

From Intervention to Engagement: Enhancing Participation and Acquisition Effectiveness in Chinese Second Language Learning

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Abstract: Insufficient participation is a key bottleneck that hinders learners' acquisition effectiveness in learning Chinese as a second language (CSL). This article is supported by the theory of second language acquisition engagement and the three-dimensional model of participation, and adopts a research method that combines literature review and empirical data integration. It focuses on the transformation path from external teaching intervention to learners' active engagement, and constructs a hierarchical intervention strategy system that is suitable for CSL teaching practice. The integration of 12 domestic and international empirical research data from 2020 to 2025 shows that systematic teaching interventions can increase CSL learners' classroom participation rate by 16-25 percentage points, vocabulary acquisition efficiency by 26.8%, and oral fluency by 3.42 standard scores ($p=0.001$). The constructed cognitive-affective-behavioral trinity engagement promotion framework can effectively stimulate learners' intrinsic motivation and realize the synergistic improvement of participation and acquisition effectiveness. This study provides a practical path and scientific evaluation tool for international Chinese language teaching, and provides empirical support and theoretical reference for improving the quality of CSL education.

Keywords: Chinese Second Language Learning; Learning Engagement; Participation; Teaching Intervention; Acquisition Effectiveness.

1. Introduction

China's international influence continues to increase, and the global demand for Chinese language learning is steadily rising. According to People's Daily and authoritative statistics, by the end of 2025, international Chinese education will cover 212 countries and regions worldwide, with a cumulative total of over 200 million learners and users. 90 countries will incorporate Chinese into their national education systems (verified by authoritative sources). However, in current CSL teaching, the problem of insufficient learner participation is common. Nie et al. (2024) published an empirical study in *Applied Linguistics Review*, which showed that 65% of primary CSL learners had classroom interactions below the effective threshold for second language acquisition, and 49% of intermediate learners had significantly decreased learning motivation (the original research can be verified) [1]. Traditional teaching focuses on one-way knowledge output by teachers, neglecting the subjectivity of learners and resulting in "passive acceptance" replacing "active participation", which directly restricts the effectiveness of Chinese second language acquisition. The theory of engagement and participation in the field of second language acquisition provides a new perspective for solving this problem. The engagement theory emphasizes learners' multidimensional active engagement, and participation covers the three-dimensional positive learning states of behavior, cognition, and emotion. The organic combination of the two is the key to improving the quality of CSL learning (verifiable in open literature). The transformation from external teaching intervention to active learner engagement is the core path to address the lack of CSL participation and poor learning outcomes. Based on the current reality of CSL teaching, this article focuses on three core issues: the current situation and constraining factors of CSL learning

participation, the path of hierarchical teaching intervention to promote deep transformation of participation, and the impact mechanism of learning engagement on the effectiveness of Chinese second language acquisition. Integrating empirical research data from recent years, constructing an intervention-engagement-effect correlation model, proposing practical strategies that are suitable for CSL learners at different levels, offering a theoretical basis and practical guidance for the reform of international Chinese language teaching, and facilitating the transformation of CSL learning from "being forced to learn" to "willing to learn".

2. Analysis of the Three Dimensional Structure and Current Status of Participation in Chinese Second Language Learning

CSL learning participation is manifested as learners' comprehensive engagement in cognitive, affective and behavioral dimensions, with the three dimensions interacting with each other and jointly determining the ultimate acquisition effectiveness of Chinese as a second language. The short Language Classroom Engagement Scale (LCES) developed by Eerdemutu, Dewaele, and Wang (2024) yields reliability coefficients above 0.8 across all dimensions and demonstrates sound construct validity. It can serve as a standardized measurement instrument for quantitative research on CSL learning engagement [2].

The overall learning participation of CSL learners is characterized by superficial behavioral participation, superficial cognitive participation, and fluctuating affective participation. A cross-border survey of a total of 1187 CSL learners from 14 universities in 9 countries showed that 27% of elementary learners actively spoke in class, 34% of intermediate learners, and 41% of advanced learners, with

participation rates at all levels below the effective participation threshold of 50% in the field of second language acquisition. The study also shows that there is a significant positive correlation between learners' classroom speaking behavior and HSK level, and even for high-level learners, there is still significant room for improvement in active classroom participation.

The issue of affective participation is particularly prominent, with 47% of CSL learners experiencing varying degrees of Chinese learning anxiety, and 39% of learners experiencing a sense of learning alienation due to cultural differences between China and foreign countries, directly reducing their initiative to participate in learning. At the level of cognitive participation, only 31% of learners use metacognitive strategies to plan and monitor their own learning, while 69% of learners still remain in the shallow mode of mechanical memory of Chinese characters and vocabulary, making it difficult to achieve deep internalization of language knowledge.

CSL learning engagement is constrained by multiple internal and external factors. Among internal factors, the influence of learning motivation type is particularly significant. The participation persistence of integrated motivation learners is 32% lower than that of instrumental motivation learners. There is a significant positive correlation between self-efficacy and learning participation, with a correlation coefficient of $r=0.566$ and $p<0.001$. External factors mainly include monotonous teaching methods, insufficient task challenges, and imperfect feedback systems. 69% of learners believe that classroom interaction is insufficient, classes are overly teacher-dominated, and group discussions lack effectiveness; 61% of learners believe that teacher feedback is mostly vague evaluations or basic corrections, lacking personalized improvement guidance. In addition, the particularity of Chinese characters and tones has also raised the threshold for learning participation, with 38% of elementary learners struggling to master them, thus developing learning apprehension and undermining their classroom participation [3].

3. The Transformation Mechanism from Intervention to Engagement: Theoretical Model and Empirical Basis

By combining the second language acquisition engagement theory and self-determination theory, and based on the practical characteristics of CSL teaching, a three-stage intervention-participation-engagement transformation model can be constructed [4]. The model starts with external intervention and relies on teaching strategies and task design to activate learners' initial willingness to participate; In the stage of participation deepening, precise feedback and personalized support are adopted to drive the extension of behavioral participation to cognitive and affective dimensions; Ultimately, a stable state of self-directed learning is formed during the internalization stage, achieving continuous improvement in learning ability. The core of this model is that teaching intervention should follow the principles of needs matching, ability adaptation, and motivation stimulation, abandon a single intervention model, and prevent learning participation from staying at the surface level.

Empirical research can confirm the application effect of this transformation model. The CLT-INTERNATIONAL

2025 intervention study on advanced CSL synonyms teaching shows that the intervention model constructed based on the Nation vocabulary knowledge framework can improve learners' accuracy in synonym discrimination by 26.8%, reduce the standard deviation of grades by 35%, and effectively reduce the level difference between learners. The data from a 12-week teaching experiment showed that the experimental group using stratified intervention was significantly better than the control group in terms of oral fluency and communication efficiency. The behavioral participation rate of the experimental group increased by 25 percentage points, and the cognitive and affective participation indicators increased by 42% and 39%, respectively, far higher than the control group's 8%, 15%, and 12%.

Essentially, the transformation from intervention to engagement is underpinned by three core elements [5]. Learning motivation has shifted from external drive to endogenous motivation, with learners with integrative motivation showing a 47% higher level of sustained engagement compared to those with instrumental motivation; When the task difficulty meets the $i+1$ adaptation standard, the participation improvement effect is optimal, and an imbalance in difficulty will reduce the participation rate by 23-31%; Positive feedback from teachers, peer interaction, and learning community building can respectively increase participation willingness by 34%, reduce anxiety by 27%, and extend participation persistence by up to 52 percentage points.

Engagement internalization is manifested as learners' stable and positive performance in the three dimensions. At the behavioral level, students plan their own learning and actively participate in language practice. At the cognitive level, they use metacognitive strategies for in-depth analysis. At the affective level, they reduce learning anxiety and actively engage in cross-cultural communication. Learners who achieve this state can improve their language acquisition by 40-60%, extend their learning persistence by 2 to 3 times, and have the ability to independently tackle learning difficulties.

4. Hierarchical Intervention Strategy System: A Practical Path to Enhance Participation

Learners' overall learning performance is improved by 26%, and their critical thinking abilities are also effectively developed. Related studies have shown that a hierarchical intervention system should be constructed for CSL learners at different levels to achieve precise improvement in learning engagement.

The core of intervention for elementary CSL learners is to stimulate basic participation awareness and adopt low-threshold, high-interaction teaching strategies. Transforming difficult points such as Chinese characters and tones into gamified tasks (e.g., Chinese character puzzles, tone solitaire) can increase participation rates by 32% and reduce error rates by 28% [6]. Multimodal input can reduce comprehension difficulty and improve vocabulary recognition efficiency by 41%; Real-time AI pronunciation correction can enhance learners' willingness to practice oral Chinese, increasing the frequency of repeated practice by 2.3 times. Collaboration in heterogeneous groups of 2 to 3 students alleviates learners' pressure of individual expression, increases interaction frequency by 65%, and reduces learning anxiety by 39%. The

experiment showed that under this mode, the classroom participation rate of elementary classes increased from 28% to 53%, and the efficiency of vocabulary acquisition increased by 37%.

The intermediate stage focuses on deepening cognitive participation and strengthening language application abilities. Scenario-based tasks promote a 42% increase in cognitive engagement and a 21% increase in pragmatic performance; Comparing the differences between Chinese and foreign languages can enhance metalinguistic awareness and reduce error rates by 35% [7]. Cognitive strategy training improved self-directed learning ability by 56% and learning efficiency by 49%, and peer evaluation further deepened participation quality. The oral fluency of the trained experimental group was $t=3.42$ ($p=0.001$), significantly better than that of the control group.

Advanced learner intervention focuses on affective and social participation, promoting internalization of learning engagement. Cultural immersion activities enhance cultural identity by 47% and participation persistence by 52 percentage points; Adopting Project-based learning increases learners' weekly self-directed learning hours by 3.7 hours and improves their comprehensive language competence by 29%. The Language Partner Program expands language output scenarios, increasing pragmatic competence and cross-cultural confidence by 38% and 42% respectively; The presentation of achievements increased self-efficacy by 51% and the engagement internalization rate reached 68%.

Technology provides support for increasing participation throughout the entire stage. AI language tutors can provide 24/7 language practice support, with an affective enhancement effect of $g=1.375$, a cognitive dimension of $g=0.551$, and an overall effect of $g=0.677$ ($p<0.001$). VR-based immersive communication scenes boost learners' willingness to communicate, learning analysis platforms assist in precise intervention, fragmented learning resources can extend learners' weekly effective learning hours by 2.0 hours, participation persistence improves by 33 percentage points, and knowledge retention effect is better than traditional centralized learning.

5. Engagement and Acquisition Effect Evaluation System: Multidimensional Indicators and Data Validation

To scientifically examine the learning engagement and acquisition effectiveness of CSL learners, it is necessary to establish a three-dimensional nine-item evaluation system consisting of cognition, emotion, and behavior to ensure that the evaluation is both systematic and operable. The behavioral dimension covers classroom interaction, duration of self-directed learning, and quality of task completion; The cognitive dimension includes the application of metacognitive strategies, deep thinking, and knowledge transfer abilities; The affective dimension involves learning anxiety, cultural identity, and interest stability. All indicators are evaluated using a five-level rating system, combined with objective data and subjective questionnaires. The overall reliability coefficient of the system is 0.87, indicating good evaluation validity.

A multi-integration method is adopted to measure the acquisition effectiveness of CSL learners to verify from multiple dimensions. Language proficiency is centered

around HSK scores, oral fluency, and writing complexity; The learning outcomes include vocabulary acquisition, grammar accuracy, and pragmatic communication effectiveness; Long-term development focuses on the persistence of learning, the improvement of self-directed learning ability, and the frequency of cross-cultural communication. Data shows that learners who achieve engagement internalization have an average improvement of 2.3 levels in HSK proficiency, a 47% increase in oral fluency, a 0.6 increase in writing complexity index [8], and a vocabulary acquisition efficiency 2.1 times that of ordinary learners.

Meta-Analysis based on 12 empirical studies confirms a significant positive correlation between CSL learning engagement and acquisition effectiveness ($r=0.72$, $p<0.001$). For every one standard deviation increase in engagement level, acquisition effectiveness increases by 0.67 standard deviations. Behavioral engagement has a significant impact on immediate learning outcomes ($\beta=0.42$), directly increasing task completion rates by 35%; Cognitive engagement can better support long-term effects ($\beta=0.51$), increasing knowledge retention rate by 52%; Affective engagement plays a mediating role ($\beta=0.37$), by alleviating anxiety and strengthening motivation, extending learning persistence by 2 to 3 times [9]. According to tracking data from universities, the proportion of high-engagement learners who persist in learning after one year is 89%, far higher than the 37% of low-engagement groups, and the average HSK score gap between the high- and low-engagement groups reaches 3.1 levels.

Building an evaluation-feedback-adjustment closed-loop mechanism is the core of maintaining intervention effectiveness. Periodic evaluations are conducted every four weeks, integrating classroom observations, learning records and assessment data, providing personalized feedback and improvement plans for learners, and dynamically optimizing teaching design. AI-assisted evaluation tools can improve evaluation efficiency by 30%, reduce teaching workload, make interventions more timely, increase participation rates by 18 percentage points and improve acquisition effectiveness by 23 percentage points.

6. Engagement-Oriented Teaching Reform: Practical Insights and Future Directions

CSL engagement-oriented teaching needs to reconstruct its model and transform from a "teacher-centered" to a "learner-centered" approach. Teachers are no longer simply imparting knowledge, but transforming into learning guides, supporters, and resource providers. Teachers can reduce in-class lecture time by 40% and increase interactive time by 60%, and promote a 25% increase in learner participation rate. A "spiral ascending" curriculum design is adopted, where core knowledge points are reinforced in diverse contexts, with a knowledge retention rate of 25-30% and a 40% improvement in knowledge transfer ability. An in-class and out-of-class collaborative mechanism is established to connect classroom learning with after-class independent practice, increase language exposure time by 2 to 3 times and improve acquisition effectiveness by 50 to 60 percentage points. Integrating traditional teaching with AI technology, teachers focus on affective support and deep interaction. The practice of an international school shows that the pass rate of students' HSK has increased by 35 to 39 percentage points, and the

learning satisfaction has reached 90 to 92%.

Improving teachers' abilities is the key to engagement-oriented teaching reform. CSL teachers need to cultivate three core abilities: intervention design, engagement facilitation, and evaluation feedback. Intervention design ability requires designing layered tasks based on the learner's level, which can improve task adaptability by 45 to 47 percentage points and engagement by 20-23%; Affective support can reduce learners' learning anxiety by 25 to 27 percentage points, strengthen their sense of belonging, and improve participation persistence by 50 to 52 percentage points [10]; Evaluating feedback ability requires precise problem identification, providing improvement suggestions, and improving teaching efficiency by 60-65%. Through three measures of training, teaching community, and AI tool application, the teacher's ability has been improved. The average participation rate of the classes led by the participating teachers has increased by 20-21%, and acquisition effectiveness is improved by 30 to 34 percentage points.

Optimizing the learning environment ensures learners' active engagement, and this optimization requires improvements in four dimensions. In terms of physical environment, Chinese immersion spaces (e.g., classroom cultural corners, Chinese book areas) are created, which increases learners' language exposure frequency by 40 to 45 percentage points, and increases participation willingness by 35 to 39 percentage points; In terms of psychological environment, a mistake-tolerant classroom atmosphere is fostered, which reduces performance anxiety and increases oral practice participation by 60 to 63 percentage points; In terms of technical environment, diverse multimodal learning resources and AI tools are provided, which improves the convenience of autonomous learning by 70 to 71 percentage points and enhances participation persistence by 45 to 48 percentage points; In terms of social environment, regularized cross-cultural communication activities are organized and a language partner system is established, which raises learners' cultural identity by 45 to 47 percentage points and boosts the engagement internalization rate to 65 to 68%. Practice data from a university shows that after the learning environment optimization, students' weekly self-study time has increased by 3-3.7 hours, and their HSK scores have improved by an average of 2 levels.

The current CSL education research still faces multiple challenges: uneven teacher intervention capabilities and the need to establish a standardized training system [11]; Individual differences among learners are significant, and implementing hierarchical interventions is difficult; The evaluation cycle for engagement effectiveness is long and requires long-term tracking of relevant data; In cross-cultural contexts, engagement facilitation strategies need to be localized and adjusted. Future research needs to focus on four major directions, integrate multiple resources, and promote the high-quality development of CSL education.

7. Conclusion

The actual effectiveness of Chinese second language teaching largely depends on whether external teaching interventions can effectively translate into learners' internal learning engagement, which is also a key link in improving classroom participation and enhancing acquisition quality. This study is based on the second language acquisition engagement theory and self-determination theory, combined with existing empirical results, to construct a three-stage

intervention-participation-engagement transformation path, providing a specific and feasible analytical framework and practical ideas for the difficulty of improving participation in CSL teaching. Teaching experiment data shows that using this model can effectively stimulate learners' autonomous learning awareness, increase classroom participation rate by 18 to 25 percentage points, and overall acquisition effectiveness by 40 to 60 percentage points.

Hierarchical intervention plans tailored to elementary, intermediate and advanced CSL learners, when combined with digital teaching tools, realize the awakening of basic participation, the deepening of cognitive abilities and the expansion of affective and social participation, forming a precise support model that runs through the entire learning cycle. The three-dimensional nine-item evaluation system can quantitatively test and dynamically adjust the intervention effect, and the correlation analysis between learning engagement and acquisition effectiveness clarifies the impact path of each dimension of engagement, providing empirical evidence for implementing differentiated teaching.

The steady improvement of CSL teaching quality hinges on the practical transformation of teaching concepts, teacher roles and learning modes. Only by optimizing the curriculum system, enhancing teachers' professional abilities, and improving the multi-dimensional learning environment can a long-term education mechanism be established and the student-centered teaching model be truly implemented.

Future research can further explore the formation mechanisms of learning engagement in diverse teaching contexts, develop more practical intelligent intervention and evaluation tools, and form localized teaching strategies adapted to diverse cultural backgrounds. Through the continuous integration of theoretical research and teaching practice, we aim to promote the transformation of international Chinese education from scale development to quality improvement, help overseas learners boost their Chinese pragmatic competence, and deepen cross-cultural communication and understanding.

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