school support, including lesson preparation, teaching suggestions and feedback, development of teaching strategies, provision of rich digital tools and resources, and the use of online reading platforms. Teachers will receive

comprehensive training in instructional design that incorporates multiple text readings, ensuring that students gain adequate learning experiences to enhance their reading competency across various texts. By equipping educators with effective strategies and tools, we will foster a more engaging learning environment that encourages students to explore a wide range of online reading alongside printed reading. These resources will be integrated with the current curriculum used in schools, ensuring that they complement existing teaching practices rather than creating additional burden.

Targets and Expected Number of Beneficiaries

This project will benefit nearly 100,000 students and over 7,500 teachers from participating primary and secondary schools in total.

For primary schools:

- i. Number of direct beneficiaries: 30,720 Primary 3 and Primary 4 students from 160 primary schools, and 800 Chinese Language teachers of these students will benefit directly from this project.
- ii. Indirect beneficiaries: 61,440 students from other grades and 6,400 teachers of various subjects in these 160 primary schools will benefit indirectly from this project.

For secondary schools:

- i. Number of direct beneficiaries: 1,792 Secondary 3 and Secondary 4 students from 8 secondary schools, and 40 Chinese Language teachers of these students will benefit from this project.
- ii. Indirect beneficiaries: 3,584 secondary school students from other grades and 360 teachers of other subjects in these 8 schools will benefit indirectly from this project.

	Primary 3 & 4	Secondary 3 & 4
Students	<u>Direct beneficiaries</u> 160 schools x 2 levels/school x 4 classes/level x 24 students/class = 30,720 students <u>Indirect beneficiaries</u> 160 x 4 remaining levels/school x 4 classes/level x 24 students/class = 61,440 students	<u>Direct beneficiaries</u> 8 schools x 2 levels/school x 4 classes/level x 28 students/class = 1,792 students <u>Indirect beneficiaries</u> 8 x 4 remaining levels/school x 4 classes/level x 28 students/class = 3,584 students
Teachers/ Schools	<u>Direct beneficiaries</u> 160 schools x 5 teachers/2 levels/school = 800 teachers <u>Indirect beneficiaries</u> 160 schools x 40 other teachers/school = 6,400 teachers	<u>Direct beneficiaries</u> 8 schools x 5 teachers/2 levels/school = 40 teachers <u>Indirect beneficiaries</u> <u>Secondary:</u> 8 schools x 45 other teachers/school = 360 teachers

Benefits for the students

(i) Development of essential online reading competencies: Students will develop essential competencies for online reading, such as navigating, integrating, and evaluating, which will enhance their interest and build their confidence in carrying out online reading tasks.

(ii) Enhancement of effective online reading volume to create good reading habits: By engaging with a substantial amount of online Chinese reading content, students will increase their reading volume and broaden their perspectives, aiding in the development of independent reading habits and solid reading literacy, hence enhancing self-directed learning.

(iii) Instant feedback and specific suggestions for reading competency enhancement: After completing the online reading tasks, students will receive immediate feedback on their answers and areas for improvement through the system's real-time feedback feature, along with customized and constructive suggestions, where students can improve their online reading competencies and excel in international assessments such as PIRLS and PISA through targeted feedback and familiarization with assessment formats.

Benefits for teachers and schools

(i) Relearning of the concept of reading: Participating teachers will learn the differences between printed reading and online reading, and the benefits of the hybrid use of both these reading mediums. Additionally, they will learn to facilitate the learning of online reading competencies, collaboratively develop teaching

strategies, offer suggestions for revising reading materials, and share their experiences with colleagues through the online reading platform and other means.

(ii) Collaborative Network for Educator Empowerment: The network operates as a collaborative platform for primary school Chinese Language teachers, facilitating the sharing of resources, insights, and best practices. It organizes training workshops, which allow educators from various schools and districts to connect and learn from one another. The online platform serves as a repository for training materials, lesson plans, and multimedia resources, enabling teachers to access and contribute valuable content. Furthermore, the teacher training workshops, and the network community will be open to teachers other than Chinese Language teachers, so that more teachers from different learning areas can benefit and this will help enhance online reading teaching.

(iii) Collaborative learning with professionals and peers: Participating secondary teachers can enhance their online reading teaching competencies through intensive school support, where they can discuss strategies and activities, engage in discussion about classroom learning and teaching, and implement improvements based on feedback. Opportunities for participation in discussions with peers on the online reading platform and other channels will further enrich their learning and professional development.

(iv) Bridging online and printed reading materials in teaching: Participating primary and secondary school teachers can adapt their reading instruction to encompass both online and printed reading materials. As a result, the project will shift the focus of reading from solely printed texts to include effective online reading practices. This approach will empower students to become self-directed learners, equipping them with the competency necessary to use online resources effectively.

Innovation

(i) A new learning trajectory of online reading competencies for both primary and secondary education

Building on the successful experience from our previous QEF project, the current project will further improvise and develop a structured framework of online reading indicators tailored for primary and secondary education. This framework will describe the learning trajectory of online reading competencies and facilitate a systematic approach to assessing and enhancing students' reading competencies. By identifying the key competencies and aligning them with educational outcomes, we can create a comprehensive evaluation system that not only measures students' reading competencies but also builds a curriculum that supports the students' learning trajectory. This systematic approach will facilitate targeted interventions, ensuring that students develop the critical reading competencies necessary for success in a rapidly evolving digital landscape.

(ii) Rich learning resources for online reading practice and assessment

After the 2014 education reform that encourages reading across the curriculum and emphasizes information technology interactive learning, there were some electronic reading resources created, such as "Graded Reading World" and "i-learner". However, these reading resources still retain the traditional reading literacy, merely digitizing the format. While they incorporate games and interactive elements to stimulate reading interest and enhance learning convenience, they fell short in fostering students' online reading competencies, especially in interpreting complex information from various web pages and multimodalities. By providing rich learning tasks on an online reading platform, this project fills in the gap and provides targeted resources to enhance students' multimodal and multiple-text reading competencies in primary and secondary education.

(iii) Redefining the concept of reading among educators and in schools

While digital resource is used for learning and teaching for many years, educators fall short of identifying the uniqueness of reading competencies in an online environment and acknowledging the challenges that students face. This project will conduct teacher workshops, provide intensive school support and create a community of practice among teachers to strengthen teachers' awareness and ability in fostering students' Chinese online reading competency. It will facilitate the re-conception of reading to include online reading competencies, build educators' awareness to better understand the unique challenges and opportunities presented by the online reading environment, and empower teachers with the methodologies and skills necessary to provide effective instruction and support in these areas. By fostering a deeper understanding among educators, we can create a more informed and capable teaching workforce.

With a strong teaching workforce with the knowledge of the new concept of reading, schools will better facilitate lessons that will integrate online reading competence. Furthermore, the wealth of learning materials on online reading offered by this project will act as supplementary resources to the textbook passages used in daily classes. Overall, schools will be equipped with capable educators and rich resources that can successfully enhance student engagement with online reading and enhance their capacities in self-directed learning using online resources.

Conceptual Framework

The project will consider the theoretical underpinnings for enhancing students' online reading competencies and their self-directed learning skills. Compared to paper-based reading, online reading is particularly challenging for students (Barzillai et al., 2018) and will incur additional cognitive loads (Clinton, 2019; Delgado et al., 2018; Kong et al., 2018). The following theories guided this project.

- Online world is filled with an overwhelming amount of information that requires readers to strategically and critically search for, select, and evaluate the trustworthiness of sources (Barzillai et al., 2018).
- Online reading often involves engaging with multiple texts simultaneously, necessitating that students synthesize information across various web pages and organize their learning in a coherent manner (Kerr & Symons, 2006). Hence, online reading requires the readers to navigate themselves to different pages like scrolling up and down, clicking on tabs and hyperlinks to obtain information during the reading process (Sanchez & Wiley, 2009).
- Online texts frequently incorporate multimodal features, such as images, animations, videos, tables, and diagrams, which are interspersed throughout the text and serve different purposes. Readers must identify the relationships between these multimodal elements and the accompanying text, decipher the information they present, and integrate it to achieve a comprehensive understanding (Rasmusson, 2015; Sanchez & Wiley, 2009).
- Cheong (in preparation) found 18 indicators that are evidenced in Hong Kong primary school students' online reading. These indicators are represented in a two-dimensional framework in which one dimension illustrates students' level of reading comprehension and in the other the characteristics of online reading situations.

Moreover, self-directed learning skills are essential for primary and secondary school students (Boyer & Kelly, 2005). These skills encompass the ability to identify learning needs, articulate learning objectives, select appropriate learning materials, choose and apply effective learning strategies, and evaluate learning outcomes (Maeroff, 2003). The EDB recognizes self-directed learning as one of the nine key generic skills that students should develop throughout their education (EDB, 2024), highlighting the necessity of nurturing these competencies through learning programs and resources. Research shows that proficient self-directed learning enhances academic performance and fosters lifelong learning habits. For example, studies emphasize techniques such as goal-setting, self-assessment, and time management, which enable students to take control of their learning processes more effectively (Adams, 2006; Crowther, 2004). Incorporating these strategies into the curriculum can greatly benefit students by providing them with essential tools for independent learning. In response to these educational advancements, this project presents a conceptual framework adaptable for primary and secondary education based on our previous QEF project. Our goal is to foster critical reading skills essential for success in today's interconnected world by featuring new indicators that will measure and enhance reading competencies across various modalities. The conceptual framework is detailed in Figure 1.

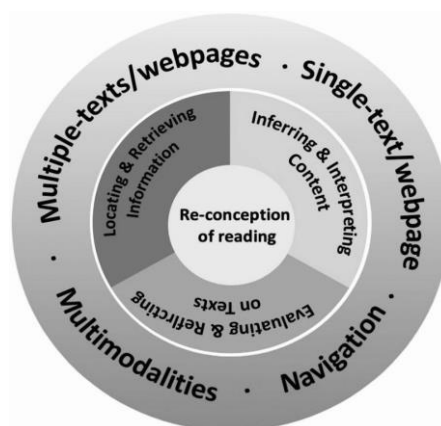


Figure 1. Conceptual framework

Implementation Plan with Timeline

To meet the goals and objectives, this project will be divided into two parts. Part 1 involves 160 primary schools, will build on the PI's previous QEF results to enhance the online reading skills of primary students, improve the developed online reading platform and promote to a wider community of primary schools. Part 2 will focus on 8 secondary schools, to develop a framework of competence indicators and validate it with online reading tasks. For each of the parts, work will further be divided into various key milestones, including constructing theoretical

framework, designing of tasks and online reading platform, school recruitment, conducting teachers' workshops, releasing of online reading tasks on the platform for schools' use, providing intensive school support, collecting evaluation and feedback for further improvement. The project is planned to commence on March 1, 2026, with a duration of 24 months. The table below outlines the milestones and timeframe for each part of the project separately.

Primary School		Secondary School	
Milestones	Timeline	Milestones	Timeline
<u>Theoretical framework</u> Refine the framework of 18 indicators that developed for primary education in the previous QEF project	Mar 26	<u>Theoretical framework</u> Update literature and develop the framework of online reading indicators for secondary education	May 26
<u>Task design</u> Improvise four online reading tasks and create two online reading exercises based on the current six tasks that developed in the previous QEF project	Mar 26	<u>Task design</u> Create six online reading tasks based on the framework	Jun 26
<u>Online platform design</u> Setting up the online reading platform	Mar 26	<u>Online platform design</u> Setting up the online reading platform	Jul-Aug 26
<u>School implementation</u> Release the platform user guide to schools to assist students in completing their online reading tasks	Mar 26	<u>School implementation</u> Release the platform user guide to schools to assist students in completing their online reading tasks	Sep 26
<u>Teachers' workshops</u> Workshops will be held for approximately 800 teachers from all participating primary schools, organized into 14 sessions (including 6 in-person hands-on sessions and 8 online sessions). Each in-person session will last about 6 hours, with a maximum of 2 participants from each school. The online sessions include Tier One and Tier Two, each Tier contains four sessions and each session will run for 3 hours, allowing a minimum of 3 teachers from each school to attend. The workshop will cover essential reading concepts, skills and strategies, as well as how to use resources from the online reading platform. Detailed information about the in-person and online sessions can be found in Appendix E.	Mar 26- Jan 27	<u>School implementation</u> Release Tasks A to D through the online reading platform and conduct pre-test for the 8 participating schools to assess the students' online reading competencies	Sep-Oct 26
<u>School implementation</u> Students practice with two online reading exercises to become familiar with the online reading platform developed	Mar 26	<u>Intensive school support</u> 1st intensive school support: help the teachers to re-conceptualize online reading and present the students' reading performance of the pre-test	Nov-Dec 26

<u>Feedback collection & evaluation</u> Collecting feedback on students' experiences with these practices via the platform	Mar-Apr 26	<u>Intensive school support</u> 2nd intensive school support: gathering feedback of the reading tasks and using experience of the platform	Mar-Apr 2027
<u>Task design</u> Revise the reading tasks based on the feedback collected	Apr 26	<u>Task design</u> Revise the reading tasks based on the feedback collected	Apr 27
<u>School implementation</u> Release Tasks A and B on the online reading platform for participating schools to practice and complete a pre-test	Apr 26	<u>Teacher workshop</u> Teacher workshop conducted for around 20 teachers from 8 recruited secondary schools (2-3 teachers from each school, 1 session of 6 hrs.) The workshop will cover the introduction of core reading concepts, reading skills and strategies, and the use of the resources of online reading platform.	May 27
<u>School implementation</u> Release Tasks C and D on the online reading platform for participating schools to practice and complete a post-test	May-Jun 26	<u>School implementation</u> Release Task E through the online reading platform and conduct mid-test for the 8 participating schools to assess the students' online reading competencies	Jun 27
<u>Dissemination of findings</u> Participate Learning & Teaching Learning & Teaching Expo (LTE) 2026 to disseminate the findings regarding primary education	Jun 26	<u>Intensive school support</u> 3rd intensive school support: cognitive and metacognitive reading strategies to foster online reading competencies	Sep-Oct 27
		<u>Intensive school support</u> 4th intensive school support: adapt the teaching and learning resources to students' learning needs	Oct-Nov 27
		<u>School implementation</u> Release Task F through the online reading platform and conduct post-test for the 8 participating schools to assess the students' online reading competencies	Nov 27
		<u>Task design</u> Revise the reading tasks based on the students' performance	Dec 27
		<u>Dissemination of findings</u> Participate Learning & Teaching Learning & Teaching Expo (LTE) 2027 to disseminate the findings regarding secondary education	Dec 27

<u>Dissemination of findings</u> • Territory-wide dissemination seminar in collaboration with professional organisation(s) • Broadcast the project on CACLER website and publicize the online reading platform to the public • Present at local and international conferences • Write up report and academic papers	Nov 27- Feb 28
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Teachers' and Principals' Involvement in the Project

This project will involve approximately 160 primary schools and 8 secondary schools, with at least five teachers joining from each school. As this project aims for widespread participation, especially in the primary school sector. On one hand, it will need to depend on the active and professional involvement from the principals and teachers; while on the other, it will also ensure that this involvement is not overwhelming.

i. Principals of the participating schools

Principals will be provided with guides for schools and updated information of the project's preparation and development at appropriate times. They will plan and assist with the curriculum implementation by meeting with their Chinese language teachers to discuss learning and research activity arrangements, as well as teacher professional development, such as data collection and selecting teachers for workshops. Additionally, principals of secondary schools will assist in intensive school support sessions, including providing professional insights with regard to the school's context, making school-based decisions, and facilitating these support sessions both professionally and administratively.

ii. Chinese language teachers in the participating schools

Teachers at the participating schools will facilitate the learning of their students' online reading by designing relevant lessons based on the new knowledge learnt in the teachers' workshops. Additionally, the two teachers who attended the workshops will share their knowledge with the rest of the teachers. Furthermore, teachers from participating secondary schools will discuss the learning and teaching challenges, and receive feedback from the discussion about classroom learning and teaching during the intensive school support.

Budget

Items	Budget Details	Sub-total (HKD)	Remarks
(a) Staff Cost			
1. Project Officer x 1 x 24 months	\$19,300/month + 5% MPF x 24 months	\$486,360	The Project Officer, who possesses a Bachelor's degree will assist the PI in overseeing the production timeline of the platform and other deliverables, manage resource and manpower allocation, coordinate with participating schools and other stakeholders, arranging professional development training, develop contingency plans, implement quality assurance measures, supervise junior staff, etc. S/he will ensure the smooth operation of this large-scale project, and that the administrative and logistical tasks are efficiently managed and coordinated.
2. Curriculum Development Officer x 1 x 18 months	\$51,545/month + \$1,500 MPF X 18 months	\$954,810	The Curriculum Development Officer who possesses a Bachelor's Degree in Chinese or Chinese Language education and professional qualifications as a Chinese language teacher and has at least 6-8 years of post-qualification experience in teaching Chinese language in local secondary schools, school management,

Items	Budget Details	Sub-total (HKD)	Remarks
			school-based curriculum development involvement, and profound knowledge in the local Chinese language curriculum, will provide intensive support to secondary schools in facilitating collaborative planning sessions with teachers to enhance their instructional practices in Chinese language and online reading, review reading proficiency framework for secondary schools, give advice on how to integrate the framework, strategies, and findings into their curriculum, and develop professional development training programmes with the PI. S/he will need to provide support to the primary schools in the project whenever necessary.
3. Instructional Materials Writers x 1 full-time x 12 months + 1 part-time x 3 months in Year 1, and 1 part-time in Year 2	\$33,780/month + \$1,500 MPF x 12 + \$33,780/month x 0.5 + 5% MPF x 15	\$689,378	The Instructional Materials Writers, who possess a postgraduate degree in Chinese Language or Education and have at least 3-5 years of experience in teaching, curriculum development, instructional design, or educational publishing, will develop reading tasks, exercises, other T&L instructional resources, and reading materials in accordance to the primary and secondary reading proficiency frameworks, and prepare guides and manuals for schools and teachers.
4. Research Manager x 1 x 24 months	\$20,400/month + 5% MPF x 24 months	\$514,080	The Research Manager, who possesses a Master's degree in the area of study related to Chinese language, reading psychology, evaluation, or related disciplines and has at least three year of work experience in the related field, or a doctoral degree in the related field, will oversee the research aspects of the project, analyse quantitative and qualitative data and findings, translate research findings into practice and transform into teachers' teaching resources, write up research reports, produce academic papers, present in local and international conferences, and contribute to the advancement of knowledge in the field.
5. Clerical Assistant x 1 x 24 months	\$13,900/month + 5% MPF x 24 months	\$350,280	The Clerical Assistant will provide clerical and administrative support to the project team, including liaising with schools and teachers, preparing fieldwork materials, coordinating schedules, supporting project activities (e.g., interviews, training

Items	Budget Details	Sub-total (HKD)	Remarks
			workshops, etc.), managing documentation and records, supervising part-time helpers, handling enquiries, etc.
6. Part-time Helpers (*Contract titles: Clerical Assistants / Student Research Assistants)	\$65/hour x 4,500 hours	\$292,500	Part-time pre-service Chinese Language teachers will be trained to code the constructed-response items of the online reading tasks. Other part-time helpers will provide clerical, technical, administrative and logistical support, including data entry, data collection, test administration, video-shooting and editing, audiotaping, transcribing interviews, and other duties as assigned.
Sub-total (a):		\$3,287,408	
*The combination will enable us to recruit appropriate candidates to do different tasks as required to meet our tight work schedule.			
(b) Services			
1. Buyout Teaching Cost for Principal Investigator	\$100,000/year	\$100,000	The Project Investigator is a full-time academic staff member of the University. Given the complexity and time requirements for this project, and to ensure the PI's engagement in the leading role until the completion of the project, a budget has been allocated for buyout teaching to relieve her teaching loads. According to our Faculty's Guidelines for Buying Out Teaching: 'The amount charged for buying out a course should cover not only the direct cost of hiring the part-time teacher, but also the indirect academic and administrative staff costs involved in processing the application for buying out, and other overhead costs. For 2020/21 onwards, the rate for buying out one course is HK\$100,000 for all staff grades and is subject to review from time to time.
2. Part-time Professional Development Trainer x 1	\$1,050/hour x 78 hours (workshop and preparation)	\$81,900	Experts and scholars in the areas of Chinese language, Chinese literacy, teacher training, school-based support, international reading assessment, online reading research, etc., with at least 10-15 years of professional practice, and/or research experience in the field, will deliver the teacher workshops with the PI.
3. Consultation/Advisory Service Fees	\$800/hour x 300 hours	\$240,000	Experts, scholars, experienced subject teachers, curriculum leaders, etc., with 10-15 years of experience in Chinese language education or Chinese reading research, will

Items	Budget Details	Sub-total (HKD)	Remarks
			provide professional consulting advice for this project, including T&L resource materials, framework, texts, curricular matters, issues and needs of frontline teachers, etc.
4. Services for Online Reading Platform Development		\$1,100,000	Provision of services on developing and supporting an online reading platform by an external vendor (including Cloud service, security, maintenance, debugging, backup & recovery, etc.)
Sub-total (b):		\$1,521,900	
(c) General Expenses			
1. Photocopying and Printing		\$20,000	
2. Transportation Costs		\$20,000	
3. Other Operating and Administrative Expenses		\$20,127	Including stationery, consumables, postage, courier service, conference registration, etc.
4. QEF Audit Fee		\$15,000	
5. University Overhead (15%)		\$732,665	The University overhead covers bookkeeping, financial management, handling accounting matters, interim financial reports, recruitment, handling contract matters, managing program contracts/commitments, procuring equipment and items, and conducting procurement procedures according to the University's administrative regulations, etc.
Sub-total (c):		\$807,792	
(d) Contingency			
1. Contingency Fee		\$30,000	
Sub-total (d):		\$30,000	
Grand Total (a - d):		\$5,647,100	

N.B.: The procurement of all goods (including equipment) and services will be conducted in an open, fair, and competitive manner, and measures will be taken to avoid any actual or perceived conflicts of interest in the procurement process.

Expected Project Outcomes

i. Expected tangible outcomes

(i) **Digital platform on online reading competencies:** A digital platform with Chinese online reading tasks for primary and secondary school students, holding frameworks, rich learning and teaching resources, and including a back-end system for scoring and feedback.

(ii) **Workshop Materials:** Resources such as presentation slides and worksheets for PD activities that are designed to support teachers in facilitating online reading teaching.

(iii) **Guides for Schools:** Guides on the use of the digital platform and school implementation of online reading in the curriculum for successful and effective implementation.

(iv) **Dissemination materials:** Engaging presentations showcasing the online reading platform and students' online reading competencies. For instance, presentations at Learning & Teaching Expo (LTE), informative documents on CALCER website highlighting the digital reading platform and its features.

ii. Expected intangible outcomes

(i) **Students equipped with the capacity to use online resources**

- Short Term: Participating students will enhance their Chinese online reading skills through multiple practice sessions, leading to improved performance in the upcoming PIRLS and PISA assessments.
- Long Term: Students will cultivate a lasting interest in online reading and devote more time to practice. This commitment will promote self-directed learning skills (e.g., the ability to identify learning needs, articulate learning objectives, select appropriate learning materials, choose and apply effective learning strategies, and evaluate learning outcomes), leading to improved online reading competencies. Additionally, these experiences will address and mitigate ineffective practices when navigating complex online environments.

(ii) **Teachers Empowered with Online Reading Facilitation Skills**

- Short Term: Participating teachers will engage in workshops and receive support from the research team, gaining familiarity with online reading instruction and assessment requirements, ultimately enhancing their students' reading competencies.
- Long Term: Teachers will integrate new conceptions of reading into their practice, designing lessons that effectively incorporate both online and printed reading materials. They will leverage resources from the research team and establish peer network communities to continuously improve their teaching skills.

(iii) **Schools Implementing Effective Reading Across the Curriculum**

- Short Term: Schools will use the provided resources to enhance online reading teaching activities.
- Long Term: Schools will initiate reading programs that embrace reading across the curriculum, adopting deep reading strategies as a means to acquire new knowledge, thereby fostering a culture of literacy and critical thinking within the educational environment.

Project Evaluation

Aligned with the goals of this project and guided by the crafted research questions, the tables below present the evaluation of this project for both primary and secondary schools.

Primary schools

Research Questions	Study Method	Participants	Process Measures	Outcome Measures	Hypothesized Outcome
1. To what extent do the resources and support provided in this project affect primary students' reading progress and self-directed learning capacity?	Quantitative method (reading test, questionnaire) Qualitative method (focus group)	Primary 3 & 4 students Principals or representatives	Pre-test and post-test (Mar 26 - Apr 26, May 26 - Jun 26). Survey of students' feedback on the platform and tasks over 3 time points (Mar 26 - Jun 26). Survey of students' self-directed learning capacity. Focus group of students' perceptions of reading. Survey of schools.	<u>Change in reading competencies and perceptions</u> Changes in student reading tests over 2 time points (Mar 26 - Jun 26) Changes in student perception of reading and self-directed learning over 3 time points (Mar 26 - Jun 26)	Instruments validated Students' reading competencies and perceptions improved

2. To what extent do the resources and professional development opportunities facilitate teachers' online reading instruction?	Quantitative method (questionnaire) Qualitative method (focus group)	Primary 3&4 Chinese Language Teachers	Survey of teachers' pedagogical content knowledge. Survey and focus group of teachers' perceptions and feedback on the platform and workshops.	<u>Changes in teachers' pedagogical content knowledge</u> <u>Effectiveness of platform and workshops</u> Teachers' perceptions and feedback on the platform and workshops	Teachers' pedagogical content knowledge improved. Supplement resources and improve the platform based on feedback from teachers.
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Secondary Schools

Research Questions	Study Method	Participants	Process Measures	Outcome Measures	Hypothesized Outcome
1. What are the indicators that will reliably measure secondary school students' online reading competencies?	Quantitative method (pre-, mid- & post-test design; test)	Secondary 3 & 4 students	Pre-, mid- & post test of students' online reading competencies (Sep 26 Pre-test Jun 27 Mid- test Nov 27 post-test).	Effectiveness of measurements and framework	A competency framework describes the performance of secondary school students.
2. To what extent do the resources and support provided in this project affect secondary students' reading progress and self-directed learning capacity?	Mixed-method Research: • Quantitative method • Qualitative method (student focus group)	Quantitative Measures: All Secondary 3 & 4 students participating Qualitative Measures: 6-10 students per school x 8 schools	Pre-, mid- & post test (Sep 26 Pre-test Jun 27 Mid- test Nov 27 post-test). Survey and focus group of students' reading motivation, self-efficacy, and engagement. Survey of students' self-directed learning capacity.	<u>Changes in reading competency</u> <u>Changes in reading motivation, self-efficacy, and engagement</u> <u>Factors affecting students' reading motivation, self-efficacy, engagement and self-directed learning</u>	Students' reading competencies and perceptions improved.
3. To what extent do the resources and professional development opportunities facilitate teachers' online reading instruction?	Mixed-method Research: • Quantitative method (questionnaire) • Qualitative methods (focus group)	Secondary 3 & 4: 8 schools x 5 teachers/2 levels/school = 40 teachers	Survey of teachers' pedagogical content knowledge Survey and focus group of teachers' perceptions and feedback on the platform and workshops	<u>Changes in teachers' pedagogical content knowledge</u> <u>Effectiveness of platform and workshops</u> Teachers' perceptions and feedback on the platform and workshops	Teachers' PCK improved. The supporting activities are conducted effectively.

Sustainability of Project Outcomes

i. How the project will add value to the education sector as a whole

(i) The online reading competencies of participating primary and secondary school students will be significantly enhanced, along with a heightened interest in reading Chinese materials online. In addition, these students will become more self-directed learners by effectively using the resources on the Internet.

(ii) Due to the effective learning and teaching practices, the students' reading skills are widened to include online reading competencies, and hence more aligned with international large-scale reading assessments such as PIRLS and PISA.

(iii) Teachers from participating primary and secondary schools will receive support for teaching Chinese online reading, including reconceptualizing the definition of online reading, designing the curriculum, developing instructional materials and strategies, and using assessment tools to enhance the quality of teaching and learning.

(iv) Schools will adopt a comprehensive approach to reading, emphasizing both reading for learning and reading across the curriculum. This strategy will encourage students to engage with texts in various subjects, fostering critical thinking and deeper comprehension.

ii. How the impact of the project will be sustained

(i) The project provides an online platform with assessment and learning tasks.

Reading tasks that are developed in the project will be shared for schools' use, which will serve as a centralized location where the resources can be accessed and used. The availability of these shared resources will help to improve the quality and consistency of online reading instruction, as teachers can build upon the work of their peers rather than starting from scratch.

(ii) Knowledge about online reading instruction and assessment will continue to be used by teachers

Participating teachers will gain valuable knowledge and skills of learning and teaching online reading competencies. The teachers continue to apply these knowledge and skills in their daily teaching practices. The teachers can further design more engaging, effective, and standards-aligned reading lessons for their students, drawing on the expertise and best practices they acquired during the project. As a result, the students of these teachers will continue to benefit from the pedagogical advancements and instructional improvements that were fostered by the project, even after it has concluded. The long-term impact of the project on student learning and achievement will be enhanced by the lasting influence on the teachers' knowledge and teaching practices.

(iii) A network of Chinese language teachers will be formed and sustained for peer learning/support and sharing of resources.

The project, involving 160 primary schools and 8 secondary schools in Hong Kong, will facilitate the establishment of a network community of Chinese language educators. This network will provide opportunities for peer learning, collaboration, and the sharing of resources and best practices. Teachers within the network will be able to support one another, exchange ideas, and engage in professional development activities even after the project period has ended. The sustained network will help to maintain the momentum and impact of the project, as teachers continue to learn from each other, share new materials and strategies, and collectively work to improve deep reading instruction. The network may also serve as a platform for ongoing communication, problem-solving, and the dissemination of information related to Chinese language education. By fostering this collaborative network, the project will have a lasting influence on the professional growth and development of Chinese language teachers, ultimately benefiting their students and the broader educational community.

(iv) Delve deeper into various research topics regarding online reading

One aspect of this project builds upon and disseminates the findings from previous research on online reading among primary school students, while the other aspect is an initial effort to investigate and extend to secondary school level. For future research, we plan to source for funding such as QEF, QTN etc., to delve deeper into various teaching and learning challenges regarding online reading, including designing a wider range of online reading materials for both primary and secondary schools, organizing training sessions for teachers focused on online reading strategies, and promoting the project within primary and secondary schools in Hong Kong and internationally.

Dissemination/Promotion of Project Outcomes

(i) Territory-wide dissemination seminar in collaboration with professional organisation(s) will be organized for primary and secondary school teachers and other stakeholders, as well as researchers from universities dedicated to improving students' online reading competencies.

(ii) The project's information and findings will be promoted on the CACLER's website, with the link of the online reading platform that is available to encourage engagement from individuals outside the school.

(iii) Presentations will be shared at academic conferences in Hong Kong and internationally

(iv) Research findings from the project will be published in academic journals in Hong Kong and other regions and countries to ensure that education scholars worldwide have access to the project's outcomes.

Compliance and Commitment

- (i) The Centre for advancement of Chinese Language Education and Research (CACLER) under the Faculty of Education of the University of Hong Kong, hereafter HKU, will ensure openness, fairness and competitiveness of the procurement of services and goods, and conduct quotation/tendering in accordance with the QEF General Guidelines on Staff Administration and Procurement Matter to select the service provider(s).
- (ii) HKU will bear the recurrent expenditure incurred, including maintenance costs, daily operating costs, etc., and the possible consequences that may arise.
- (iii) HKU acknowledges the acceptance of the QEF Intellectual Property Rights Policy and confirms that the copyrights of the deliverables/materials should be vested with the QEF. Any reproduction, adaptation, distribution, dissemination, or making available of the deliverables to the public by the service provider(s) for commercial purposes will be strictly prohibited.

HKU commits to submit proper reports in strict accordance with the following schedule:

Project Management (Should be submitted via the “Electronic Project Management System” (EPMS))		Financial Management (Hard copy together with supporting documents should be submitted to the QEF Secretariat by mail or in person)	
Type of report and reporting period	Report due on	Type of report and reporting period	Report due on
Progress Report 01/03/2026 - 28/02/2027	31/03/2027	Interim Financial Report 01/03/2026 - 28/02/2027	31/03/2027
Final Report 01/03/2026 - 29/02/2028	31/05/2028	Final Financial Report 01/03/2027 - 29/02/2028	31/05/2028

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Appendix A. The outline of four online reading tasks for primary school

閱讀任務	主題	文本類型	內容類型及組成（例子）	主要內容
一	她們的光芒	文藝類+資訊類	網頁一：人物傳記或與人物對話、圖片或表格（例如：醫學及藥學家——屠呦呦） 網頁二：敘事性人物故事或人物傳記、圖片或表格（例如：猿類學家——珍·古道爾） 網頁三：閱讀活動資訊或人物專訪（例如：讀書分享會）	記述女性人物的成長經歷，同時補充其在領域中的成果與影響。
二	歷史文化的交響	文藝類+資訊類	網頁一：遊記或敘事性故事、圖片（例如：法老王的咒語） 網頁二：旅遊導覽手冊或科普類文本、圖片或表格、網頁廣告（例如：名勝古蹟知多少——知識有獎競猜） 網頁三：討論論壇或旅行筆記、圖片或表格、網頁廣告（例如：文化遺產數字化論壇）	透過遊記和敘事故事，探索古老文明的神秘與魅力；透過旅遊導覽手冊和科普文本，了解名勝古蹟的歷史背景與文化價值；並參與討論論壇，分享旅行經驗與見解。
三	生態警訊	資訊類	網頁一：分析類文本或新聞、資訊圖片或表格（例如：洛杉磯為甚麼會燒起來？）； 網頁二：研究報告或其他科普類文本、資訊圖片及網頁廣告（例如：媽祖藍眼淚）； 網頁三：專題文章或政策案例、資訊圖片及網頁廣告（例如：不同地區在生態文明建設中的具體政策）。	探討森林火災對生態系統的影響、媽祖藍眼淚現象的環境意義，以及生態文明建設的重要性，以促進對環境問題的理解與行動。
四	奇幻旅程	文藝類+資訊類	網頁一：寓言故事及圖片（例如：華特·迪士尼的標誌性帽子） 網頁二：指南攻略、圖片（例如：萬聖節狂歡——惡人派對反轉全城） 網頁三：遊覽資訊或網頁廣告、圖片或表格（例如：樂園導覽圖）	透過寓言故事揭示夢想與勇氣的重要性，並介紹萬聖節狂歡活動的精彩攻略，讓讀者了解如何全情參與；同時提供詳盡的遊覽資訊，幫助他們輕鬆導航這片奇幻天地。

Appendix B. The outline of two online reading exercises for primary school

閱讀練習	涉及能力點	內容
一	- 找出圖形(如圖、表或地圖)中的具體訊息 - 比較和對比網站內與網站間的訊息 - 確定網站中所呈現的觀點或偏見	兩個網頁：科普類資訊和科學雜誌文章 四至五幅圖片 每個能力點涉及兩道試題（共 6 題）
二	- 描述網站中圖形元素的效果 - 歸納來自相同或不同網頁或網站內的訊息 - 判定網站上訊息的可信度	兩個網頁：敘事性故事和人物訪談 兩至三個網頁廣告 每個能力點涉及兩道試題（共 6 題）

Appendix C. The outline of the six reading tasks for secondary school

閱讀任務	主題	內容類型及組成（例子）	可配合的原教材篇目以及原 EDB 推薦篇目
一	格物致知	1. 《何為格物致知》 格物致知的概念，出處，後世影響與發展 2. 《淺談「工匠精神」》 工匠精神的本質，中國哲學對工匠精神的認知，工匠精神的當代意義 3. 《中國非遺走向海外：美學的推廣流傳與工藝的精雕細琢》 探討工藝的傳承推廣是否與工藝精益求精的精神有矛盾	《核工記》 魏學洙《核舟記》 葉聖陶《景泰藍的製作》
二	唐詩詠懷	1. 《詩仙，詩聖與詩佛》 李白，杜甫和王維的生平介紹，個人風格，三人之間的關係。 2. 《驚艷唐詩》 唐詩在中國文學史的重大意義，藝術特色，格律形式，以及為什麼我們要在現代讀唐詩。 3. 《盛唐的背影》 從貞觀之治到安史之亂的歷史	李白《月下獨酌（其一）》 王維《山居秋暝》 杜甫《登樓》 杜甫《江南逢李龜年》 《登高》《春望》——強調詩史，沈鬱頓挫 李白《將進酒》——強調豪放，個人風格 王維《終南山》《烏鳴間》——詩佛，詩中有畫畫中有詩
三	寄情山水	1. 《遊記美學與生命省察》 亭台樓閣，遊記散文是中國文學的典型題材，是文人墨客借景抒情，感目騁懷的重要表現形式。 2. 《一場文學的「白日夢」》 《荷塘月色》的寫作背景，朱自清的情緒困境。 3. 《中西方文學作品中的自然景物》在中西方文學中（例如《瓦爾登湖》），自然景物為文人提供內心的平靜，遠離現實的紛擾。	范仲淹《岳陽樓記》 歐陽修《醉翁亭記》 蘇軾《記承天寺夜遊》 朱自清《荷塘月色》
四	文以載道	1. 《文以載道》 唐代古文運動的背景，代表人物與理論，影響與發展。 2. 《中國為何讀書》 儒家學說對中國讀書人的影響，將「修身、齊家、治國、平天下」的個人價值與社會責任相結合，並將科舉制度下的讀書作為實現理想的階梯。 3. 《在積累中成長》 成長，並非一瞬的蛻變，而是一段漫長而堅實的「積累」。	韓愈《師說》 荀子《勸學》 孔子《論語》（與學習有關） 孟子《魚我所欲也》 袁枚《黃生借書說》 梁啟超《敬業與樂業》
五	風雅宋聲	1. 《獨上高樓，望盡天涯路》 宋詞發展簡史，流派，代表人物，文學意義。 2. 《劍膽詩心辛棄疾》 文武雙全的愛國詞人辛棄疾的傳奇一生。 3. 《鐵馬冰河入夢來》 南宋抗金至亡國簡史，南宋詞作中的家國情懷和亡國之恨。	蘇軾《念奴嬌·赤壁懷古》 李清照《聲聲慢·秋情》 辛棄疾《青玉案·元夕》 王國維《人間詞話》——三境界 《宋史》——《辛棄疾傳》 王春庭《辛棄疾傳》 蘇軾《前赤壁賦》 婉約派代表詞作（李清照《如夢令》 柳永《雨霖鈴》） 岳飛《滿江紅》

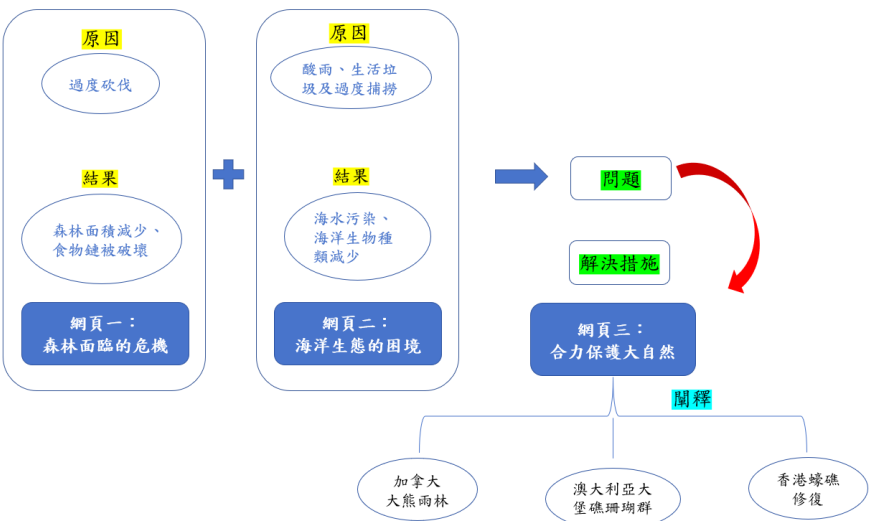
六	人物風骨	1. 《史記的人物世界》 《史記》的文學性以及對歷史的獨特觀察，主要是透過人物傳記表現出來。 2. 《人文在人》 文學評論中對讀人物傳記的意義闡釋和閱讀方法。 3. 《言辭之重》真正的雄辯，其力量不局限於邏輯與辯論技巧本身，而在於言說者傾注其中的氣節。	《廉頗藺相如列傳》 司馬遷《報任安書》 史記《鴻門宴》 《戰國策》（節選） 魯迅《司馬相如與司馬遷》 胡燕青《雙層床》
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Appendix D. Three samples of reading activity design

Sample 1：資訊類多文本閱讀理解教學指引

教學篇目： 1. 文本一「森林面臨的危機」 2. 文本二「海洋生態的困境」 3. 文本三「合力保護大自然」
篇目基本資訊： 1. 總字數：1268字 2. 類型：資訊類 3. 主題：科學，環境，生物
教學步驟： • 步驟一：指導學生根據篇章中的提示詞語（如，破壞、覆蓋、食物鏈、物種、威脅、瀕危）建立初步文本結構（問題—成因—解決）。 • 步驟二：指導學生從文本中提取重要的觀點，並形成主旨。 • 步驟三：指導學生從文中尋找能夠支撐重要觀點的相關細節，將主旨擴寫為總結。 • 步驟四：運用因果推理或比較，對文本作出推論。 • 步驟五：結合閱讀成果，擴充文本結構。
工作紙示例： • 找出整篇文章的總體主旨/關鍵觀點/中心思想： {請確保使用與文章整體結構相符的主旨句框架。例如，因果關係：原因是_____，結果是_____，解決方法是_____。} 答案示例： 大自然正遭受嚴重破壞，以森林和海洋為代表，例如，森林面積減少、食物鏈被破壞、海水污染及海洋生物種類減少。（問題） 造成這種情況的原因是過度砍伐森林、酸雨進入海洋、海水中的生活垃圾以及過度捕撈。不同國家或地區通過立法保護自然棲息地、設立海洋保護區以及開展生態修復項目的方法，以此減少對森林、海洋的破壞。（解決方法） • 透過添加文本細節延伸主旨 答案示例：大自然正遭受嚴重破壞，以森林和海洋為代表，面臨著不同的威脅。森林面積減少：根據2021年熱帶原始森林覆蓋面積統計，很多國家的原始森林面積已大幅減少。2. 海洋海水污染及海洋生物種類減少：海龜誤食像水母的塑膠袋，致死率就可達 50%。 造成這種情況的原因是過度砍伐森林、酸雨進入海洋、海水中的生活垃圾以及過度捕撈。不同國家或地區通過立法保護自然棲息地（如加拿大的雨林保護計劃）、設立海洋保護區（如澳洲的珊瑚保育）以及開展生態修復項目（如香港的蠔礁修復），以此減少對森林、海洋的破壞。

- 結合閱讀成果，擴充文本結構



Sample 2：多文本能力點的練習

能力點：將一個網頁或網站的訊息與另一個網頁或網站的訊息進行聯繫

教學目標：1. 引導學生從兩篇網頁中提取關鍵資訊，理解森林與海洋面臨的危機；2. 培養學生比較分析的能力，將森林和海洋的危機進行聯繫，找出共同點與差異點。

教學篇目：

- 網頁一「森林面臨的危機」
- 網頁二「海洋生態的困境」

教學活動流程：

一、閱讀與整理資訊（8-10 分鐘）

- 分組閱讀：
將學生分成小組（每組 4-5 人），並分別提供兩篇網頁：「森林面臨的危機」和「海洋生態的困境」。
 - 小組內部分工：
 - 2 人負責閱讀「森林面臨的危機」，提取關鍵資訊。
 - 2 人負責閱讀「海洋生態的困境」，提取關鍵資訊。
 - 1 人負責記錄與整理小組討論的內容，整理出兩篇網頁的關鍵資訊。
 - 給每組提供以下問題作為指導，幫助提取重要內容：
 - 森林/海洋面臨的主要危機/困境（問題）是甚麼？
 - 造成危機/困境的原因是甚麼？
 - 危機/困境對動植物和人類有哪些影響？
 - 有哪些數據或例子支持這些危機/困境的嚴重性？

二、比較與聯繫（8-10 分鐘）

- 將整理好的關鍵資訊，製作對比圖表：
 - 每組製作一張表格，對比森林與海洋的危機/困境，找出相同點或不同點。
 - 表格範本：

危機及困境	原因	結果
森林	過度砍伐	1. 森林面積減少 2. 食物鏈被破壞

	海洋	酸雨、生活垃圾、過度捕撈	1. 海水污染 2. 海洋生物種類減少
	相同點	人類活動是主要原因	動植物、人類生存環境受到破壞

2. 全班討論：

○ 森林和海洋危機（問題）有哪些相似之處？有哪些不同？

○ 這些危機對我們人類生活的影響是甚麼？

○ 從這些危機中，你認為我們可以做些甚麼來幫助改善環境？

Sample 3：多模態能力點的練習

能力點：描述網站中圖形元素的效果 教學目標：1. 引導學生理解森林與海洋危機的內容，並學習如何通過圖形元素來表達和解讀資訊。2. 幫助學生運用圖形元素(如圖表、圖片、地圖等)來分析和聯繫網站中的訊息。3. 培養學生的多模態閱讀能力，提升對圖文結合資訊的理解和表達能力。 教學篇目： 1.網頁三「合力保護大自然」
教學活動流程： 一、理解篇章與分析圖形元素 (10-15 分鐘) 1. 分組閱讀與提取資訊： ○ 將學生分成小組 (4-6 人)，分別為文字組和圖片組。請同學們在閱讀「合力保護大自然」的過程中，結合工作紙，記錄自己對文本產生疑問或不清楚的地方。 2. 圖形元素分析： ○ 教師每組派發兩種不同的工作紙進行討論，分別為只提供文字 (文字組)，以及只提供圖片 (圖片組) 的兩種工作紙。 以網頁三，<u>加拿大大熊雨林</u>文字部分及圖 1 大熊雨林保護區域為例：每組完成工作紙後，邀請文字組和圖片組的學生互相交換分享。待分享結束後，引導兩組學生互相補充或拓展文字。 二、展示大熊雨林保護區域圖，與學生討論： (8-10 分鐘) ● 這些圖形元素表達了甚麼信息？

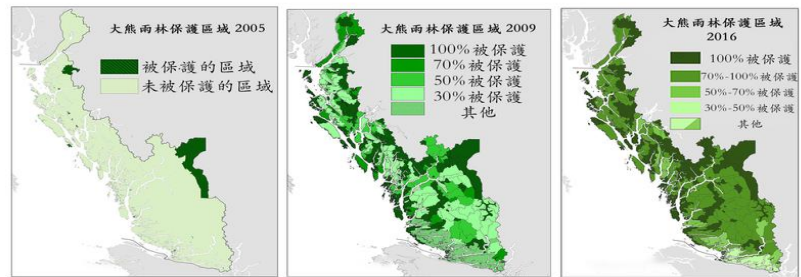
- 它們是否解答了我們在閱讀時產生的疑問？是如何幫助我們更好地理解文章的？

工作紙一：

大熊雨林地處加拿大西部，1990 年，這片雨林只有 5%的林地受到保護，許多野生動物因此失去了家園。2009 年，加拿大卑詩省政府頒布了雨林保護計劃，通過立法禁止居民在雨林保護區內進行開採活動，自此，超過 85%的林地得到了有效保護。

請思考： 根據以上文字內容，畫一幅說明大熊雨林保護區域變化的圖。

工作紙二：



Appendix E. Details of the primary schools' teachers' workshop

In-person hands-on sessions: Mastering Online Reading Strategies

Teachers' Workshops (Main content/Duration)	Details
Core concepts of online reading & its enablers (1.5 hours)	(1) Re-conception of reading and the need to develop students' competencies in online reading. (2) Online reading skills that include comprehend and integrate information conveyed through multiple texts and multimodal elements (videos, interactive graphics and audio clips) and understand their relationship with text in online situations.
Multiple-Texts Reading (1.5 hours)	(1) Various skills needed to effectively engage with multiple texts. (2) Examining case studies that demonstrate how different capacities for reading multiple texts influence comprehension, followed by group discussions to brainstorm strategies for bridging gaps in these areas. (3) Collaborate in small groups to create lesson plans that integrate multiple texts, focusing on the skills that students may need to improve.
Multimodal Reading (1.5 hours)	(1) Explain what multimodal reading is and investigate its different components, gaining an understanding of how these elements collaborate to improve comprehension and engagement. (2) Analyze how the interactivity of multimodal elements supports the written text, enriching meaning and offering further context. (3) Key skills required to effectively incorporate multimodal elements into reading instruction.
Assessment and questions design with required skills (1.5 hours)	(1) Guidelines for creating effective reading questions suitable for both multi-text and multimodal scenarios. (2) Engage in designing questions using the given multi-text and multimodal examples. (3) Choose a multi-text or multimodal reading example and present their questions to peers for constructive feedback. (4) Explore ways to modify questions for diverse learners to ensure accessibility for all students.

Online sessions (Tier One): Unlocking the Essentials of Online Reading

Teachers' Workshops (Main content/Duration)	Details
Core concepts of online reading & its enablers (1 hour)	(1) Re-conception of reading and the need to develop students' competencies in online reading. (2) Online reading skills that include comprehend and integrate information conveyed through multiple texts and multimodal elements (videos, interactive graphics and audio clips) and understand their relationship with text in online situations.
Multiple-Texts Reading (1 hour)	(1) Various skills needed to effectively engage with multiple texts. (2) Examining case studies that demonstrate how different capacities for reading multiple texts influence comprehension.
Multimodal Reading (1 hour)	(1) Explain what multimodal reading is and investigate its different components, gaining an understanding of how these elements collaborate to improve comprehension and engagement. (2) Analyze how the interactivity of multimodal elements supports the written text, enriching meaning and offering further context. (3) Key skills required to effectively incorporate multimodal elements into reading instruction.

Online sessions (Tier Two): Teaching and Assessment of Online Reading

Teachers' Workshops (Main content/Duration)	Details
Foundations of Online Reading Instruction (1 hour)	(1) Discuss the cognitive processes involved in online reading. (2) Explore core reading strategies for online texts and introduce tools and technologies that can support online reading.
Integrating Multiple Texts and Multimodal Resources (1 hour)	(1) Strategies for navigating and synthesizing information from various online texts; Techniques for teaching students to compare and contrast perspectives across sources. (2) Discuss the importance of teaching students to interpret and evaluate multimodal resources critically.
Assessment Techniques for Online Reading Skills (1 hour)	(1) Explore various assessment types, including formative, summative, and diagnostic assessments.

Teachers' Workshops (Main content/Duration)	Details
	(2) Discuss how to create questions that measure comprehension, critical thinking, and interpretation of online texts.

Intensive School Support: List of Secondary Schools (in Alphabetic Order)

- 1. [Redacted]
- 2. [Redacted]
- 3. [Redacted]
- 4. [Redacted]
- 5. [Redacted]
- 6. [Redacted]
- 7. [Redacted]
- 8. [Redacted]