

ANALYSIS OF THE NEEDS OF MANDARIN TEACHING USERS ON LIVE STREAMING PLATFORMS

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ABSTRACT- The rapid development of live streaming platforms has attracted an increasing number of knowledge sharers and learners. These platforms have expanded from entertainment and live commerce to knowledge sharing and monetization. Mandarin Chinese teaching has gained popularity due to its vast user base and relatively low teaching threshold. However, after a period of practice, some drawbacks have been observed, impacting teaching effectiveness and students' learning outcomes. Through questionnaires, specific student needs will be identified, and collaborative efforts among the platform, regulatory authorities, and content providers will be undertaken to improve and enhance Mandarin Chinese teaching on live-streaming platforms. This paper employs quantitative analysis to investigate the distribution of Mandarin learners on live streaming platforms, factors influencing their learning, and their satisfaction levels with the learning process. The aim is to provide valuable insights for future Mandarin teaching on live-streaming platforms and other educational domains. The rapid development of live streaming platforms has attracted increasing knowledge sharers and learners. These platforms have expanded from entertainment and live commerce to knowledge sharing and monetisation. Mandarin Chinese teaching has gained popularity due to its vast user base and relatively low teaching threshold. However, after a period of practice, some drawbacks have been observed, impacting teaching effectiveness and students' learning outcomes. Through questionnaires, specific student needs will be identified, and collaborative efforts among the platform, regulatory authorities, and content providers will be undertaken to improve and enhance Mandarin Chinese teaching on live-streaming platforms. This paper employs quantitative analysis to investigate the distribution of Mandarin learners on live streaming platforms, factors influencing their learning, and their satisfaction levels with the learning process. The aim is to provide valuable insights for future Mandarin teaching on live-streaming platforms and other educational domains.

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INTRODUCTION

The rise of knowledge sharing is attributed to the cognitive surplus concept introduced by American scholar Clay Shirky. It refers to individuals who have received education and have discretionary free time. With their rich professional knowledge and a strong desire to share, these people coming together can create significant social effects. In recent years, the

rapid popularization of the Internet in China and the rapid growth of mobile access devices have increased people's desire for knowledge and skills. This has led to greater participation and support from educators (hereafter referred to as "teachers") in knowledge sharing, monetisation, and knowledge output on live-streaming platforms (Zhang, 2018).

Research and discussions on knowledge sharing and monetisation on online live-streaming platforms mainly focus on content and user characteristics analysis. However, there is limited investigation and analysis regarding learners' learning outcomes. Learners' willingness to pay for content, learning outcomes, feedback, and evaluations are essential for guiding content output on live streaming platforms, enabling educators to adjust their sharing content and methods, and encouraging regulatory authorities to optimise and update supervision regulations. This, in turn, promotes the sustainable development of knowledge sharing on live-streaming platforms.

This research fills the current research gap and examines Mandarin Chinese teaching content on live streaming platforms, catering to a large user base. Using questionnaires, the study investigates learners' willingness to pay for learning, motivations, and satisfaction with online learning content and formats. By exploring the issues from the perspective of knowledge recipients, this research provides a scientific basis for future developments.

PROBLEM STATEMENT

As of June 2020, the number of mobile internet users in China had reached 932 million. For short video live streaming platforms, taking Douyin (TikTok) as an example, the total number of daily active users, including Douyin Huoshan (a quick video app), had surpassed 600 million as of September 15, 2020. According to the "2020 Short Video User Value Research Report," user engagement with humorous and comedic content on the platform, regarding clicks and likes, showed a declining trend, while interest in knowledge and skill-related content significantly increased. In 2019, platforms like Kuaishou (Kwai) had around 120 million pieces of knowledge-based content, accumulating over 30.8 billion likes from users, considerably higher than the 9 billion likes for comedic content.

Looking at the user base, growth trends, and the shift in user preferences, the prospects for developing knowledge sharing and monetisation on online live-streaming platforms are extremely promising. The development of knowledge sharing and monetisation on these platforms breaks the limitations of traditional education in terms of geography, cultural backgrounds, and time, making widespread and anytime learning possible (Wang, 2021).

However, from the perspective of learning methods, there are certain drawbacks to learning on live online streaming and knowledge-sharing platforms. The learning experience can be negatively affected by unstable internet signals and speeds.

Regarding learning content, as geographical boundaries do not restrict online platforms and have no admission requirements, learners with different levels of knowledge can access the same content in the same virtual space, which may affect the level of targeting in the learning experience.

The improvement in Mandarin Chinese proficiency has been driven by occupational requirements, overall skill development, and families providing a conducive language environment for children. This has created a vast learning community. Mandarin Chinese teaching on live streaming platforms meets the learning demands of many students and

compensates for the shortage of teaching resources in remote areas.

Due to the subject's unique characteristics, certain drawbacks can affect the learning experience. For example, students from different dialect regions have varying phonetic issues. When they learn the same content in the same virtual space, some learners may not receive the specific content they need or may spend more time absorbing unnecessary content. Moreover, effective Mandarin Chinese teaching requires instructors to listen and discern students' issues to provide targeted guidance. However, online teaching often involves one-way output from instructors, resulting in limited interactivity and significant impacts on the learning outcomes of Mandarin Chinese (Chen, 2019).

LITERATURE REVIEW

Cognitive surplus and knowledge payment

Knowledge sharing and knowledge payment are derived from the theory of "cognitive surplus." Clay Shirky pointed out that individuals who have received education, possess discretionary free time, and a strong desire to share knowledge form a knowledge-sharing community, leading to significant social and economic benefits. He also observed that increasing number of people spend more time using computers and mobile phones, blurring the boundaries between the online and offline worlds. The rapid development of short video and live streaming platforms in the internet world presents users with vast amounts of information, knowledge, and fragmented content. Simultaneously, the growing pressure of social competition has increased people's demand for knowledge and skills, providing a strong impetus for knowledge sharing and monetisation.

The expansion of internet coverage, the growing number of mobile internet users, and the rapid increase in users of mobile network payment have created a more extensive user base for knowledge sharing and monetisation. Data shows that as of June 2020, the number of mobile internet users in China had reached 932 million. According to the "China Internet Development Status Statistical Report 2021," as of December 2020, China's mobile network payment user base had reached 853 million, accounting for 86.5% of mobile internet users.

Initially, knowledge sharing on online platforms was free, allowing anyone to become a knowledge sharer. However, this led to disorderly, repetitive, and inefficient knowledge sharing with varying quality. In the long run, it can also decrease the motivation of high-quality knowledge sharers, thus affecting the sustainability of knowledge sharing.

The status of knowledge payment development in China

In 2016, China entered the "first year of knowledge monetisation." The transformation from free to paid services on video websites, music portals, and other platforms laid the foundation for people's willingness to pay for knowledge. From the perspective of the potential and acceptance of knowledge payment, according to Ai Media Consulting's "2017 China Knowledge Payment Market Research Report," knowledge payment users are more inclined towards financial and economic products as well as educational and training products, driven by the desire to enhance skills and accumulate knowledge. Data from the "2017 China Sharing Economy Development Report" indicated that in 2016, the transaction volume in knowledge and abilities reached 61 billion yuan, with a year-on-year growth of 205%. In recent years, the further development of knowledge payment platforms and the acceptance of

online learning methods during the COVID-19 pandemic have reignited the potential of knowledge sharing and payment on online platforms.

In 2016, "Lizhi Micro Course," a popular knowledge-sharing platform created by Guangzhou Senji Software Technology Co., Ltd., was launched. It focuses on knowledge sharing and employs a course model featuring a combination of text, images, and interactive voice to deliver micro-lectures.

In 2018, the short video platform "Kuaishou" entered the knowledge payment field and launched "Kuaishou Classroom" in June of the same year.

In March 2020, the rise of e-commerce on "Douyin" (TikTok) led to the introduction of various live-streaming incentive programs. Meanwhile, "Douyin" began promoting knowledge-oriented content to avoid excessive entertainment-oriented content. In the same year, "Douyin" introduced the "Xuelang Plan," creating the "Haidou Zhidao" mini-program, where knowledge sharers can establish personalised knowledge shops to publish various types of online courses rapidly.

According to a survey conducted by "Chuangyebang" and "Juliang Suanshu" in 2021, among the groups interested in knowledge payment products, those aged between 31 and 40 accounted for 32.4%. The following age groups with interest were 18-25 years old (including 18) and 26-30 years old, accounting for 27.5% and 21.6%, respectively. It can be seen that the majority of interested users fall within the middle to young adult age range, indicating a high demand for knowledge and a strong willingness to pay.

Furthermore, as of June 2020, the total number of internet users aged 60 and above in China surpassed 90 million, accounting for 10.3%. The impact of short video platforms on leisure activities and interpersonal communication among older people is becoming increasingly prominent. A "Senior Short Video Research Series Report" (2019) showed that 53.8% of elderly internet users would choose "content that is helpful to their lives." Knowledge-sharing content can enrich the lives of retired elderly individuals and provide excellent support to enhance their personal and social value. (Tan,2021)With China's ageing population on the rise, the demand for knowledge payment content among older people should not be underestimated.

Analytical Features

Existing literature provides detailed discussions on the user development and trends of knowledge sharing and monetisation in live streaming and knowledge-selling platforms. However, in-depth analysis focused explicitly on a particular knowledge domain or discipline, especially from the user's perspective, still needs to be improved. The existing literature tends to analyse from a macroscopic standpoint and needs more practical operability to guide implementation. Therefore, there is a need to conduct a more focused analysis within the existing framework, particularly from the perspective of the demand side, to better guide the practice of knowledge sharing and monetisation in a specific knowledge domain or discipline and apply it to the broader context of knowledge sharing practices. (Qi, 2022)

METHODOLOGY

This article used quantitative analysis, specifically through survey questionnaires, to gain

insights into the profiles of learners who choose online live-streaming platforms for learning Mandarin Chinese. The purpose is to understand learners' issues better and make improvements and adjustments accordingly.

Research Design

This study adopts a quantitative analysis method and utilises an online platform questionnaire survey. A total of 50 participants engaged in Mandarin learning on online live-streaming platforms were randomly selected, and 45 valid questionnaires were collected. The survey includes aspects such as learners' personal information (gender, age, educational background), motivation for course enrollment (individual learning needs, platform advertising attraction, personal interests), factors influencing learning effectiveness, and overall satisfaction with the learning experience.

Population and Sampling

Population Description: The subjects of this survey are users participating in Mandarin learning on online live-streaming platforms. During the survey, we collected personal information from each participant, including gender, age, and educational background. These details help us understand the background characteristics of the respondents, facilitating a better analysis of the survey results.

Sampling Method: A random sampling method was employed to ensure objectivity and representativeness. We randomly selected 50 participants from the online platforms as the survey sample. Through random sampling, we aimed to minimise sample selection bias and make the sample more representative of the entire population of users engaged in Mandarin learning on online live-streaming platforms.

Although we initially planned to collect 50 questionnaires, we received 45 valid responses. Despite slightly reducing the sample size, these useful questionnaires can provide reliable data and conclusions. We rigorously protected the participants' privacy and personal information throughout the sampling process, ensuring that all questionnaires were conducted anonymously.

Credibility

This survey was conducted online using anonymous voting, targeting a specific group of individuals engaged in Mandarin learning on online live-streaming platforms. The questionnaires were randomly distributed through multiple learning platforms, ensuring that the surveyed participants were genuinely involved in learning Mandarin on live-streaming platforms and enhancing the survey's objectivity.

A total of 50 questionnaires were distributed, and 49 were collected. After excluding four incomplete questionnaires, the survey results were maximally ensured to be objective and practical.

RESULT

This survey is based on the responses of 45 participants engaged in Mandarin learning on online live-streaming platforms. The survey covers demographics such as age, gender, educational background, course enrollment motivations, factors influencing learning effectiveness, and overall satisfaction. The data analysis aims to understand the characteristics

and preferences of learners and provide valuable insights for future course design and platform planning.

Table 1. Age distribution of learners

N	Range	Minimum	Maximum	Mean	Standard Deviation
45	56	17	73	39.11	15.130

Table 2. Gender distribution of learners

Gender Distribution				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Male	14	31.1	31.1	31.1
Female	31	68.9	68.9	100
Total	4	100	100	

Table 3. Distribution of learners' educational attainment

Educational Background				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Undergraduate	14	31.1	31.1	31.1
Secondary School	8	17.8	17.8	48.9
College	4	8.9	8.9	57.8
High School	14	31.1	31.1	88.9
Master's and above	5	11.1	11.1	100.0
Total	45	100.0	100.0	

Table 4. Distribution of learners' motivation for purchasing courses

Course Enrollment Motivation				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Personal Learning Needs	22	48.9	48.9	48.9
Platform Advertising Attraction	11	24.4	24.4	73.3
Recreational Interest	12	26.7	26.7	100.0
Total	45	100.0	100.0	

Table 5. Distribution of factors affecting learning outcomes

Factors Influencing Learning Effectiveness				
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	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Inadequate Teacher Proficiency	22	48.9	48.9	48.9
Content Not Meeting Needs	14	31.1	31.1	80.0
Poor Learning Interface Experience	9	20.0	20.0	100.0
Total	45	100.0	100.0	

Table 6. Distribution of course evaluation satisfaction

Learner Satisfaction				
	Frequency	Percentage	Valid Percentage	Cumulative Percentage
Dissatisfied	11	24.4	24.4	24.4
Satisfied	21	46.7	46.7	71.1
Average	13	28.9	28.9	100.0
Total	45.0	200.0	100.0	

The age of participants in online courses ranges from 17 to 73 years, with an average age of 39.11 years and a standard deviation of 15.130. The relatively large standard deviation indicates a dispersed age distribution among the learners, suggesting that the age range of the participants varies significantly from the average age.

Among these 45 participants, male learners account for 31.1%, while female learners account for 68.9%. It can be observed that there is a higher proportion of female learners, indicating a more significant appeal of online courses to women.

The participants in the survey have different educational backgrounds. Among them, 31.1% have an undergraduate degree, 31.1% have a high school diploma, 17.8% have a secondary school education, 11.1% have a master's degree or above, and 8.9% have a college education. This indicates that high school and undergraduate degree holders are the primary participants.

The main motivations for learners to engage in Mandarin learning on online live-streaming platforms are personal learning needs (48.9%), platform advertising attraction (24.4%), and recreational interests (26.7%). Individual learning needs are the primary course enrollment motivation, followed by platform advertising attraction and recreational interests.

Among the learners, the highest proportion, 48.9%, believes that inadequate teacher proficiency affects learning effectiveness the most. Following that, 31.1% of learners feel that the content not meeting their needs is a significant factor. Additionally, 20.0% of learners would like to be more satisfied with the learning interface experience. This feedback provides valuable suggestions for educators and platforms to enhance course quality and user experience.

Regarding course satisfaction, 21 learners expressed satisfaction (46.7%), 13 learners indicated average satisfaction (28.9%), and 11 learners reported dissatisfaction (24.4%). It can be observed that most learners hold a positive attitude towards Mandarin learning on

live-streaming platforms.

Discussion

Based on the comprehensive data analysis, the following conclusions can be drawn: Learners participating in Mandarin learning on online live-streaming platforms have a wide age range, with the majority being middle-aged.

Female learners constitute a significant proportion of online course participants. In the future, course design and layout can be more oriented towards the characteristics of female learners, with more targeted course development and promotion.

High school and undergraduate degree holders are the primary participants. Course content, depth, difficulty, and teaching methods can be tailored to cater to the needs of learners at these educational levels.

Personal learning needs are the primary motivation for purchasing online courses. Therefore, the practicality and personalised customisation of courses are of utmost importance.

Teacher proficiency and content quality have a significant impact on learning effectiveness. Improving the expertise of teachers and the quality of courses are critical factors in enhancing learner satisfaction.

From the perspective of learner satisfaction, it is essential to consider the results of those who expressed average or dissatisfied satisfaction and integrate them with the factors influencing learning effectiveness to address any existing shortcomings.

These conclusions provide valuable insights for improving course offerings, targeting the right audience, and enhancing the overall learning experience on the online live-streaming platform.

CONCLUSION AND IMPLICATIONS

Despite having a small sample size due to limited conditions, the survey holds objectivity and reference value as the samples were randomly selected and anonymous. While the survey focused on Mandarin learners on knowledge livestreaming platforms, the findings can apply to other online learners and adjustments in various learning contexts.

The results indicate that users primarily choose live-streaming platforms for Mandarin learning to improve their skills, making instructors' teaching levels and effectiveness crucial for student satisfaction. Improvements in this regard require collaborative efforts from multiple parties. Here are the key aspects to consider:

Platform Perspective

Strengthen platform regulation and supervision: Verify qualifications of knowledge producers to ensure content quality. Implement an evaluation system to grade content sharers and eliminate low-quality content.

Involve professionals in content evaluation: Engage experts in relevant fields to assess and filter content, removing redundant, erroneous, or poor-quality materials.

Enhance evaluation systems: Establish a comprehensive rating mechanism to objectively evaluate live streams and courses, allowing for timely selection and improvement.

Regulatory Perspective

Copyright protection: Address the issue of piracy and unauthorised distribution, involving regulatory bodies in supervising and intervening as needed.

Consumer rights protection: Collaborate with consumer protection agencies to address service and after-sales issues unique to knowledge-sharing products.

Knowledge Sharer Perspective

Continuous improvement: Knowledge sharers should enhance their expertise and knowledge base to maintain a competitive edge and provide high-quality content.

Learner Perspective

Informed choices: Learners should make objective and rational decisions when selecting courses, avoiding impulsive purchases driven by sensationalised marketing.

Diversify learning sources: Supplement platform learning with resources like books and professional materials to achieve in-depth understanding and proficiency.

Based on these common considerations from the platform, regulatory, knowledge sharer, and learner perspectives, the development of Mandarin teaching on live streaming platforms can be improved in the following ways:

Rigorous teaching qualifications: Require instructors to meet specific Mandarin proficiency levels as a prerequisite for teaching on the platform.

Self-regulation by knowledge sharers: Encourage them to continuously improve their teaching skills and methods, providing compelling Mandarin language learning experiences.

Dialectical learning and objective evaluation: Encourage learners to participate in discussions actively, seek teacher guidance, and objectively evaluate courses, benefiting both the platform and other learners. (Lv et al.,2022)

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