

## Chinese character size test (CCST) data

### Description:

The Chinese character size test (CCST) is an open-access standardized test that measures children's character recognition, the character size of simplified Chinese. The formal CCST includes five booklets respectively designed for primary school students in grades 1-6. Each booklet consists of 150 multiple-choice and dichotomously-scored items that require students to select the correct Chinese character from homophonic, morphologically-related, or semantically-related distractors based on audio materials.

The CCST were assembled using the vertical equation design. Each booklet includes 60 to 75 item characters learned during the current grade, 0 to 15 characters from previous grades, and 60 to 90 characters from the next grades. There are at least 40 anchor items between adjacent booklets, allowing for comparable test scores across test forms and grades. Besides, this test assembly design could reduce the probability of students answering items that are too difficult or too easy, and improve the overall test discrimination. The CCST has no time limit. The average test time was 11.13 minutes, and 98.61% of students completed the test within 16 minutes. Therefore, the CCST can be easily administered to primary school students in a group setting.

Key features of the Chinese character size test.

Test Features	Descriptions
Score/Interpretation	The Chinese character size reflects the number of Chinese characters that participants recognised during reading or listening activities.
Participants	Mandarin Chinese students in grade 1-6 (age range: 6-13).
Completion Time	Between 5-16 minutes, an average of 11.13 minutes.
Quantity of Items	150 items in a single booklet, 525 items in the item bank.
Reliability	The Cronbach's alpha reliability of the formal CCST booklets was 0.93, ranging from 0.91 to 0.95.
Validity	Construct validity, Criterion-related validity
Reference Types	Criterion-referenced and norm-referenced. The Chinese character size score is aligned with the Compulsory Education Language Curriculum Standards issued by the Chinese Ministry of Education and can be used to assess whether primary school students' character sizes are compatible with the educational objectives of the three key stages of education, i.e., by the end of Grade 2, 4, and 6, students should know at least 1,600, 2,500, and 3,000 Chinese characters, respectively. The norm sample consisted of 7,459 primary school students from 20 schools using the probability proportional to size (PPS) sampling method, representing approximately 980,000 primary school students in Beijing as a whole.
Test Frequency	Yearly (recommended)
Administration	Computer-based assessment, compatible with Inquisit software.

Benefits	<p>Measure chinese character size with reference to the national curriculum criterion.</p> <p>Contribute useful information when assessing character recognition, as part of a language evaluation, throughout the primary school years.</p> <p>Directly compare character size with norm references.</p>
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### **Format:**

The CCST data include anonymized demographic information, Chinese character recognition (CR), character size, reading ability, Chinese language exam scores, and item-leveled test data of 7459 primary school students.

CCST\_data\_norm.csv contains demographic information and character size variable.

CCST\_data.csv contains more information.

The data were retrieved from <https://osf.io/ktf5c/> on Aug 6, 2025. More information can be found in Li, et al. (2025).

### **References**

Li, Y., Wei, Y., & Li, H. (2025). Chinese character size test: Test development, validation, and standards-referenced norms for Chinese primary students. *Behavior Research Methods*, 57(6), 155.