

Students Learning Achievement and Satisfaction of Chinese Proficiency Test (HSK1) Reading Courses on the Udemy Platform

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Received: January 15, 2024

Accepted: March 29, 2024

Online Published: July 26, 2024

doi:10.5539/jel.v13n5p260

URL: <https://doi.org/10.5539/jel.v13n5p260>

Abstract

This study aimed to explore the effectiveness of learning the Chinese Proficiency Test (HSK) 1 reading course through the Udemy platform and assess the learner's satisfaction with learning the Chinese course on the Udemy platform. The participants were 30 zero-foundation learners with minimal exposure to basic Chinese expressions and were randomly selected from those enrolled in the Chinese course on Udemy. The pretest and post-test were designed for this study, and the researchers sent the satisfaction survey to the Chinese language learners to investigate the learners' satisfaction. The findings revealed that the students' post-test scores were significantly higher than the pretest scores; the current online Chinese language courses benefit students in learning the language. The satisfaction survey results showed that learners were satisfied with learning Chinese courses on the Udemy platform.

Keywords: learning achievement, Chinese proficiency test, reading, online course, Udemy platform

1. Introduction

1.1 Introduce the Problem

Due to the development of network technology, online course learning has gained immense popularity. This way of teaching makes teaching flexible and avoids the obstacles of time, space, and courses. Students are no longer required to adhere to fixed classroom schedules (Mahmood, 2020). As China's economic and cultural influence continues to grow, the popularity of Chinese language courses has increased (Chen, 2021). Online Chinese language courses are gradually becoming mainstream. With the continuous development of information technology, more and more Chinese language courses have started to adopt online teaching modes, which allow learners to study anytime and anywhere and improve learning efficiency. According to data released by Hanban, a directly affiliated institution of the Ministry of Education of China, the global population of Chinese language learners will surpass 100 million by 2020, with over 3,000 foreign institutions offering Chinese language programs (Zhao & Huang, 2010).

Consequently, Chinese language exams have garnered increasing attention. As the number of Chinese learners increases, these exams have emerged as the benchmark for assessing learners' proficiency in the language (Jiang, 2020). The HSK test is a globally recognized instrument that effectively measures Chinese language proficiency (Jiang, 2020). Not only does it serve as a comprehensive assessment of students' linguistic abilities, but it also provides critical language credentials for studying and working in China. As a result, it holds significant appeal for international students, who view it as a crucial steppingstone in the linguistic journey.

However, many online MOOC platforms, such as Coursera, Udemy, Lynda, and edX, offer Chinese courses. Although students' feedback on these platforms can be seen as a comment on the courses, it is impossible to understand the progress and absolute satisfaction of international students learning Chinese in depth. Therefore, as the researchers of Chinese classes should produce and upload courses to the platform to test students' Chinese performance and satisfaction with the course.

1.2 Chinese Proficiency Test (HSK)

The Chinese Proficiency Test (HSK) is a standardized language proficiency test designed for non-native Chinese speakers (Ozdilek & Robeck, 2009). It is administered by Hanban, a directly affiliated institution of the Ministry

of Education of China. The HSK test measures a candidate's proficiency in listening, reading, and writing Chinese as a foreign language (Peng et al., 2021).

The regulations have undergone significant revisions, transitioning from a six-level system to a new framework of three levels with nine distinct grades (Wu, 2023). It is not in line with the time of the course research, and the content is the same as that of the previous levels in the lower levels; the main difference is in the higher levels. Consequently, the researchers have focused on the old version of HSK Level 1, particularly the reading component. Reading is a pivotal aspect of the HSK exam as a metric for assessing non-native speakers' Chinese proficiency. Successfully navigating the reading section necessitates the development of specific skills (Ozdilek & Robeck, 2009). The HSK 1 reading section tests basic reading comprehension skills such as identifying simple vocabulary words, understanding simple sentence structures, and recognizing basic grammar patterns (Su & Shin, 2015). HSK reading skills were measured using a questionnaire created by the researchers to examine learners' reading skills. The researchers will also design the curriculum based on the books published in the HSK standard syllabus.

1.3 Develop the HSK 1 Reading Courses by ADDIE Model

To further enhance the Chinese language curriculum, a comparative analysis with various educational models reveals that the ADDIE model offers significant advantages and convenience. Its analysis and development steps align well with the needs of diverse stakeholders, encompassing teachers, schools, platforms, and students (Zhang, 2020). The model emphasizes the evaluation process, crucial for subsequent curriculum improvement and redevelopment. The primary objective of the researcher is to assess the effectiveness of the video course, and the ADDIE model aptly fulfills this requirement (Stapa & Mohammad, 2019).

The ADDIE model comprises five key steps: analyze, design, develop, implement, and evaluate. This product development concept is widely used in construction (Lawrence, 2016). The application of ADDIE in education emphasizes the importance of intentional learning that is student-centered, innovative, authentic, and inspirational (Branch, 2010), therefore, the HSK 1 reading video course design is analyzed as follows:

Analysis: The analysis includes (a) the online platform used; (b) the needs of the students; and (c) the appropriate textbook to develop the syllabus of the HSK reading course; (d) the syllabus and the exam analyze how to design the pre-and post-tests; (e) analyzing the platform's use, the course's design, and the perspectives from which the students can design the satisfaction surveys.

Design: (a) designing the teaching objectives and content, content sequencing, with a total of 16 lessons and videos of 5–15 minutes in length; (b) designing the methodology for teaching and learning activities, including lesson introduction, content presentation, and practicing what has been learned; (c) designing the evaluation of learning outcomes through tests and satisfaction questionnaires; (d) designing the background of the course PPT and video lessons and design the position of the teacher's role in the video, text size, and color; (e) designing the pretest, post-test, and satisfaction survey.

Develop: In this activity, the researchers developed the lessons via instruction based on the information acquired in the activities above.

Implement: (a) course recording and instructional notes according to the course syllabus and lesson plan; (b) signing up for the Udemy online course platform and uploading video courses, pretests, post-tests, and satisfaction surveys.

Evaluation: In this step, there are two types of assessment: (a) evaluating the course quality through tests and a satisfaction survey. This step occurs after developing the curriculum and questionnaires. Experts will determine the relevant content and give suggestions and comments. The researchers will make changes according to the applicable content and upload it to the Udemy platform; (b) students will evaluate the course through a satisfaction survey after uploading the course.

There are criteria for evaluation as follows:

Likert scale: 1 Not very good, 2 Not good, 3 Neutral, 4 Good, 5 Excellent

The interpretation of the average score on quality of the course and satisfaction survey is as follows:

4.50–5.00 = Very good

3.50–4.49 = Good

2.50–3.49 = Neutral

1.50–2.49 = Not good

1.00–1.49 = Not very good

1.4 The Introduction of the UdeMy Platform

UdeMy (<https://www.udemy.com/>) is an online learning platform that offers various courses on diverse topics, including business, technology, design, and personal development. It was founded in 2010 (Muawiyah et al., 2018). UdeMy differentiates itself from other MOOC platforms by allowing anyone to create and offer a course to the UdeMy community (Ahrache et al., 2013). It allows for a vast library of courses and offers diverse topics from various instructors.

Courses offered on UdeMy are typically self-paced and feature a blend of video lectures, quizzes, and assignments, providing learners with comprehensive and interactive educational experiences (Cowie & Sakui, 2019). While some courses are offered free of charge, others require payment. UdeMy also offers a 30-day money-back guarantee for all paid courses. UdeMy is also known for its mobile application; everyone can download it onto any mobile device (Maria et al., 2016). This feature dramatically enhances accessibility, allowing students to access course content seamlessly. Over the years, UdeMy has gained immense popularity and boasts a vast user base. The platform has over 50 million students and 57,000 instructors teaching courses in over 65 languages (Zulueta-Veliz et al., 2022).

The HSK courses on UdeMy are extensive, including courses for all HSK 1-6 levels and in HSK vocabulary, grammar, reading, listening, speaking, and more. Besides that, the UdeMy platform is available to individual, non-school teachers in China and has important implications for individual Chinese language teachers in China (Liu, 2020).

1.5 Research Problem

Based on using the UdeMy platform for teaching Chinese language courses, the research questions for this study are the comparison between students' pre-and post-test scores and the satisfaction of students after learning Chinese language courses on the platform. Satisfaction includes evaluating the courses and the overall satisfaction of using this platform to learn Chinese. Therefore, the research questions are as follows.

- 1) What is the quality of the developed Chinese Proficiency Test 1 reading courses?
- 2) After studying Chinese Proficiency Test 1 via UdeMy platform, is the post-test score higher than the pretest?
- 3) Are students satisfied with taking Chinese Proficiency Test 1 reading courses on the UdeMy platform?

2. Method

This study adopts a quantitative approach to assess the quality of the course. After uploading the course, we utilize testing mechanisms and satisfaction surveys to investigate students' achievement and satisfaction. Subsequently, the researchers collect and analyze the data using SPSS methods to gain insights into the effectiveness of the course and the student's perception of it.

2.1 Participants

The population of this study was 100 zero or basic-level Chinese learners who enrolled on the UdeMy platform to take a Chinese course in 2 months, which means the participants have no experience in learning Chinese or only know Chinese pinyin and some simple sentences. They have yet to receive systematic Chinese language training. The UdeMy platform applies to the world; students come from all over the world and are not limited by time and location. The researchers will randomly select 30 samples. All students are from different countries, which means their native languages are not Chinese.

2.2 Research Design

Step 1: The course design was firmly rooted in the standard syllabus and curriculum of the HSK, focusing primarily on crucial vocabulary and grammar. Each lesson, spanning 5 to 15 minutes, totals 16 lessons, ensuring comprehensive coverage. Subsequently, the course content was recorded and edited to ensure its professional presentation.

Step 2: The courses were evaluated by three experts and the researcher's advisor, who are good at teaching HSK.

Step 3: The videos were uploaded to the UdeMy platform if the content was consistent and relevant.

Step 4: The test design was based on the standardized syllabus and standard curriculum of the HSK, the test questions in the pretest, post-test, and satisfaction survey were developed.

Step 5: The pretest, post-test, and satisfaction surveys were checked and evaluated by three other experts and the researcher's advisor.

Step 6: Tests and satisfaction surveys were uploaded to the UdeMy platform, and students who listened to the

course then took pre-and post-tests. The random samples of 30 students were selected from the 100 students on the platform, and then the data was counted and analyzed.

Step 7: A satisfaction survey was also posted on the platform, allowing students to score their satisfaction after studying and analyzing their satisfaction with the course and using the Udemy platform.

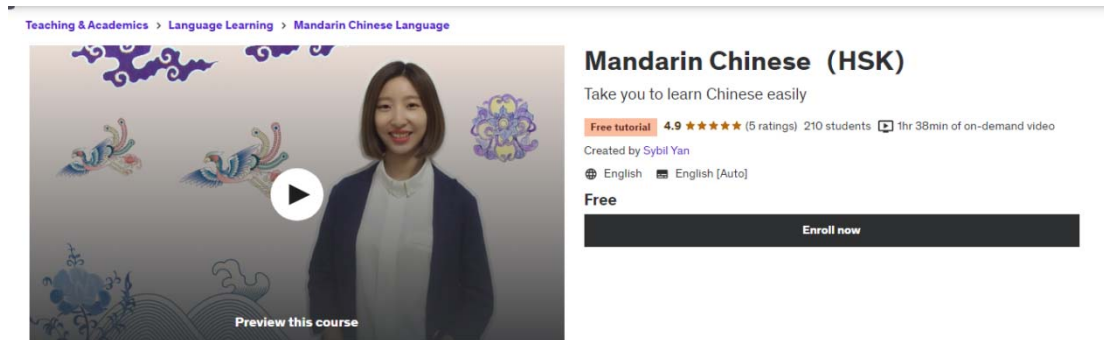


Figure 1. Chinese lessons on the Udemy platform

2.3 Data Collection and Data Analysis

Data for this study was obtained from the pretest and post-test, which were used at the beginning and the end of one lesson to compare the participants' reading ability before and after learning the HSK1 reading course on the Udemy platform. The researchers would choose three lessons from the course for the pre and post-test and then collect data in 2 months. After these three courses, the researchers would submit a satisfaction survey to the samples to collect data. The researchers adopted different methods for data collection by promoting the course through website links and students searched for Chinese courses on the platform based on their needs. The platform also marketed Chinese courses, attracting students to register. Researchers set up the back-end system, communicated with students, guided them to take tests, filled out questionnaires, and then collected the data.

The data analysis determined the significant difference between the pretest and post-test scores by calculating the mean of the two scores and finding out the standard deviation (S.D.) and pretest and post-test scores, a t-test was used in this study. Then, the learner satisfaction survey used the Likert scale to measure student satisfaction, and the mean and standard deviation (S.D.) were analyzed for HSK 1 reading course satisfaction on the Udemy platform.

The mean scores from the survey are explained below:

- 4.50–5.00 = Very satisfied
- 3.50–4.49 = Satisfied
- 2.50–3.49 = Neutral
- 1.50–2.49 = Not satisfied
- 1.00–1.49 = Very unsatisfied

3. Results

The results of this study were conducted to fulfill the study's objectives according to the data using quantitative methods. Findings were collected from the quality of the course, pretests, post-tests, and satisfaction ratings completed by 30 learners enrolled in an online course (the participants in this study)

3.1 The Quality of the Developed HSK1 Reading Course Video

Likert scale: 1 Not very good 2. Good 3. Neutral 4. Good 5. Very good

The mean scores of the closed-ended questionnaire are explained below:

- 4.50–5.00 = Very good
- 3.50–4.49 = Good
- 2.50–3.49 = Neutral
- 1.50–2.49 = Not good

1.00–1.49 = Not very good

Table 1. The IOC of the experts to check the quality of the course videos

Item Questions	Experts			\bar{X}	Level
	1	2	3		
1. Do you find the picture quality of the video lessons clear?	5	4	4	4.33	Good
2. Is the length of the video course reasonable?	5	3	5	4.33	Good
3. Is the sound of the video lessons clear?	4	5	5	4.67	Very good
4. Do you find the content of the video engaging?	5	4	4	4.33	Good
5. Do you find the video course design logical and coherent?	4	4	4	4.00	Good
6. Will students clearly understand the content of the video?	4	3	4	3.67	Good
7. Did you find the teacher's explanations clear?	3	3	3	3.00	Neutral
8. Is the teacher's teaching style and language appropriate?	5	5	4	4.67	Very good
9. Are the lessons in the video clear and concise?	4	4	4	4.00	Good
10. Are the lessons in the video engaging?	5	5	5	5.00	Very good
11. If you were a student, would you choose an online video class to learn the HSK reading course?	5	4	5	4.67	Very good
12. You would choose an online course because of his convenience.	5	5	5	5.00	Very good
13. You would choose an online course because it is practical.	5	4	5	4.67	Very good
14. Do video courses still have room for improvement?	5	4	5	4.67	Very good
15. Do any design aspects need to be added to the HSK reading and learning videos?	5	5	5	5.00	Very good
16. Are you satisfied with the content of the current HSK1 reading video lessons?	4	5	5	4.67	Very good
Total Mean				4.43	Good

Table 1 presented the scores provided by three experts on the quality of the developed HSK1 reading course video. The mean score was 4.43, which indicated that the courses were high quality. When analyzing each item individually, it was evident that items No.10, No.12, and No.15 received the highest mean score of 5.00. This signifies that the course was highly interactive and engaging, and the videos provided a convenient and comprehensive learning experience.

The second highest score items were No.3, No.8, No.11, No.13, No.14, and No.16, with a mean score of 4.67. This indicated that the video sound was clear, the content was understandable, the teacher's teaching language was appropriate, and the content was relevant and satisfactory to students.

The third highest score items were No.1, No.2, and No.4, with a mean score of 4.33. This reflected the crispness of the images, the appropriate length of the videos, and the engaging nature of the content. In conclusion, the quality of the HSK 1 reading course was high. With suggestions as follows:

- (1) Some lessons should be added in the middle to make the overall course seem more coherent.
- (2) The teacher should use more understandable language when explaining words and usage.

3.2 The Result of the Pretest and Post-Test

To compare the difference between pretest and post-test scores in learning the Chinese Proficiency Test1 reading test through the Udemy platform.

Table 2. The result of the pretest and posttest

Test	N	Mean	S.D.	T	Df	Sig
Pretest	30	29.73	13.06	-16.39	29	.000
Posttest	30	72.57	15.82			

As shown in Table 2, the mean score of the pretest was 29.73, with a standard deviation (S.D.) of 13.06. The mean score of the post-test was 72.57 with a standard deviation of 15.82, indicating that the student's scores were higher than their scores on the pretest. Significant differences existed between Chinese video courses before and after learning ($P < 0.001$).

3.3 The Satisfaction of Students with Learning Chinese Proficiency Test Reading Lessons Through the Udemy Platform

Table 3 showed the mean and standard deviation of satisfaction on learning the HSK1 reading course through the Udemy platform (N = 30)

The survey mean score was as follows:

4.50–5.00 = Very satisfied

3.50–4.49 = Satisfied

2.50–3.49 = Moderate

1.50–2.49 = Unsatisfied

1.00–1.49 = Very unsatisfied

Table 3. The result of the satisfaction survey

Content of satisfaction survey	X	S.D.	Level
1. Do you think the content of the lessons is interesting?	4.53	0.63	Very satisfied
2. Are you satisfied with the length of the course?	4.53	0.68	Very satisfied
3. Was the teacher clear in his lessons?	4.4	0.78	Satisfied
4. Do you feel that the number of products is satisfactory?	4.2	0.76	Satisfied
5. Is the course practical?	4.5	0.68	Very satisfied
6. Was the exercise portion of the course satisfactory?	4.73	0.52	Very satisfied
7. Do you find the Udemy platform easy to use?	4.27	0.78	Satisfied
8. Are you satisfied with the course format on the platform?	4.57	0.68	Very satisfied
9. Is the price of the course reasonable?	4.2	0.85	Satisfied
10. Do you find taking Chinese courses on the Udemy platform convenient?	4.33	0.76	Satisfied
Total Mean	4.43	0.71	Satisfied

Table 3 presented the findings on students' satisfaction with learning HSK reading lessons via the Udemy platform. The researchers discovered that 30 learners participated in the scoring of each question, resulting in an overall mean of 4.43 and S.D. of 0.71, indicating a satisfactory level of satisfaction. When analyzing each item, the highest score was obtained for item No.6, about satisfaction with the exercise portion of the course (Mean score = 4.73). This suggests that students were particularly delighted with the practice aspects of the course. Similarly, item No.8, inquiring about satisfaction with the format of the course presentation on the platform, also received a high mean score of 4.57, indicating students' satisfaction with the course's presentation format. The third highest score was tied between item 1, assessing the interest level of the lesson content, and item 2, evaluating satisfaction with the course's duration, scoring a mean of 4.53. This implied that students were pleased with the length of the videos and found the courses engaging. In conclusion, learners utilizing the Udemy platform to study HSK1 reading courses expressed high satisfaction, as evident from the results presented in Table 3.

4. Discussion

In this section, the results of the study and the relationship with other previous relevant studies are discussed. Many researchers support using the Udemy platform to teach HSK1 reading courses. Therefore, it is worthwhile to discuss the results of these studies to compare how they differ from those of other studies.

4.1 The Quality of the Developed HSK1 Reading

The research findings revealed that the online course content aligned effectively with the learners' proficiency level and complied with the assessment criteria. This achievement was attributed to the researchers' meticulous course design, guided by explicit learning objectives, and tailored to the student's digital age characteristics, considering the appropriate sequence, continuous relationship, and harmony in both learning objectives, content, and teaching activities. It was a study that students must learn through a designed online curriculum, which was lifelong learning. The results of our analysis were very similar to those of Khalil and Elkhider (2016). In terms of video duration, language utilization, audio volume, course design sequencing, typography, and clarity, each aspect has attained a notably high level of proficiency. This achievement could be attributed to the researchers thorough designing principles of the ADDIE model, resulting in an exceptional demonstration of these facets of the research outcomes and the design steps of the ADDIE model. The ADDIE model provided a realistic framework for organizing curriculum development projects, a goal-oriented process. And this model has a clear set of steps

anyone can follow. This can be followed when developing a learning program. Therefore, the curriculum is straightforward, easy to understand. This can also be seen in student satisfaction and experts' evaluations of the course quality. It was the same as Stapa and Mohammad (2019). The researchers thought all the teaching content was based on the teacher's and student's needs.

Furthermore, meticulous consideration was given to the nuances of the course structure, resulting in the content's exceptional suitability and quality. The ADDIE model in the course design, especially in the conception of the course, the coherence of the content, analysis, and the final production plays a huge role. However, the ADDIE model used by the Udemy platform in setting up the evaluation link is unable to communicate promptly with students, which may cause a certain degree of hindrance. Nevertheless, the videos can be evaluated through student feedback on the Udemy platform, and modifications can be made accordingly.

4.2 The Results of the HSK 1 Reading Online Course on the Udemy Platform

According to the analysis of the students' pretest scores and post-test scores, we found that the post-test scores were higher than the pretest scores, which could be explained by the fact that the students' HSK1 reading ability has been significantly improved after learning HSK1 reading course through the Udemy platform. The advantage of the course is that the students can learn it without any time constraints, and by observing the Udemy platform, The researchers found that students from different countries have enrolled in the course, which also showed that the platform could solve the problem of distance. Students found it very convenient to watch the course; there was no time limit for studying, they could study at any time, and the accompanying practice questions were their favorite part of the course. This course used the ADDIE model (Analysis et al., and Evaluation) to develop and evaluate this HSK 1 reading online course, which was a needs analysis of the target learners, learning characteristics, and motivation to determine the learning goals of the learners. It was used in designing the content of the course units, learning strategies, and evaluation methods through the Udemy platform, which has dynamic learning formats and bite-sized lessons. Learners can improve HSK1 reading and allow learners to progress through the course at their own speed.

Udemy courses are online so students can learn at their own pace and in their own time. An online course typically involves the following steps(Iuliana et al., 2018).

Step 1 Choosing a course: Learners choose lessons according to their level and needs.

Step 2 Registering for the course: Learners register to enter the lesson.

Step 3 Accessing course materials: The online lessons developed by the researchers can be accessed anywhere, anytime. Moreover, there are various learning styles. Learners can learn at their own pace, allowing students to learn important content and vocabulary from teaching videos over and over and providing interactive learning resources for learners.

Step 4 Learning and completing assignments: doing various activities that help and support students, such as having review questions from articles the teacher has assigned them to read to find the meaning of words. Simple phrases and sentences and continuous repetition exercises assigned by the teacher on the system make it possible to review vocabulary. Continuously This results in an increased vocabulary, which will help learners process their understanding from reading the content. As well as answering questions from the readings from actual practice often until skills and expertise in that skill are gained.

Step 5 Participating in discussion forums: Regular exchange of knowledge between teachers and learners, which makes the learners improve their Chinese language.

Step 6 Taking exams or quizzes: Taking exams will help students know the progress of their reading skills and will also allow them to help develop and correct each student's weaknesses.

Step 7 Completing the course: After learning and taking the test, students will know the learning results and level of their Reading HSK Test to see their progress.

This learning process will help students develop their HSK skills to a higher level. The mentioned finding was similar to the study of Lin Ruo (2021), which demonstrated that online learning could be a great way to prepare for the HSK test. The growing popularity of online learning platforms has shown promise in helping language learners prepare for the HSK test, as evidenced by the study conducted by Lin Ruo (2021), highlighting the benefits and effectiveness of online learning in HSK test preparation. Hence, students were willing to use the video course to learn and had significantly improved. Furthermore, online learning platforms, such as the Udemy platform, can provide learners with convenient and flexible access to various resources, including practice exams and vocabulary exercises. This study shows that HSK 1 reading skills can be taught via online learning when the curriculum and

accessibility meet learner needs.

However, in administering pre- and post-tests, a significant challenge arise due to the inability to ensure a standardized testing period for students. Consequently, some students completed the pretest, proceed with the course content, and promptly undertook the post-test. Conversely, others completed the pretest, watched the educational videos, and postponed the post-test for a considerable duration. This variance in study timing and pace ultimately influences the post-test scores, rendering them either higher or lower. Regrettably, our current experimental design lacked complete control over these variables, resulting in a mixed performance across students, with some achieving high scores while others scoring lower. Nevertheless, a noteworthy observation was the overall improvement in post-test grades compared to pretest scores.

It is imperative to note that students were required to submit both pretest and post-test scores, which posed a limitation in accurately assessing their test participation and performance. This hinders our ability to determine whether they have taken the exams or merely reported scores. Therefore, The researchers must meticulously consider the authenticity of the grades and identify pertinent factors that may influence their accuracy. Future endeavors should aim to enhance the experimental design to ensure greater control over variables and thereby enhance the reliability and validity of our assessments.

4.3 The Satisfaction of the HSK 1 Reading Course on the Udemy Platform.

In the satisfaction survey on the HSK1 reading course on the Udemy platform, we found that the satisfaction levels were all above 4 points, which indicated that learners were delighted with the HSK1 reading lesson through the Udemy platform. The conclusion of the study was similar to Tatiana Markova's (2017). Teachers' or professors' competence, expertise, and rapport are crucial to students' satisfaction. The platform was convenient, and the exercise portion was suitable for students. Engaging and effective teaching methods, clear communication, and supporting students' learning gave students a positive educational experience.

Besides that, the learners showed increasing satisfaction with the exercise portion of the course and the length and format; they felt interested and concentrated on the course when they were learning. Moreover, the findings were similar to the results of the study by Nipada Trairut, Nutteerat Pheeraphan, Rathapol Pradubwate, and Naruemon Sirawong (2020) which showed that learning media stimulated curiosity and help them to learn until the end and, learning the content of the course is what they need, the duration of the course has enough for students in online environment.

Acknowledgments

I extend my deepest gratitude to those instrumental in completing my research. Most importantly, my sincere thanks go to my advisor, Asst. Prof. Nipada Trairut, and co-advisor, Naruemon Sirawong. Their unwavering guidance, valuable insights, and constant encouragement were pivotal to the fruition of this study. With their expertise and support, this endeavor reached its completion. Besides that, my heartfelt appreciation goes out to the participants of this study and my family and colleagues, whose cooperation and unwavering support were integral to the research process. Their encouragement bolstered my determination, and I am profoundly grateful for their contributions to this academic achievement.

Authors' contributions

Not applicable.

Funding

Not applicable.

Competing interests

The author declares that she has no competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Informed consent

Obtained.

Ethics approval

The Publication Ethics Committee of the Canadian Center of Science and Education.

The journal's policies adhere to the Core Practices established by the Committee on Publication Ethics (COPE).

Provenance and peer review

Not commissioned; externally double-blind peer reviewed.

Data availability statement

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

Data sharing statement

No additional data are available.

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