The Effectiveness of Developing and Optimizing a Self-Learning Course to Promote Chinese Learning

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Abstract: Most universities in Hong Kong require that students demonstrate fluency in the Chinese language. In 2013, the Department of Chinese Language and Literature (CHLL) and the Independent Learning Centre (ILC) at the Chinese University of Hong Kong initiated the development of "CHLT 1104 Self-learning Elementary Chinese" to facilitate independent learning for international students who do not possess prior Chinese language education. This paper presents the redesign and optimization of CHLT 1104 Self-learning Elementary Chinese at the Chinese University of Hong Kong from an instructional design perspective. The manuscript is structured according to an ADDIE-informed process: analysis of learner needs and course limitations, design of enhanced learning pathways and platform layout, development of new bilingual materials and trilingual videos, implementation of the revised course in the second semester of 2025–2026, and evaluation via a structured questionnaire and open-ended feedback. The study clarifies the evolution of the course from three original modules to five, articulates the pedagogical rationale for the revised design and learning activities, and clarifies the differences between quantitative questionnaire results and qualitative feedback themes. The evaluation findings indicate significant student approval of the updated platform, while the open comments provide detailed information regarding usability, material organization, and recommendations for further enhancement. Numerous students believe that the newly integrated elements will greatly improve their understanding of the Chinese language and culture. However, feedback indicating the necessity for design enhancement or an extension of the course parameters has also been acknowledged. The design and optimization of this course is considered effective and successful.

Keywords: Self-learning Course, Chinese Learning, Online Learning, Independent Learning, Language Learning

1. Introduction and the Research Question

The need for independent Chinese learning at CUHK is not new. Since the 1980s, CHLL has developed self-learning resources for Chinese language study, created a language knowledge reader, “Selected Essays on Chinese Language,” mainly for students to study independently for the then-mandatory Chinese course. (Chao, 2015) From 2012 to 2015, the content of this book evolved into “The Chinese Grammar Site,” an online learning platform created by Independent Learning (ILC), with a funding from the Teaching Development Grant (TDG). Building on this tradition, CUHK and ILC launched several self-learning Chinese courses, including CHLT 1104 Self-learning Elementary Chinese, an introductory course for beginners. The course combines mandatory lectures, optional consultations, and an online platform to support guided independent learning in three areas: Chinese Characters, Cantonese, and Putonghua. This design reflects the view that self-learning courses should accommodate differences in learners’ self-regulated learning capacity and provide both structure and flexibility (Lin, Gong, and Xu, 2021). CHLT1104 is designed as a self-learning course that allow students to achieve their specified learning goals at their own pace, according to their learning habits and with proper guidance.

The research question of this paper is: Can the optimization project enhance the effectiveness of CHLT 1104 Self-learning Elementary Chinese to promote Chinese learning? This question is answered by explaining the analysis of the original course, the aims of the optimization project, the project's development, the implementation, the evaluation findings, and the following discussion.

2. Analysis of the Original Course

The need for revision of CHLT1104 emerged from both prior course experience and student feedback. Since the launch of CHLT 1104 in 2014, approximately 200 to 250 students have enrolled each semester, and the student population has become increasingly diverse, including local, mainland, and international students with different levels of prior exposure to Chinese. One of the comments collected from the course evaluation in the first semester of 2022, stated that: “I found this course very helpful, but as a native Mandarin speaker, the recommended links and books might be a bit basic. It would be even better if there were learning materials at different levels for native and non-native speakers. However, the teacher's lectures were very clear. Due to the pandemic and online classes, my Zoom sometimes didn't work, and I'm very grateful to all the teachers for their timely feedback via email. Thank you again, and best wishes!” (informant U) Similar comments could be found on course evaluations from more recent years, for example, another student’s comment from first semester of 2023 stated that: “If it’s possible it might be better to classify student's ability before the course lecture.”

(informant X). The comments suggested that certain students needed more explicit guidance for self-learning, while others found certain aspects of the original materials to be too basic and these comments should consider a compelling justification for course enhancement. Therefore, to effectively address the existing diverse needs of students and the future development, ILC and CHLL decided to revise and enhance the complete curriculum. A project entitled "Enriching the Self-Learning Resources of CHLT 1104 Elementary Self-Learning Chinese for International Students," funded by the "Teaching Development and Language Enhancement Grant 2022–2025" at CUHK, was effectively implemented aiming to enhance the content and design of CHLT 1104.

3. Aims of the Optimization Project

The project aims to optimize the content and design of CHLT 1104 Self-learning Elementary Chinese in response to the increasing diversity of its student population. It focuses on enhancing the online platform through written materials, exercises, feedback questions, and multilingual videos to support more effective independent and deep learning in Chinese language, writing system, grammar, and culture.

4. Development of the Optimization Project

The optimization is focused on both curriculum and platform layout.

Table 1: revisions that have made:

Design Element	Revision Made	Purpose
Course structure	Expanded from 3 modules to 5 modules	Address different proficiency levels and broaden learning pathways
Content organization	Shorter sections with clear subheadings	Improve readability and support self-paced learning
Language support	Bilingual written content and trilingual videos	Accommodate diverse student language backgrounds
Navigation	Indexed layout and side navigation buttons	Help learners locate relevant content efficiently
Learning activities	Added reflection and repetition exercises	Promote active engagement rather than passive reading
Media design	Added 30 short, subtitled videos	Support comprehension and flexible independent learning
Evaluation	Embedded 10-question feedback form	Collect formative and summative feedback on the redesign

The existing three modules— "Learning Chinese Characters by Yourself," "Learning Cantonese by Yourself," and "Learning Putonghua by Yourself"—were updated with new information and new angles. The content is prepared in both Chinese and English; users can switch languages by clicking the "Switch language" button on the webpage. Furthermore, the written content of all learning modules is divided into small sections, each with a clear subheading. Users can use the buttons on the left side of the webpage to jump directly to the content they wish to view. Please see Figure 2 for an example of how the module has been presented.



Figure 1

In response to students' feedback that the existing modules were too basic, two new modules—"Modern Chinese Grammar" and "Introduction to Chinese Literature and Culture"—were added to broaden the curriculum and better accommodate differences in learner proficiency, motivation, and depth of interest. The grammar module introduces key features of modern Chinese grammar, such as quantifiers, word order, tenses, and auxiliaries, for intermediate-level learners, while the culture module has the broadest scope of the five modules, covering traditional Chinese religions (*Please see Figure 3) in Hong Kong as well as major literary genres, including poetry, lyrics, novels, and prose, alongside an introduction to Hong Kong culture and literature.



Figure 2

Additional written explanations, reflective questions, and exercises were integrated into the revised platform so that the site would support guided self-learning rather than function only as a repository of links and notes. Please see Figure 4 for an example.

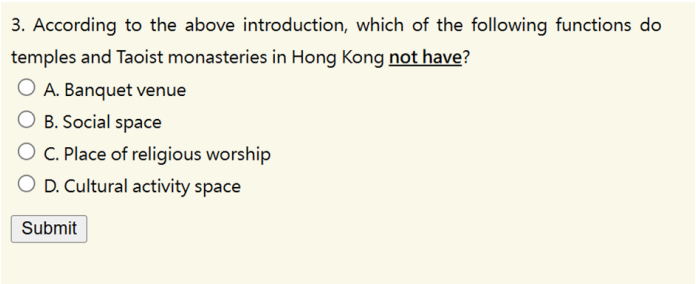


Figure 3

To enhance independent learning, the project added instructional videos to the online platform. Instead of the original plan for 5 English videos, the team produced 30 subtitled videos in English, Mandarin, and Cantonese to better suit students' diverse language backgrounds. The videos are usually under four minutes, and Figure 5 shows a screen capture of the video on Chinese kung fu culture.



Figure 4

An evaluation form was developed and embedded into the online platform to collect users' opinions on the optimization. Please see Figure 6 for the first part of the feedback system.



Figure 5

5. Implementation of the Revised Course

The project was originally scheduled from February 2024 to April 2025, but the need to develop multilingual videos extended the work until the end of 2025. The revised course was then implemented in the second semester of the 2025–2026 academic year, from January to April 2026. During this stage, students engaged with the optimized platform as part of CHLT 1104 and were invited to complete an embedded evaluation form after using the revised materials.

6. Evaluation and Findings

This paper adopted a mixed-method research approach to examine the optimization of CHLT 1104 Self-learning Elementary Chinese. Burke et al. (2014) contend, mixed-method research can take several forms, and this study adopted a quantitatively driven design in which quantitative analysis was given priority while qualitative comments served to complement and enrich the interpretation of the survey results. The revised course was implemented in the 2025–2026 academic year and evaluated through an embedded project-specific questionnaire. The questionnaire comprised 10 items: nine closed-ended questions rated on a five-point agreement scale with a non-applicable option— "Strongly Agree" (6), "Agree" (5), "Slightly Agree" (4), "Slightly

Disagree" (3), "Strongly Disagree" (2), and "Non-Applicable" (N/A) (1)—and one open-ended question for additional comments. The evaluation questionnaire was project-specific, as it was designed explicitly for this course optimization project to gather feedback on the usability, students' perceptions, and overall effectiveness of the revised CHLT 1104 course platform. It was therefore tailored to the aims of the study rather than adopted as a generic institutional survey. Between January and April 2026, 156 students completed the form. Quantitative data were analyzed descriptively, and the open-ended responses were analyzed thematically to identify recurring patterns in student feedback. Overall, the findings show very positive student perceptions of the redesigned course.

6.1 Quantitative Findings

For Question One: The interface of the platform is user-friendly, we can see from Figure 7 that 3 students have indicated dissatisfaction (*slightly disagree and below) with the system's interface. The combined ratings of "Slightly Agree" and above have collected a total of 153 students, or almost 98% of the total participants indicated that most of the students found the interface user-friendly. Moreover, 121 students, or over 77% of the total participants, have selected "Agree" or a higher rating for this question.

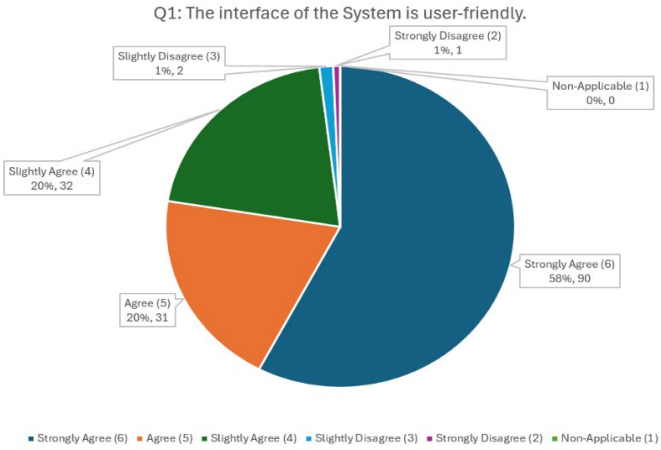


Figure 6

For Question Two: The difficulty level of each learning module is appropriately balanced, a total of 152 students from the combined ratings of "Slightly Agree" and above, or almost 97% of the participants, found the difficulty level of each learning module is appropriately balanced (based on Figure 8). A total of only 4 students expressed dissatisfaction. Furthermore, 114 students, or over 73%, picked the "Agree" or higher rating option for this question, indicating that one of the main objectives of this optimization—addressing the needs of students with varying proficiency levels in Chinese—should be considered quite successful.

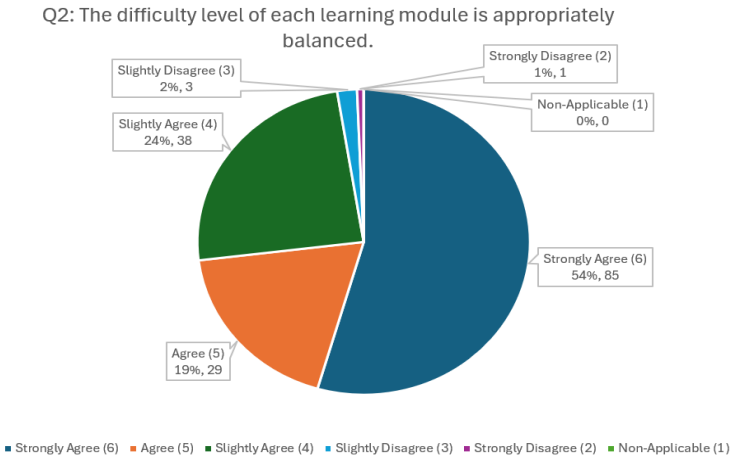


Figure 7

For Question Three: The content of the learning modules facilitates my understanding of the evolution and

characteristics of Chinese characters, only 1 student indicated dissatisfaction with the content of the learning module on Chinese characters, while 3 students selected "Non-Applicable" (N/A) (based on Figure 9). A total of 152 students, covering almost over 97% of participants, rated the learning modules as "Slightly Agree" or higher, indicating that these modules facilitate the understanding of Chinese characters. Furthermore, 126 students, or almost 81% of the total participants, selected "Agree" or a higher rating. Among the 5 learning modules, this is the highest number that combines these two ratings.

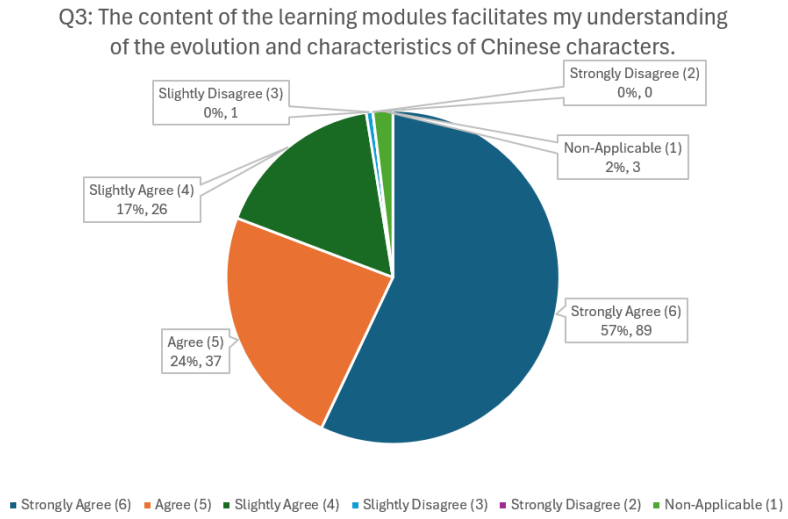


Figure 8

For Question Four: The content of the learning modules enhances my awareness of the fundamental features of Cantonese, although there are up to 3 students indicated dissatisfaction with the content of the learning module on Cantonese, we can see from Figure 10 that the combined ratings of “Slightly Agree” and above is still very high, there were 152 students or almost over 97% of the total participant. It would indicate that the student still found the learning module very good for learning Cantonese. Furthermore, the number of students who chose “Agree” or a higher rating is also very high; there are a total of 116 students, or over 74% of the total participants.

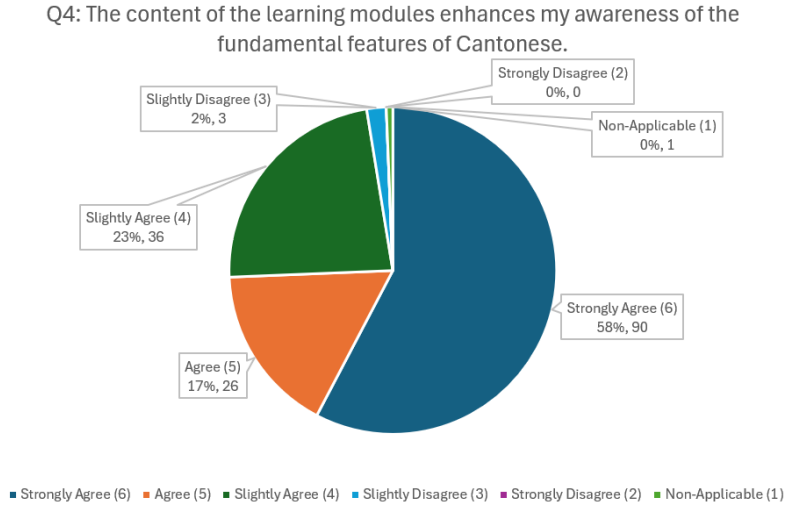


Figure 9

For Question Five: The content of the learning modules enhances my awareness of the fundamental features of Putonghua, 3 students indicated dissatisfaction with the content of the Putonghua learning module, while 3 others selected "Non-Applicable" (N/A), resulting in a total of 150 students from the combined ratings of “Slightly Agree” and above (based on Figure 11). Although 150 is still very high (covering over 96% of the participants), it is the lowest number among the 5 learning modules (Chinese characters, Cantonese, Putonghua, Modern Chinese grammar & Chinese culture). Furthermore, 114 students, or more than 73% of the total

participants, have chosen an "Agree" or higher rating. This number is also a bit low when compared with other learning modules.

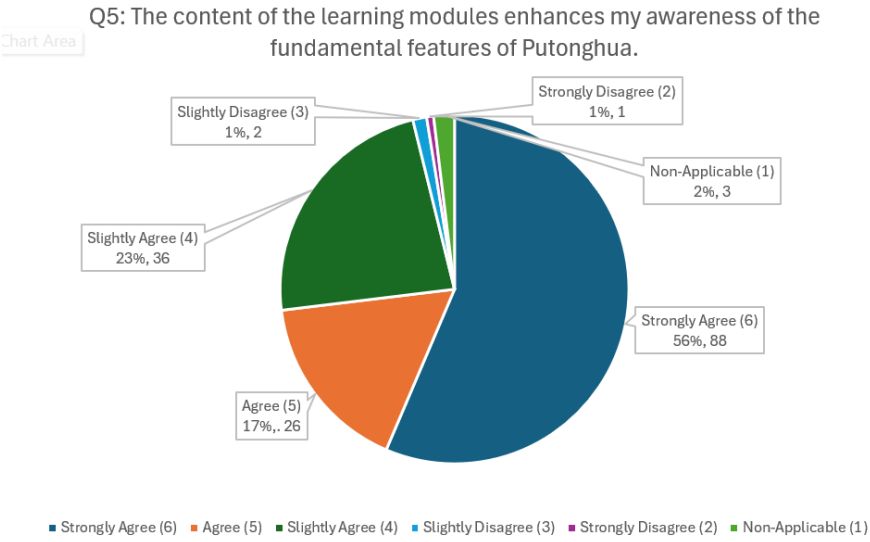


Figure 10

For Question Six: The content of the learning modules helps me understand the learning difficulties of modern Chinese grammar, this is the only question for which no students indicated dissatisfaction, while 2 students selected “Non-Applicable” (N/A). Based on Figure 12, a total of 154 students, or nearly 99% of the total participants, selected “Slightly Agree” or above, indicating that the learning module supports their comprehension of modern Chinese grammar; this is the highest total across the combined positive ratings. Furthermore, 119 students, or over 76% of the total participants, chose “Agree” or above.

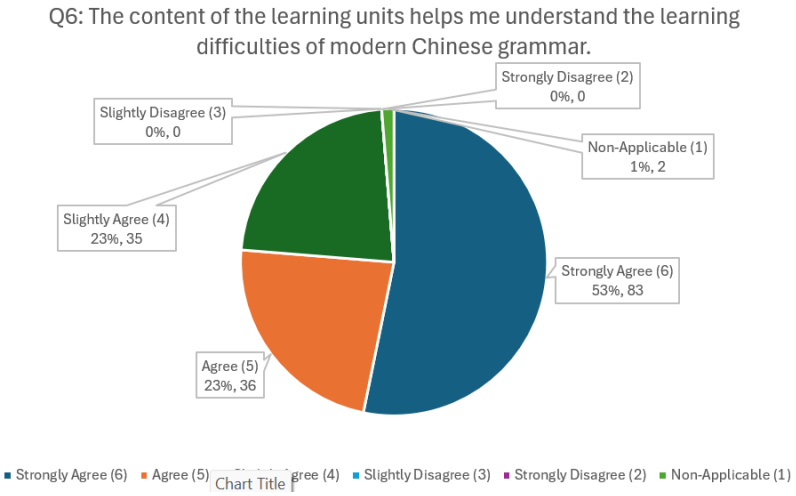


Figure 11

For Question Seven: The content of the learning modules broadens my understanding of the diverse aspects of Chinese culture, only 1 student has indicated dissatisfaction with the content of the Chinese culture learning module, while 3 students selected “Non-Applicable” (N/A) (based on Figure 13). A total of 152 students from the combined rating of “Slightly Agree” and above, or over 97% of the total participants, indicated that the learning modules support their comprehension of Chinese culture. Furthermore, 122 students, or over 78% of the total participants, have chosen an "Agree" or higher rating. Among the 5 learning modules, this is the second highest number that combines these two ratings.

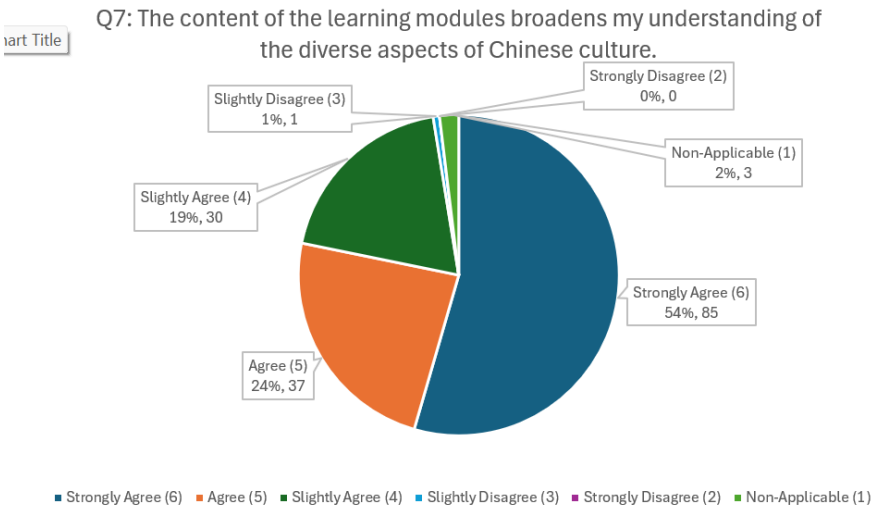


Figure 12

For Question Eight: The suggested learning resources are useful for my own learning of Chinese, we can see from Figure 14, almost all students, or nearly 99% of the total participants from the combined ratings of “Slightly Agree” and above, indicated that learning resources are useful for the learning of Chinese. Only 1 student indicated dissatisfaction, while 1 student selected “Non-Applicable” (N/A). Furthermore, 124 students, or over 79% of the total participants, have chosen an "Agree" or higher rating.

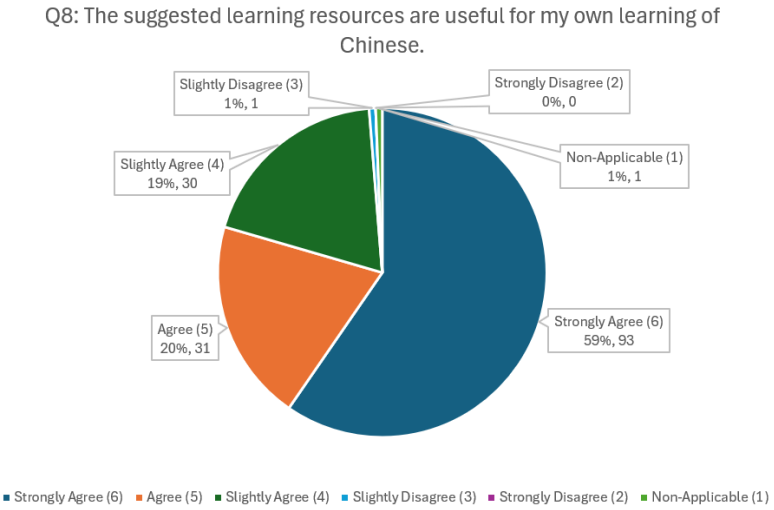


Figure 13

For Question Nine: I will recommend the platform to my fellow CUHK students, 5 students indicated that they would not recommend the platform to other CUHK students, while two students selected "Non-Applicable" (based on Figure 15). This is the greatest number of negative responses among all feedback questions. Nonetheless, there are still 149 students from the rating of "Slightly Agree" and above, or over 95% of the total participants, who indicated that they would recommend the platform. Moreover, 115 students, or nearly 74% of the total participants, selected a "Agree" rating or above.

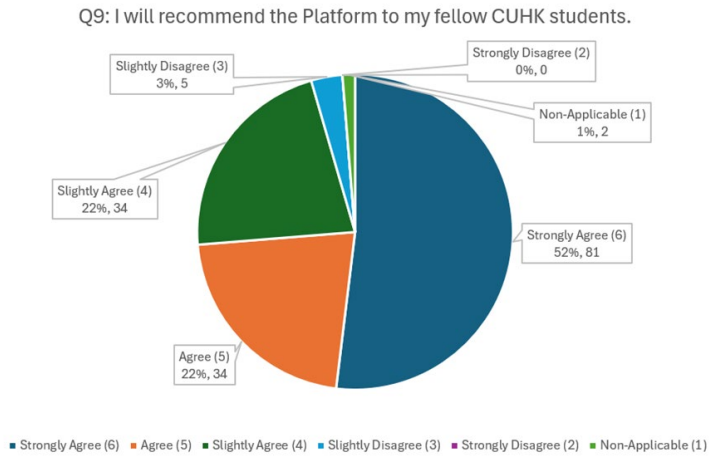


Figure 14

6.2 Qualitative Findings

For Question Ten, the open-ended responses provided the qualitative component of the evaluation. These responses were first reviewed and then coded into recurring thematic categories to identify the main patterns in students' feedback. Seven themes were derived inductively from the content of the 32 comments : (1) user experience, (2) suggestions for improvement, (3) language learning modules, (4) platform design, (5) platform content, (6) learning and usage experience, and (7) no comments. This qualitative analysis complements the quantitative survey findings by providing a deeper understanding of how students perceived the revised CHLT 1104 platform.

As shown in Figure 16, the overall feedback was overwhelmingly positive. Only two comments were negative: "The duo push is not available for those who change devices and do not delete them" (Informant A) and "Slow website" (Informant B), and four entries contained no comment. In addition, six comments offered positive remarks on the overall learning experience, such as "Very good" (Informant C) and "Very efficient" (Informant D). The content and design of the platform also received ten positive comments, including "It is clear and well organized" (Informant E) and "A fairly well designed and made webpage with significant resources that are well selected and well prepared. Would rate it 8 out of 10" (Informant F), suggesting that students valued the enhancements in these areas. Furthermore, six comments provided constructive suggestions for further development, indicating that students were engaged thoughtfully with the platform and remained committed to their learning.

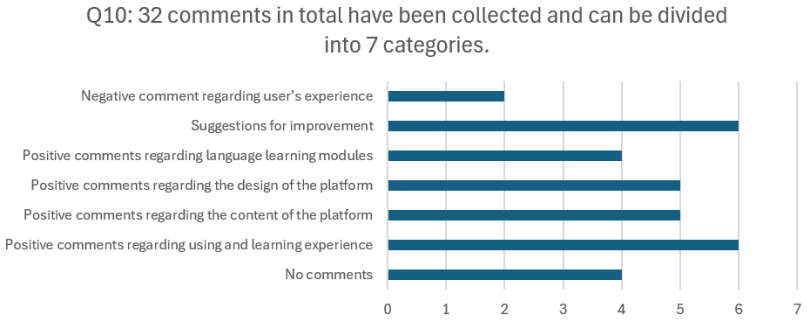


Figure 15

7. Discussion

7.1 Platform Design and Independent Learning Support

Feedback from the evaluation form suggests that the platform's design effectively supports independent learning. Question One received strong support: 153 students (about 98%) described the interface as user-friendly, and more than three-quarters selected "Agree" or "Strongly Agree." (over 77%) This indicates that the platform lowers usability barriers, helping learners focus on learning tasks rather than navigation or technical

issues. Comments in Question Ten reinforce this view, for example: "This site is very helpful and well-organized for students of any level of learning Mandarin and Cantonese." (Informant G) and "It is clear and well organized." (Informant H). One student also noted, "There are many resources to help with self-learning; it's very convenient." (Informant I) (*translated from Chinese). These comments align with the platform's aim of selecting practical resources for self-learning. Hua, Wang, and Li (2024) suggest that student capacity to monitor their learning process and choose resources and strategies that align with their requirements is essential for effective self-directed learning. The responses to Question Eight have shown a nearly universal agreement ("Slightly Agree" or above) that the recommended resources are beneficial, indicating high satisfaction and perceived learning value. This should be considered an indication that students are confident in selecting the appropriate tools for self-learning. Therefore, putting together the responses from Questions One and Eight with selected comments from Question Ten, we can consider the platform meets student expectations for a webpage design that facilitates independent learning.

7.2 Curriculum Development and Learner Diversity

The revised curriculum for CHLT1104 has been expanded to cover a wider range of Chinese language components, including spoken Chinese (Putonghua and Cantonese), written Chinese (Chinese characters), Chinese grammar, and Chinese culture. A core objective of the optimization is to strengthen and modernize the online platform to accommodate students with different proficiency levels and interests in Chinese learning. We can consider this objective met, because across all nine closed-ended questions on the evaluation form, more than 95% of the 156 respondents selected "Slightly Agree" or above, suggesting consistently positive perceptions of the platform. These high satisfaction levels indicates that the current platform already provides an accessible, supportive environment that satisfies the learning needs of an increasingly diversified cohort of local, mainland, and international students. Further evidence can be found in the comments provided by students. One student praised the platform for providing comprehensive explanations for Chinese learning: "This website provides an accessible explanation of Chinese culture and Chinese characters, offering comprehensive and diverse information. It's suitable for beginners, those interested in Chinese culture and language who wish to further improve their language skills, and even native speakers seeking advanced learning opportunities. Highly recommended." (Informant J) (*Translated from Chinese). Meanwhile, another student appreciated the site's support for different proficiency levels, noting: "This site is very helpful and well-organized for students of any level of learning Mandarin and Cantonese." (Informant K). These comments suggest that students can choose what they need based on their own requirements, and the online system can support effective self-disciplined learning. A focus study conducted by ILC in 2023–2024 on the perception of independent learning of CUHK students revealed that self-discipline is considered a critical component of effective independent learning, particularly in an online environment, as it is perceived as self-determination and a result of self-motivation. (Chao, 2025) The optimization has enhanced the online platform with more diverse and broader content, offering more entry points and directions for exploration and making it easier for students, especially beginners, to maintain a self-disciplined learning attitude.

7.3 Module-Level Learning Outcomes and Self-Learning

Basith et al (2019) argued that anxiety can significantly impede Chinese language comprehension, especially for foreign learners who struggle with tones, characters, and performance pressure. Learning difficulties may also stem from the design of the materials themselves. Chen (2021) found that international students often have difficulty engaging with online materials related to Chinese cultural elements and therefore rely heavily on teachers for learning and problem solving. In this regard, Informant L's comment— "it's a very well-balanced read that meets the middle-ground between depth and simplicity. Most of the text cuts to the chase with minimal filler, which is something I can appreciate."—suggests that the platform's written content was well received, consistent with the high ratings for all five learning modules. Guo, Li, and Guo (2024) further note that student satisfaction and continued engagement in online learning can be improved through stronger content, delivery, and instructional design. The five modules showed only minor differences in evaluation. The Chinese characters module (Question Three) performed particularly strongly, with about 81% of students selecting "Agree" or above, the highest among the five modules for these two positive categories. This suggests that it was especially effective in supporting students' understanding of the evolution and characteristics of Chinese characters. The Chinese culture module (Question Seven) also performed strongly, with more than 78% selecting "Agree" or higher. By contrast, although the Putonghua module (Question Five) maintained a high approval rating, it recorded the lowest percentages for both "Slightly Agree" or above and "Agree" or above. Although over 96% of students still rated it at least "Slightly Agree," and more than 73% selected "Agree" or higher, this

relative decline suggests that students may have found the Putonghua content slightly less beneficial or less aligned with their needs. These differences are likely related to variations in the writing approach. Additional elements such as historical facts, distinctive angles, and unique characteristics enriched the Chinese characters and Chinese culture modules, and this approach appears to have been well received, as shown in the comment "very rewarding and informative" (Informant N). Taken together, the evaluation results and student comments suggest that the updated content across all five modules successfully increased students' interest in Chinese learning and supported effective self-learning.

7.4 Feedback on Putonghua and Cantonese Modules

The independent learning survey conducted by ILC in 2022–2023, indicated that most students tended to associate self-learning with academic writing and language learning (Chao et al 2023). The optimization intends to accommodate student's language learning needs, by further develop their interest and proficiency in Chinese languages through revising and updating the content and design of the two Chinese language modules. Fundamental introductions, informative explanations and interesting facts have been provided to Putonghua (the official language of China) and Cantonese (the local dialect of Hong Kong) modules. In result, both modules received positive feedback, including comments such as "This site is very helpful and well-organized for students of any level of learning Mandarin and Cantonese." (Informant O), indicating that students appreciate the content and design. However, there are small differences between the Putonghua and Cantonese modules. The Cantonese module shows a slightly higher acceptance rate than the Putonghua module, exceeding it by about 2% in the "Strongly Agree "categories. In addition, written comments about Cantonese are more detailed and informative. One student remarked: "Thank you ILC teachers who created this course for foreigners and other students. I have learnt a lot more regarding the background and history of my mother tongue Cantonese. And I would love to preserve this language to future generations and help other people discover this amazing and complex language." (Informant P). This comment is notable because it reflects not only knowledge gains but also reflection on how the platform may support self-learning of local language and culture. Another student even makes a deeper reflection on how to further develop the online platform by proposing: "It would be even better to launch a self-study platform for 'Hakka' and 'Weitou' dialects in collaboration with the Association for Conservation of Hong Kong Indigenous Languages. Both 'Hakka' and 'Weitou' dialects are local languages, yet they are neglected and lack sufficient learning resources. Therefore, it would be beneficial if the self-learning platform could help preserve these endangered local dialects." (Informant S) (*translated from Chinese). These comments suggest that the language modules—especially the Cantonese module—can successfully promote effective independent learning and support deep learning by motivate students to evaluate and reflect deeply on the significance and potential application of what they have learned.

7.5 Multimedia Learning and Video Effectiveness

The 30 videos produced for the online platform are highly appreciated by students. Comments such as "Really like the content of the videos, helped me gain a better understanding of Chinese" (Informant T) and "Videos are very helpful and easy to understand." (Informant W) suggest that the videos are an effective instructional method. Chan and Chao (2022) have studied the effect of adding sign language and subtitles to instructional videos and found that well-produced videos can encourage not just SEN students but also average students to engage in independent learning. The newly created videos are designed to foster an environment in which students can practice and strengthen independent learning skills; based on the positive comments received, this component should be considered successful. Li et al (2025) suggested that improved or additional academic guidance from teachers is crucial for achieving better learning results in online educational environments. However, teacher guidance can also be provided through alternative formats, such as an online platform with comprehensive instructional videos and curated learning resources. The high evaluation ratings for the interface (Question One) and the recommended learning resources (Question Eight), together with the strongly positive written comments about the videos, suggest that students can rely on an effective online platform, like the one provided by CHLT1104 to support successful online learning.

8. Conclusion

Despite project delays and minor adjustments, the evaluation findings indicate that the optimization of CHLT1104 Self-learning Elementary Chinese was effective. The revised curriculum and online platform appear to meet the needs of a more diverse student cohort, with particularly strong responses to the Chinese characters, Cantonese, and Chinese culture modules. Overall, the updated materials were perceived as useful,

accessible, and motivating, and the positive feedback on the interface, learning resources, and instructional videos suggests that the platform effectively supports independent learning. The results further indicate that the Cantonese module may be particularly beneficial for reflection and deeper learning. In addition, the positive responses and comments indicate that a well-designed online platform, equipped with sufficient instructional videos and suitable learning resources, can serve as an appropriate alternative to traditional educational settings. Taken together, the optimized CHLT 1104 Self-learning Elementary Chinese course demonstrated an effective blended self-learning approach for tertiary level Chinese language learning by engaging students with a more independent and deep learning-ready content and design.

Ethics Declaration

This study was approved under the project "Enriching the Self-Learning Resources of CHLT 1104 Elementary Self-Learning Chinese for International Students" funded by Teaching Development and Language Enhancement Grant (TDLEG) (reference no. #4171102) and was conducted in accordance with the guidelines of the Survey and Behavioural Research Ethics Committee (SBRE) of The Chinese University of Hong Kong (CUHK).

AI Declaration

Generative AI tools have been applied solely to verify the grammar and refine the language of this paper. The content of this paper, which includes all data, concepts, research methods, research outcomes, research findings, citations and references was entirely developed or composed by the author.

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