

# Utilization of Digital Resources in International Chinese Education: A Survey and Analysis of Russian Students

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**Abstract:** *Digital resources play a pivotal role in the dissemination of Chinese language and culture within international Chinese education. The utilization rate and satisfaction of students with digital educational resources directly impact the effectiveness of China's global linguistic and cultural outreach. This study focuses on Chinese language learners across 13 Russian cities, employing an online questionnaire to investigate various aspects of digital resource usage, including resource types, utilization rates, satisfaction levels, willingness to use, and the state of educational technology infrastructure. The survey results indicate high usage rates of online digital teaching resources among Russian Chinese learners, albeit accompanied by low satisfaction levels. Currently, the digital teaching resources in use primarily comprise overseas materials, supplemented by locally developed Russian resources. Notably, many high-quality digital teaching resources developed in China remain underutilized. The study also reveals a low level of technological sophistication in digital Chinese teaching hardware and equipment, as well as insufficient digital resource application capabilities among international Chinese teachers. Based on these findings, the paper proposes strategies to enhance Russian Chinese learners' utilization of Chinese digital teaching resources. Recommendations include strengthening digital resource promotion, improving international Chinese teachers' digital teaching skills, and gaining a deeper understanding of Russian students' Chinese learning needs. The study's insights contribute to ongoing efforts towards diversification, specialization, country-specific adaptation, and localization of Chinese digital teaching resources in international education contexts.*

**Keywords:** *Russian Chinese learners; international Chinese education; digital teaching resources*

## 1. Introduction

International Chinese education constitutes a crucial component of China's global communication efforts and serves as a foundational element in constructing China's discourse and narrative systems. Its significance lies in shaping and projecting the national image while enhancing the influence and dissemination of Chinese civilization. In 2021, the Center for Language Education and Cooperation of the Ministry of Education officially promulgated the Action Plan for the Construction of International Chinese Education Teaching Resources (2021-2025). This plan aims to develop new forms of digital teaching resources, including digital textbooks, online courses and virtual simulation teaching systems, thereby promoting the digital and intelligent development of international Chinese language education. This initiative underscores the paramount importance of digital teaching resources in the advancement of international Chinese education. Guo et al.<sup>[1]</sup> observe that in recent years, international Chinese digital teaching resources have demonstrated an overall trend of increasing variety and expanding scale, with the infusion of high-tech innovations propelling the high-quality development of international Chinese education.

Currently, China-Russia relations have reached their highest historical level of comprehensive strategic cooperative partnership, accompanied by a growing demand for Chinese language learning among Russians. This study, through an online questionnaire survey of Chinese language learners across multiple Russian cities, aims to elucidate the current status and characteristics of online resource utilization by Russian Chinese learners through data mining and analysis. The findings hold significant reference value for the future informatization of China's international Chinese education and the promotion of Chinese language teaching internationalization.

## 2. Concept Definition and Research Design

The concept of digital teaching resources encompasses both broad and narrow definitions. The broad definition refers to all resources that can promote teaching and learning activities, including digital teaching materials, teaching equipment and other hardware resources, teaching environments and human resources such as teachers. The narrow definition encompasses digital textbooks, digital audio, video, animation, images and other multimedia materials, teaching software, teaching tools, teaching websites, databases, and digital literature resources that promote and support Chinese teaching and learning activities<sup>[2]</sup>. This paper adopts the broad classification of digital resources, investigating not only the digital resources used by Russian students (such as audio, video, applications, website resources, mobile apps, and specialized software) but also conducting a comprehensive survey on the hardware resources, teaching environments, and international Chinese teachers' usage of digital teaching resources provided by Russian higher education institutions.

To obtain reliable survey data, this study primarily targets Chinese language learners from Confucius Institutes in three major Russian cities (including Moscow University Confucius Institute, Novosibirsk State Technical University Confucius Institute, and Ural Federal University Confucius Institute), while also conducting extensive online research on Chinese learners from 10 small and medium-sized cities, including Pervouralsk, Chelyabinsk, Nizhny Novgorod, and Ulan-Ude. The questionnaire's first section covers basic respondent information, while the main body, referencing the research of Wu et al.<sup>[3]</sup>, is designed to reflect the actual situation of Russian Chinese learners. The survey was conducted from April to June 2024. Out of 250 online questionnaires collected, 234 valid responses were retained after eliminating 16 invalid ones, yielding an approximate 94% response rate.

## 3. Research Results and Analysis

### 3.1 Demographic Characteristics of Survey Respondents

The online survey encompassed 234 Chinese language learners with the following demographic profile. Geographic distribution: 75 in Yekaterinburg, 49 in Moscow, 42 in Novosibirsk and 68 in smaller cities such as Pervouralsk. Gender composition: 70% female (163) and 30% male (71). Age distribution: 48% aged 18-22, 20% aged 23-30, 14% aged 31-40 and 18% in other age groups. Educational background: 53% with higher education. Occupational fields: 62% students, 21% government employees, 11% business personnel or private enterprise owners and 6% freelancers.

### 3.2 Utilization Rate and Satisfaction with Digital Teaching Resources

The COVID-19 pandemic prompted domestic and foreign universities to implement emergency prevention and control measures, necessitating a shift to online Chinese language instruction. In the post-pandemic era, a hybrid online-offline teaching model has emerged to create efficient and intelligent classrooms. The integration of new technologies has accelerated the modernization of international Chinese education online, bringing transformative opportunities in teaching methods, cultural activities, and educational resources<sup>[4]</sup>. Key survey findings include: A substantial increase in Russian students utilizing digital teaching resources for Chinese learning. 72.2% of respondents reported experience with online Chinese learning. Resource acquisition channels: 45.2% via social media platforms based on personal preferences. 26.7% based on teacher recommendations. 18.5% based on peer recommendations. Satisfaction with online teaching resources: 31.8% expressed a preference for online Chinese learning methods. 12.9% favored online learning over traditional classroom instruction. 45.9% found online learning resources satisfactory for their needs. 9.4% indicated no interest in online Chinese learning.

These results suggest a quantitative shift from traditional offline teaching to a hybrid online-offline model in international Chinese education in Russia, with the majority of students having engaged in online learning. However, the study also reveals limitations in digital resource promotion channels. The development and utilization of digital teaching resources should extend beyond industry professionals to include overseas Chinese communities and Chinese language enthusiasts. Promoting high-quality online teaching resources on popular Russian social media platforms (e.g., VK, Telegram) could enhance awareness and understanding of Chinese digital teaching resources among a broader audience. In terms of effectiveness, the advantages of online teaching are not yet prominent. Current digital teaching resources do not fully address the personalized needs of learners across various industries. Student evaluations of their experiences with online digital resources for Chinese learning indicate room for

improvement, suggesting the need for further refinement and adaptation of these resources to better meet learner expectations and requirements.

### 3.3 Types of Digital Teaching Resources in Use

The development of international Chinese digital resources in China has experienced significant growth in recent years. This expansion includes 19,530 international Chinese textbooks, nearly 4,000 digital textbooks, approximately 20,000 MOOCs and micro-courses, and close to 1,000 digital applications. The field has seen deepening integration of information technology with international Chinese education, including innovative applications of virtual simulation technology<sup>[5]</sup>. This diversification of digital resources has established a robust foundation for the global dissemination of Chinese language and culture.

This study examined the types of online Chinese teaching resources commonly utilized by Russian learners. Respondents identified 69 distinct apps and websites, with an average usage of 2.5 platforms per student. This diversity underscores the substantial scale achieved in both quantity and variety of international Chinese education digital resources, providing students with a wide array of options for online Chinese learning. Among these resources, those with high utilization rates include: BKPC (Chinese-Russian Dictionary) (35.56%), Train Chinese (34.44%), Pleco (21.11%), Duolingo (14.44%) and various Chinese teaching video resources on YouTube (13.33%). Figure 1 presents a visual representation of the digital resources frequently used by Russian Chinese learners.

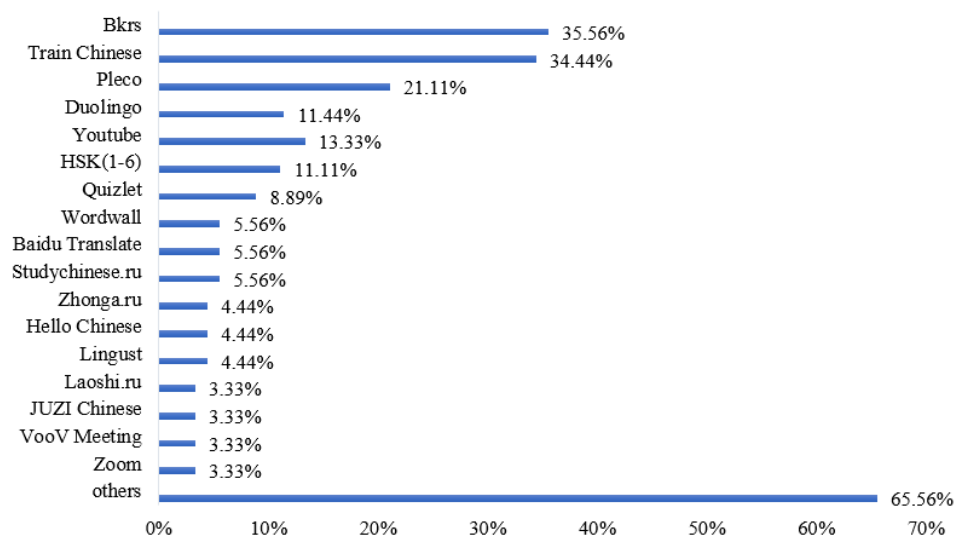


Figure 1: Digital Resources Frequently Used by Russian Chinese Learners

The survey results reveal a tendency among Russian students to primarily use overseas resources, supplemented by locally developed ones. Despite the wide variety of online Chinese resources utilized by students, these resources are highly fragmented. The platforms lack interoperability and connectivity, hindering cross-organizational and cross-system resource access and sharing. The limited scale and uneven distribution of digital resources often necessitate that Chinese learners simultaneously use 2-3 platforms to fulfill their learning requirements. Several high-quality, integrated Chinese learning platforms developed in China, such as Chinese Plus, International Chinese Smart Education Cloud Platform, Tang Dynasty Chinese International Education Informatization Cloud Platform, and Xuexitong Chaoxing Erya, effectively address the issue of resource fragmentation. However, these platforms remain largely unknown to Russian Chinese learners. Consequently, efforts should be directed not only towards promoting high-quality domestic Chinese online resources among overseas Chinese learners but also towards enhancing the digital teaching literacy and capabilities of international Chinese teachers. It is crucial to disseminate the new concept and model of online+offline blended teaching in international Chinese education and to expand the use of high-quality domestic online digital resources. These initiatives will contribute to a more cohesive and effective digital learning environment for Chinese language learners in Russia and potentially other international contexts.

### **3.4 Educational Equipment Resources and Utilization Efficiency**

This study surveyed the state of educational equipment resources in Russian higher education institutions. The results indicate that 90.3% of respondents reported the availability of basic equipment such as computers and projectors, along with internet connectivity in classrooms. However, only 18.7% indicated the presence of electronic whiteboards. Regarding device usage for Chinese learning, 49.3% of students use personal computers, 41.2% use smartphones, and 9.6% use tablets. Teachers' utilization of hardware facilities primarily involves content presentation (41.6%), assignment distribution (23.4%), online teaching (13%), online testing (7.1%) and facilitating online discussions (3.9%). These findings suggest that while Russian institutions generally possess adequate hardware conditions for online Chinese learning, the level of digitalization and intelligent integration of teaching equipment remains relatively low, potentially constraining the development of online Chinese instruction.

The data analysis also reveals suboptimal utilization efficiency of teaching equipment resources. From the student perspective, there is insufficient awareness of online Chinese learning opportunities, and participation rates need improvement. From the teacher perspective, equipment usage is primarily focused on content delivery and task assignment, with limited emphasis on real-time teacher-student interaction, personalized feedback and student progress monitoring. These findings highlight persistent challenges in international Chinese teacher development. Potential solutions include leveraging online MOOCs and micro-courses to address imbalances in overseas teaching resources, enhancing overseas volunteer teachers' pedagogical skills through regular training, and promoting student-centered teaching approaches to meet diverse learner needs.

### **3.5 Willingness to Use Digital Teaching Resources**

The study investigated Russian Chinese learners' willingness to use international Chinese digital teaching resources<sup>[6]</sup>. The findings are encouraging, with 95.6% of respondents expressing their intention to continue or try using digital resources for online Chinese learning. This high acceptance and strong learning motivation among Russian students towards Chinese digital teaching resources provide a solid foundation for cultivating students' awareness of online Chinese learning and improving the effectiveness of autonomous online learning.

The intended use of digital teaching resources by Russian Chinese learners primarily focuses on specific language skills. The breakdown of preferences is as follows: 23.1% for HSK-specific practice, 17.8% for oral training, 16.3% for grammar training, 15.9% for listening training, 11.5% for writing training and only 15.4% for comprehensive Chinese resources. Notably, current domestically developed language skill applications are predominantly comprehensive, with most specialized apps focusing on HSK preparation. There is a scarcity of apps targeting reading and writing skills, and a complete absence of those specifically designed for listening training<sup>[1]</sup>. This disparity indicates that current digital resource development does not fully address Russian Chinese learners' interests and needs. To bridge these gaps, future development of digital resources should facilitate increased collaboration between domestic and international Chinese teachers, incorporate local needs in foreign markets, and actively promote the expansion of Chinese digital teaching resources into overseas markets. These efforts will contribute to creating more tailored and effective digital learning resources for international Chinese language learners.

## **4. Conclusion**

The profound integration of education and modern information technology has made the convergence of online and offline development in international Chinese education an inevitable trend. Digital teaching resources have become crucial vehicles for the global dissemination of Chinese language and culture. Recent years have witnessed robust development in practical cooperation between China and Russia across various fields, accompanied by a growing cohort of Chinese language learners in Russia and an increasing demand for Chinese digital teaching resources.

This study conducted an online investigation and analysis of the utilization of Chinese digital educational resources by Russian learners. It focused on the dissemination effects and evaluations of international Chinese digital teaching resources primarily developed in China and used in Russia, exploring diverse dissemination pathways. The findings provide valuable insights for future related research. The survey indicates broad application prospects for Chinese-developed digital resources in Russia, with Russian Chinese learners demonstrating strong willingness to use online teaching resources. However, at present, students' online teaching resources are primarily sourced from overseas,

supplemented by locally developed resources, with Chinese-developed digital teaching resources showing low utilization rates. Russian students express relatively low satisfaction with online Chinese teaching resources. It is imperative to expand the reach of high-quality Chinese digital teaching resources developed in China, enhance international Chinese teachers' digital teaching proficiency, and thoroughly understand the diverse needs of Russian Chinese learners. Continuous efforts should be made to promote the development of Chinese digital teaching resources towards diversification, specialization, country-specific adaptation and localization.

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