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2 **The Use Of Story Teaching Method In The Teaching Of Chinese Characters-A case of**  
3 **Pakistani students.**

4  
5 **Abstract:** Although there is an increasing body of research on the pedagogy of Chinese characters,  
6 empirical research designed to address the unique requirements of Pakistani learners, a population  
7 with its own set of challenges, due to the phonetic nature of Urdu and the lack of experience of  
8 logo graphic writing, is still rare. This study fills this gap by seeking to understand whether story  
9 teaching method improves long-term memory and minimizes affective barriers among Pakistani  
10 primary learners. A quasi experiment was carried out with 30 primary Chinese learners in the  
11 Confucius Institute of the University of Agriculture Faisalabad in Pakistan. The participants were  
12 randomly categorized into an experimental group and a control group where 15 learners were  
13 assigned to each group. The experimental group was taught Chinese characters through the story  
14 teaching method and the control group was taught through the traditional stroke teaching method.  
15 The study, which used questionnaire surveys and semi-structured interviews with learners and  
16 local Chinese teachers, quantified and analyzed the learning impacts of the two groups. The initial  
17 findings showed that there was no significant difference between the instant test results of the two  
18 groups whereas, the experimental group scored significantly higher in the delayed test one month  
19 later which indicated the superiority of the story teaching method in improving the memory of  
20 Chinese characters in the long term. The process that the story method works seems to be two-fold:  
21 (1) cognitive - stories generate multi modal encoding (visual-auditory-contextual) that makes  
22 memory traces stronger than when subjected to mechanical rehearsal: (2) affective - narrative  
23 contexts reduce anxiety and increase the willingness to interact with logo graphic forms, which is  
24 consistent with the affective filter hypothesis.

25 **Keywords:** Chinese character teaching, story teaching method, Pakistani primary learners

26  
27 **1. Introduction**

28 Chinese character teaching has long been recognized as an essential and foundational component  
29 of teaching Chinese as a foreign language. As 吕必松 observed, “Chinese character teaching is an  
30 important part of Chinese language teaching, and how to handle the relationship between language  
31 and script in Chinese teaching is an extremely complex issue”. This complexity is particularly  
32 pronounced for learners from non-Chinese character culture circles, for whom Chinese  
33 characters—being a logographic system that integrates form, sound, and meaning—present a  
34 fundamentally different writing system from their native alphabetic scripts .

35 ➤ **Problem Statement**

36 Despite the critical importance of character instruction, the effectiveness of Chinese character  
37 teaching for Pakistani beginner learners—who belong to the non-Chinese character culture  
38 circle—remains unsatisfactory. Pakistani learners continue to expend considerable time and effort  
39 memorizing characters without achieving desired outcomes. Hundreds of Chinese characters are  
40 complex in form, and many are visually similar, making them prone to errors in recognition,  
41 reading, writing, and typing. Avoiding such errors requires meticulous attention to subtle  
42 differences between similar-looking characters .

43 The source of this difficulty lies in the fundamental script difference between Urdu—Pakistan’s  
44 national language—and Chinese. Urdu employs a Perso-Arabic script of 38 letters written from  
45 right to left, with subject-object-verb (SOV) word order . Its grammatical system is complex,  
46 featuring rich verb inflections and honorifics . Chinese, in contrast, uses logographic Hanzi  
47 characters with subject-verb-object (SVO) word order and a tonal system . This typological  
48 distance means that Pakistani learners cannot rely on positive transfer from their L1 script; instead,  
49 they must construct an entirely new orthographic processing system.

50 Moreover, research has shown that “phoneme and syllable characters have only shapes and sounds,  
51 but no purpose is very different from Chinese characters. Hence the difference between Chinese  
52 character writing and Urdu writing alphabets is the root of the difficulty in learning Chinese” .

53 <sup>1</sup>This fundamental script difference represents a significant barrier that requires targeted  
54 pedagogical intervention.

### 55 ➤ **Current Challenges in Pakistan**

56 In the Pakistani context, several specific challenges compound the inherent difficulty of character  
57 learning. First, at the absolute beginner level, many teachers do not teach characters systematically,  
58 primarily for two reasons: HSK Levels 1 and 2 do not require character output, relying instead on  
59 pinyin, and time constraints lead both teachers and learners to prioritize listening and speaking  
60 skills. Second, the non-target language environment provides minimal exposure to Chinese  
61 characters outside the classroom. Third, textbooks typically provide pinyin annotation, and many  
62 institutions require instruction to focus on pinyin, reducing the attention given to character form.

63 These issues have been documented similarly in other non-Chinese character cultural contexts. In  
64 Sweden, for instance, “because there is no special Chinese characters course, it is difficult for the  
65 students to learn the rule of Chinese characters’ structure. Chinese characters become an obstacle  
66 for the students to promote their Chinese level” . The same pattern holds true for Pakistan:  
67 characters are often treated as incidental to vocabulary acquisition rather than as a systematic  
68 script requiring dedicated instruction.

69 Consequently, by the time learners reach HSK Level 3, where pinyin disappears entirely, they face  
70 an overwhelming task—mastering the characters for hundreds of words while simultaneously  
71 grappling with more challenging grammar. The consequences are predictable: heightened anxiety,  
72 diminished motivation, and sub-optimal learning outcomes.

### 73 ➤ **Integrating “Script-Speech Alignment” at the Beginner Stage**

74 Given these challenges, “script-speech alignment” is essential in Pakistani beginner-level Chinese  
75 instruction. As 刘珣 (2000) stated, “Its advantage is that characters are learned in context, which  
76 facilitates mastery of character meaning and usage; each new character integrates form, sound,  
77 and meaning, preventing learners from neglecting or failing to remember characters” . In the  
78 Pakistani context, integrating character instruction with oral language development from the very  
79 beginning is not merely beneficial—it is necessary.

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80 However, a persistent challenge is making character instruction engaging. Research on  
81 non-Chinese character culture learners indicates that character learning often becomes tedious,  
82 leading to decreased motivation . The fundamental question is: How can we transform character  
83 learning from a burdensome memorization task into an engaging, meaningful experience?

#### 84 ➤ **Theoretical Framework: Storytelling and Narrative Approaches**

85 Recent scholarship suggests that narrative and visual approaches offer promising solutions.  
86 Research on “Hanzi Narrativization” proposes “a dynamic interpretive mechanism where readers  
87 identify visual clues, perform inferences, and restore meaning” . This approach positions learners  
88 “as active decoders” and shifts “the focus of character education from rote-based orthography to  
89 the learning of interpretive rules and meaning construction processes” . Similarly,  
90 context-embedded instruction—teaching characters within meaningful stories rather than as  
91 isolated units—enhances engagement and retention .

92 For Pakistani learners, who grow up with rich oral storytelling traditions but have no experience  
93 with logo-graphic scripts, story-based character instruction may provide a culturally resonant and  
94 cognitively effective bridge.

#### 95 ➤ **Research Gap**

96 Despite the growing body of research on Chinese character teaching for non-native learners, the  
97 following gaps persist:

98 Lack of Theoretical Abstraction: While Pakistani learners are identified as the research subject, the  
99 problem has not been elevated to a generalization level. The challenges faced by Pakistani learners  
100 are not unique to Pakistan but are shared by learners from all non-Chinese character cultural  
101 backgrounds whose L1 uses alphabetic scripts. A theoretical framework that addresses character  
102 acquisition for non-logographic L1 learners generally, while maintaining sensitivity to  
103 Pakistani-specific factors, is needed.

104 Gap 2 — Mismatch Between Method and Research Questions: Although 准实验 methods have  
105 been proposed, the design requires stronger alignment with specific research questions.  
106 Assessment of “long-term retention” requires post-tests with delayed intervals, and understanding  
107 cognitive and affective mechanisms requires structured questionnaires and interviews .Untested  
108 Intervention to Non-Chinese Character Culture Learners: Although 张晓涛 (2018) pointed out  
109 that learners with a non-Chinese character culture lack recognition abilities and confuse similar  
110 characters, and recommended components-based instruction and stroke training specifically,  
111 story-based methods were not well explored with regard to non-Chinese character culture learners  
112 in general, and with Pakistani learners specifically. No published experimental research has  
113 methodically investigated the effectiveness of story-based character teaching of Pakistani students.

114 Lack of Analysis of L1 Influence: The research subjects are clearly identified as Pakistani learners,  
115 but the existing studies have not addressed the influence of the characteristics of the Urdu

116 language and, specifically, on the Chinese character learning, in a sufficient manner. The nature  
117 and extent of effects of the transfer of L1 is not clear.

### 118 ➤ **The Present Study**

119 This study aims to address these gaps by experimentally investigating the effectiveness of  
120 story-based character instruction for Pakistani beginner learners. Drawing on narrative pedagogy  
121 and the theoretical framework of “Hanzi Narrativization”, this study designs a structured  
122 intervention that integrates characters into culturally meaningful story contexts. The research  
123 questions are:

124 1. Does story-based instruction have significantly better immediate character learning results with  
125 Pakistani learners as beginner learners?

126 2. Are there better long-term character retention in story-based instruction?

127 3. What is the perception of Pakistani learners to the effectiveness and involvement of story-based  
128 character teaching?

129 The study will make contributions to the field through the following ways: (a) it will provide  
130 empirical evidence on the use of story-based character instruction in teaching Pakistani learners, a  
131 previously unexplored population; (b) the study will develop a replicable model of character  
132 culture instruction, which has not been studied before; and (c) the study will offer practical  
133 pedagogical resources that can be used by teachers working with alphabetic-L1 learners.

### 134 **2. Methodology**

135 This study used a mixed-methods research design, which combined a quasi-experimental design  
136 with quantitative questionnaires and qualitative semi-structured interviews to both systematically  
137 investigate the effectiveness of the story-based teaching technique in the instruction of Chinese  
138 characters to Pakistani novice learners, and to explore the subjective attitudes of both students and  
139 Chinese local teachers towards this teaching method. The study was conducted over a period of  
140 two months (December 2023 to February 2024 online) based on the two-year on-site teaching  
141 experience of the Chinese language in Pakistan that the researcher had. All research practices and  
142 tools were formulated to suit the cognitive nature of Pakistani novice learners (HSK Levels 13)  
143 and the real situation of teaching Chinese characters in the non-Chinese character cultural circle of  
144 Pakistan with the intention to uphold the validity and reliability of the research findings.

### 145 ➤ **Participants**

146 Research participants were selected using a purposive sampling method and comprised of 30  
147 beginner Chinese learners at the Confucius Institute at the University of Agriculture, Faisalabad.  
148 All participants were adult learners who have zero or basic foundation of Chinese character and  
149 have taken or were taking the HSK Level 1 to 3 courses. Participants were native speakers of Urdu,  
150 a phonetic language and had no prior learning experience with logographic writing system, which  
151 is in line with the typical features of Pakistani Chinese learners in the non-Chinese character  
152 cultural circle. The age distribution was as follows: under 18 years old (n=1), 1821 years (n=12),  
153 2224 years (n=9), and 2527 years (n=8) that represent the major age groups of adult Chinese  
154 learners at the Pakistani Confucius Institute. The learning demand to enhance the Chinese  
155 character ability by all participants was to prepare them to study Chinese in the HSK examinations,




156 or in a university course, scholar application or future employment in a Chinese company in  
157 Pakistan, ensuring that they will maintain a consistent level of learning motivation throughout the  
158 experiment.

159 The 30 participants were randomly categorized into an experimental group and a control group  
160 with 15 participants in each group. An analysis of the key variables such as age, duration of  
161 learning Chinese, experience of taking the HSK tests, and scores achieved in the HSK tests, and  
162 the initial ability to recognize Chinese characters were subjected to a homogeneity test.  
163 Preliminary findings revealed that there were no statistically significant differences between the  
164 two groups ( $p > 0.05$ ), which confirmed the equivalence in the baseline and ruled out the  
165 possibilities of confounding effect of individual differences.

## 166 ➤ Measures

### 167 Target Chinese Characters

168 Using the Chinese Proficiency Grading Standards of International Chinese Language Education  
169 (2021 Edition) alongside the national standard, GB2312-80, 35 Chinese characters were  
170 meticulously chosen as a single instructional content in both groups, consistent with the cognitive  
171 level of Pakistani entry-level learners and the entry-level requirements of HSK Level 1-3 character  
172 acquisition. There were 20 single-component and 15 compound characters, representing four types

173 of structures: 7 pictographs (e.g., 火 , 山 , 人  )etc.

174 12 associative compounds (e.g., 男 (means man, male. The character consists of 田, fields, and 力, which originally depicted a farming tool, symbolizing effort, i.e. men at work in the fields), 明 (means bright. In bone inscriptions and regular script, 日 depicts the sun and 月 the moon, i.e. as bright as the sun and moon. In bronze inscriptions and seal script, the characters resemble the moon by a window; moonlight cast through a window is exceptionally bright on a dark night), 休 (means rest. It consists of 亻, man, and 木, tree, i.e. a man leaning against a tree to rest.), 4 self-explanatory characters (e.g., 本 (The core meaning of 本 is the roots of a tree. It resembles a tree with markings on its roots.), 夫 (The core meaning of 夫 is adult male. It resembles a man wearing an accessory on his hair suggesting adulthood), 未 (original meaning is the tip of a tree. It is made up of 木, tree and -, which indicates tip.)

184 12 phonetic compounds (e.g., 吧 (originally represented a wide open mouth. It consists of 口, an open mouth, and 巴 (bā), which is phonetic and depicts a large serpent with a huge mouth), 菜 (means vegetables. It consists of 艹 (shuā), grass, i.e. a plant, and 采 (cǎi), which is phonetic and resembles a hand (爪) plucking fruit from a tree (木), i.e. vegetables collected for consumption.), 晴 (refers to clear, sunny day. In seal script, 夕 resembles the moon, 生 resembles plants sprouting from the ground, i.e. nights where the moon seems to rise from the ground. In regular script, 日 depicts the sun, 青 (qīng) is phonetic and means blue, i.e. a blue sky and bright sun can be observed on a clear, sunny day.) etc.

192 This selection ensured content representatives and allowed examination of the story-based  
193 method's applicability to different character types.

194 **Character Knowledge Test**

195 Two parallel forms of a standardized character knowledge test (immediate test and delayed test)  
196 were designed with identical difficulty, question types, and total score (100 points) to measure  
197 learners' mastery of the 35 target characters. The test was designed to comprehensively assess  
198 three core dimensions of character learning—pronunciation, form, and meaning—and consisted of  
199 four question types, each worth 25 points (5 items × 5 points):

Question Type	Description	Construct Assessed
Picture-character matching	Selecting the correct character for a given image	Form-meaning connection
Character filling	Selecting appropriate characters to complete sentences	Practical application
Pinyin-character matching	Matching characters to correct pinyin among distractor.	Form-pronunciation connection
Writing from Pinyin	Writing characters from pinyin prompts	Comprehensive mastery

200

201 All test items were developed by the researcher and reviewed by two experienced Chinese  
202 language educators to ensure content validity and appropriate difficulty level.

203 **Learner Perception Questionnaire**

204 A self-designed 22-item closed-ended questionnaire was administered to collect subjective  
205 perceptions of Pakistani beginner learners regarding Chinese character learning and the  
206 story-based teaching method. The questionnaire comprised six dimensions:

Dimension	Item	Content
Basic information	5	Gender, age, HSK experience
Learning motivation and difficulty perception	4	Goals for learning characters, perceived challenges
Learning duration and practice status	3	Daily practice time, frequency
Comprehension of instruction	2	Understanding of teacher's content
Perceived improvement	4	Changes in character learning ability after the experiment
Evaluation of story-based method	4	Satisfaction, acceptance, perceived effectiveness

207

208 To eliminate the barrier of understanding, the questionnaire was translated to both the Chinese and  
209 English language. Subjective evaluation items were done through a 5-point Likert scale (1 =  
210 strongly disagree, 5 = strongly agree). Prior to administration, a pilot test was carried out with five  
Pakistani novice learners. According to the pilot findings, some slight changes of wording were

211 introduced to enhance the clarity and appropriateness towards different cultures.  
212 Reliability: Cronbachs alpha was used to measure internal consistency. All the questionnaires used  
213 showed a good level of reliability ( 0.79). Subscale reliabilities were 0.71-0.84, which is within  
214 traditional educational research reliabilities.  
215 Validity: Content validity was determined by giving the test to experts who had undergone training  
216 as two experts in the field of Chinese language teaching. Confirmatory factor analysis supported  
217 construct validity with all items loading significantly on their respective factors (factor loadings >  
218 0.50).

### 219 **Semi-Structured Interview Protocols**

220 Two semi-structured interview protocols were developed to be administered to learners and local  
221 Chinese teachers respectively, to conduct a thorough qualitative research and complement  
222 quantitative research based on tests and questionnaires.

223 Learner interview protocol (7 core questions): Concentrated on the initial problems in learning  
224 characters, daily application of Chinese characters, perceptions of the teaching method that was  
225 used during the experiment, the comparison between special character classes and comprehensive  
226 Chinese classes, and the perceptions on the value of character recognition or writing.

227 Teacher interview protocol (9 core questions): The topics covered included the views of teachers  
228 on when instruction in the character should begin (language-character integration vs. separation),  
229 whether special instruction in the character is necessary (or not), key challenges in teaching the  
230 story character, effective teaching methods in practice, and subjective evaluation and application  
231 suggestions to the story-based method.

232 Interview participants: Four learners (two of them were in the experimental group, two in the  
233 control group), and four local Chinese teachers at the Confucius Institute of the University of  
234 Agriculture, Faisalabad all with 1-3 years of Chinese teaching experience in Pakistan.

235 Data analysis: Interviews were audio recorded, which was transcribed verbatim. This thematic  
236 analysis was carried out in accordance to the six-phase model outlined by Braun and Clarke. A  
237 second coder independently coded a quarter of the transcripts; inter-coder reliability was moderate  
238 ( 0.82). Differences were resolved by discussion.

### 239 **Instructional Procedures**

240 The study was subdivided into three phases that included; preparation of the experiment before the  
241 study, formal teaching experiment, and post-experiment data gathering in which the entire study  
242 took about three months.

243 Pre-Experiment Preparation (Early December 2023)

244 The researcher selected and randomly assigned participants, and tested homogeneity; finalized 35  
245 target characters and teaching plans of both groups; designed and revised research instruments;  
246 and prepared multimedia teaching resources that were needed in the experiment (e.g., pictures of  
247 the characters, etymology story videos, stroke animation).

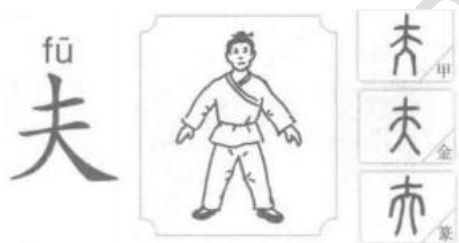
248 Formal Teaching Experiment (December 24, 2023)

249 Both groups were given a six-session character teaching intervention. The sessions were 60  
250 minutes long and were done online on the weekend.

251 Experimental Group: Story-Based Instruction.

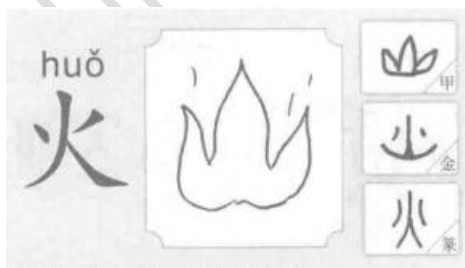
252 The experimental group was taught with the elements of narrative in it. The structure of each  
253 session was as follows:

254 Selection and adaptation of the stories: The stories were drawn on the basis of traditional Chinese  
255 cultural narratives and self-compiled on the basis of the features of the characters. Example 1:  
256 Teaching “夫” (husband/man) – The instructor presented the traditional story explaining that in  
257 ancient China, men did not cut their hair (considered a precious inheritance from parents). Instead,  
258 they tied their hair up and secured it with a hairpin, visually resembling the character form.  
259 Learners could then visualize the upper horizontal stroke as the tied hair and the two strokes  
260 extending outward as arms.



261

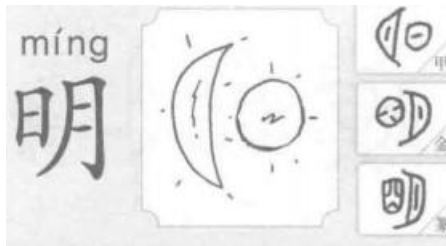
262 ● Example 2: Teaching “火” (fire) – A self-compiled story was told: when a fire breaks out, a  
263 person raises both hands and shouts for help. This narrative draws a direct parallel to the  
264 character’s form, helping learners associate the shape with an emergency scenario.



265

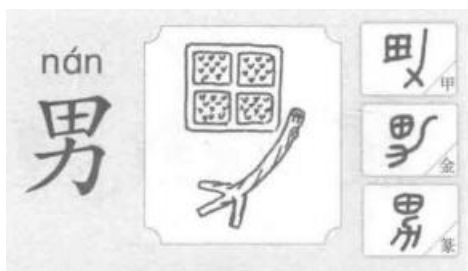
266 **Story-based character introduction:** The instructor introduced target characters embedded in  
267 story contexts, supported by visual aids.

268 Example 3: Teaching “明” (bright/tomorrow) – The etymological story explained that the sun (日)  
269 and moon (月) together produce brightness. The instructor extended this to a contextual narrative:  
270 after one sun and one moon cycle, tomorrow naturally arrives, helping learners remember both  
271 meaning and usage.



272  
273 Vocabulary extension: Key vocabulary from stories was explicitly taught.  
274 Guided questioning and discussion: The instructor posed character-related questions throughout  
275 storytelling.

276 Example 4: Teaching “男” (male/man) – The traditional story described how “man” consists of  
277 “field” (田) and “strength/power” (力), because in ancient times, men worked strenuously in the  
278 fields. The instructor asked learners to imagine a farming scene and describe the hard physical  
279 labor, connecting the character components to the cultural concept of male responsibility.



280  
281 Example 5: Teaching “茶” (tea) – A story depicted that at a traditional Chinese tea gathering, three  
282 people sit under a tree to drink tea and chat. The components were explained as: grass radical (艹)  
283 representing leaves above, a roof structure (building) below, left and right strokes representing two  
284 people sitting on either side. Learners were invited to act out a tea-drinking scene while writing  
285 the character strokes.



286  
287 Control Group: Conventional Stroke-based Training.

288 The control group was taught in a conventional stroke-based instruction in accordance with the  
289 standard practice at the Confucius Institute. Each session included:

- 290 ● Stroke demonstration and practice.

291 ● □ Compound character analysis: component characters.

292 ● □ Drills in repetition (oral and written)

293 ● □ Character copying exercises

294 Teaching fidelity: Both groups were taught the same amount of time (360 minutes total) and  
295 taught by the same instructor (the author) to control for teacher effects. It was only the systematic  
296 difference between conditions, which made the narrative elements be combined in the  
297 experimental condition. The lesson plans of the two groups were standardized and were reviewed  
298 by an independent observer who ensured that the assigned instructional methods were adhered to.

299 Late December 2023 - February 2024 Data Collection (Post-Experiment Data Collection)

300 Immediate test: Given one day after the final teaching session as a measure of the long-term  
301 learning effects.

302 Delayed test: Given one month later (February 12, 2024) to test long-term memory retention of  
303 learned characters.

304 Administration of questionnaires: This was carried out with all the 30 participants upon the  
305 delayed test.

306 Interviews: This was conducted with the 4 learners and 4 local teachers under 1 week after the  
307 delayed test, each of which lasts 20–30 minutes, and is audio-recorded with the consent of the  
308 participants.

### 309 **Data Analysis Methods**

310 An integrative and quantitative-qualitative methodology was embraced.

311 Quantitative analysis: SPSS (Version 26.0) was used to quantitatively analyze the immediate and  
312 delayed test scores as well as questionnaire numerical data. Inferential statistics (independent  
313 samples t-tests) and descriptive statistics (means, standard deviations, percentages) were done.  
314 The level of significance was  $p < 0.05$ .

315 Qualitative analysis: The thematic analysis was used to analyze the interviews transcriptions and  
316 responses to open-ended questions. Core information was coded, key themes summarized and  
317 interpretations put into context in the teaching context of Chinese character in Pakistan.

### 318 **Validity and Reliability**

319 To enhance internal validity, the following measures were implemented:

Measure	Application
Random assignment	Participants randomly assigned to experimental and control groups
Equated instructional time	Both groups received 360 minutes of instruction
Single instructor	Same teacher delivered instruction to both groups (author)
Blinded scoring	Test scorer unaware of group assignment
Pilot testing	All instruments pilot-tested before main study

320

321 Reliability was assessed as follows:

Reliability Type	Measure	Value
Internal consistency (questionnaire)	Cronbach's $\alpha$	0.79 (overall)
Internal consistency (subscales)	Cronbach's $\alpha$	0.71 – 0.84
Inter-coder agreement (qualitative)	Cohen's $\kappa$	0.82
Test-retest (parallel forms)	Pearson correlation	$r = 0.78, p < 0.01$

322

323 Content validity was established through expert review (two experienced Chinese language  
324 educators). Construct validity of the questionnaire was supported by confirmatory factor analysis  
325 (all factor loadings  $> 0.50$ ).

326

### 327 **Discussions**

328 The study design used was a quasi-experimental design with questionnaires and interviews to  
329 examine the effectiveness of story based teaching method in learning Chinese character among the  
330 Pakistani beginners learners. The findings indicate that although the story-based approach and the  
331 traditional stroke-based approach had similar immediate learning outcomes, the former had much  
332 better long-term retention as measured by the delayed test one month after instruction. This  
333 discussion understands these findings within the current literature, discusses the mechanisms that  
334 might account for the observed effects, considers the limitations of the small-scale, short-term  
335 design, and proposes the potential contributions of the study, including unexplored areas such as  
336 differences in character types and effects of genders.

### 337 **Differentiable Effects of Immediate and Delayed Learning.**

338 The fact that the experimental and the control group did not differ significantly on the immediate  
339 post-test (68.4 vs. 67.8,  $p = 0.927$ ) but had a significant difference on the delayed post test (75.8 vs.  
340 65.2,  $p = 0.019$ , Cohens  $d = 0.91$ ) is notable and must be carefully interpreted. Since the sample  
341 size ( $N=30$ , 15 members per group) is small, these results can be regarded with due caution. The  
342 insignificance of the immediate effect can be the result of the impact of various factors. To begin  
343 with, both groups were intensively instructed (six sessions within four weeks), and the tests were  
344 carried out right after the intervention. In this case, the short-term mastery, which was similar to

345 the one of the experimental group, in the use of rote memorization, through the use of stroke  
346 repetition and dictation, may have been possible in the control group. Second, the immediate test  
347 evaluated declarative knowledge which the two groups could temporarily synthesize, irrespective  
348 of the method of instruction. The fact that the two teaching methods showed no significant  
349 difference indicates that in the short run, the two teaching methods are equally applicable in the  
350 acquisition of basic character among Pakistani beginner learners.

351 The appearance of a large difference on the delayed test, however, indicates a difference in  
352 long-term retention. A potential reason is the quality of memory encoding. The story-based  
353 approach incorporates characters into rich contexts of narrative and can be useful in the  
354 development of interdependent memory traces. Conversely, the stroke-based technique can be  
355 based more on isolated, rote rehearsal. The retention privilege of the experimental group was  
356 evident when they were tested after one month without any further instructions. Nevertheless, one  
357 must admit that the aspects that could influence the difference that was observed, but were not  
358 directly measured, include factors like the individual rehearsal strategies that learners may have  
359 had outside the classroom.

### 360 **Relating Results to Theoretical Frameworks.**

361 The research of second language acquisition can provide possible frames of interpretation of the  
362 results observed. Affective Filter Hypothesis is a hypothesis proposed  
363 by Krashen that low anxiety and high motivation are facilitating factors in language acquisition.  
364 The data obtained in the survey showed that 86.7 percent of learners who participated in the  
365 experiment confirmed that they highly liked the story-based method and 60 percent reported a  
366 decrease in perceived difficulty. These self-reported attitudes could have reduced their affective  
367 filter and therefore allowed a more successful processing and retention of character information.  
368 Nonetheless, it should be mentioned that the research did not involve a direct and validated scale  
369 of anxiety, or motivation (e.g., Foreign Language Classroom Anxiety Scale, Attitude/Motivation  
370 Test Battery). The items of the questionnaires measured general satisfaction and perceived  
371 difficulty instead of particular affective constructs. Thus, the retention benefit in the long term is  
372 explained by the reduction of anxiety but is speculative and must be confirmed by the studies  
373 involving dedicated affective measures.

374 **Multi-modal learning theory** hypothesizes that the information that is delivered via several  
375 channels of perception (visual, auditory, kin-esthetic) is processed more profoundly than the  
376 information that gets conveyed via a single channel. The story-based approach utilized visual  
377 (pictures of characters, etymology videos) and auditory (storytelling, pronunciation modeling) and  
378 kin-esthetic (role-play, writing practice) types of activities. In comparison, the stroke-based  
379 method was mainly stroke demonstration and copying exercises primarily engaged both visual and  
380 motor channels. The delayed test advantage that was observed in the experimental group could be  
381 seen as an indication of multi-modal encoding. The study however failed to incorporate the  
382 measures that would help to separate the independent effects of each modality. It is not clear based  
383 on the available data whether the observed difference is specifically attributable to  
384 “ multi-modality achievement per se and/or to other aspects of the story-based method (e.g.,  
385 meaningfulness, emotional engagement, narrative coherence).

386 **Restrictions in generalized Claims.**

387 The findings of the study are to be interpreted in the context of a number of important  
388 methodological limitations that restrict the scope of generalizability of any claims of any  
389 significant superiority.

390 Sample size and power: The study had an adequate power to detect large effects (Cohen  $d > 0.80$ )  
391 but not moderate or small effects. The non-significant immediate test outcome ( $p = 0.927$ ) may  
392 indicate that there is a true equivalence of the outcome, or that the outcome is simply not  
393 sufficiently powerful to detect such a small-to-moderate effect. The large effect ( $d = 0.91$ ) is  
394 evidenced by the significant delayed test result ( $p = 0.019$ ), but only one implementation and a  
395 specific sample are used. To determine the reliability and generalizability of this effect, replication  
396 with larger samples ( $N > 50$  per group) would be required.

397 Duration of experiment: The experiment took a very brief period of only four weeks (six  
398 60-minute sessions). This is not a long period that would capture initial learning and not address  
399 how story based instruction would affect the ability of learners to learn characters over a full  
400 semester or academic year. It is not yet clear whether the retention benefit observed will continue  
401 beyond one month, or whether the benefit will decrease over time as the character load rises  
402 (between 35 and hundreds of characters).

403 Single site and instructor: The research was done within one Confucius Institute in Faisalabad,  
404 Pakistan, and one instructor (the author). Although this provided consistency in delivering  
405 instruction, it also brings into doubt external validity. The results may not be applicable to other  
406 Pakistani cities (e.g., public universities, private language schools), other forms of institutions  
407 (e.g., private language schools, university-based language schools), or other instructors with  
408 different storytelling styles. The dual role of the author as a researcher and instructor, as well as an  
409 opportunity to obtain a deep contextual understanding, also introduces the potential bias that could  
410 not be completely eliminated despite the attempts to standardize it.

411 Dependence on self-report data: The questionnaire and interview data are subject to social  
412 desirability bias and recall inaccuracies. The stated inclination towards the story based approach  
413 (86.7) could be overstated as students may have wanted to impress the researcher who also  
414 happened to be the instructor. Future research ought to contemplate more indirect measures of  
415 engagement and preference, e.g. behavioral observation or reaction time measures.

416 These limitations imply that some terms like significant superiority and definitive evidence should  
417 be used carefully with the existing results. This paper presents initial findings that narratives-based  
418 teaching might have benefits in terms of long-term character retention among Pakistani novice  
419 learners. These results however should not be taken as conclusive but as hypothesis generating.

420 **Character Type Differences: An Under explored Dimension**

421 One way that this study might potentially contribute to the field that was not analyzed  
422 systematically is the differences in the impact of the story-based approach to the character under  
423 consideration. The target set of characters consisted of pictographs (e.g., 火, 山, 人),  
424 associative compounds (e.g., 男, 明, 茶), self-explanatory characters (e.g., 本, 夫, 末), and

425 phonetic compounds (e.g., 吧, 菜, 晴). The descriptive analysis of the data indicates that the  
426 experimental group scored particularly well on pictographs and associate compounds in both tests  
427 with a score exceeding 85% on these items in the delayed test, compared to a score of about 65%  
428 on phonetic compounds. Although not statistically tested because of the small cell sizes, this trend  
429 leads to a testable hypothesis that story-based instruction can be more effective in the cases of  
430 characters whose phonetic component is the primary determinant of pronunciation.

431 This distinction has pedagogical implications. In pictographs and associative compounds, the  
432 teachers may use their time in creating or choosing the right stories. In the case of phonetic  
433 compounds (where the connection between form and meaning is less immediate) a alternative  
434 learning strategy, perhaps with a focus on phonetic series or component analysis, may prove more  
435 effective. To test this hypothesis, future studies with bigger sample sizes and systematized  
436 manipulation of character type as an experimental factor are required.

#### 437 **Moderating Variable Gender: Preliminary Observations.**

438 The data of the questionnaires indicated that there might be a gender difference in the preference  
439 of the method: male learners in the experimental group (comprising 73.33% of the group, which  
440 reflects the overall gender distribution in the sample) showed a higher level of acceptance of the  
441 story-based approach, whereas female learners appeared to have been more inclined towards the  
442 systematic stroke-based method. This trend was the result of descriptive statistics but was not  
443 statistically tested because of the small sub-sample sizes (only 4 females in the experimental group,  
444 5 in the control group).

445 When repeated in a larger sample, this result would be able to inform differentiated instruction.  
446 Male learners may be more effectively supported in terms of more narrative-based character  
447 education, whereas female learners could be better served with more structured and rule-based  
448 approaches. Alternatively, the difference observed may be due to culturally specific attitudes  
449 towards storytelling in Pakistan, where oral narratives are traditionally taught in a male-dominated  
450 context (e.g., family elders, religious storytelling). Such an interpretation, though, is purely  
451 speculative without data on how learners have been previously exposed to storytelling in the  
452 classroom. Future studies ought to be done in a systematic way, where equal gender samples are  
453 recruited and validated measures of learning style preference are used to explore possible  
454 interactions between gender, teaching approach, and learning outcomes.

#### 455 **Implications for Theory and Practice**

456 This study, despite its weaknesses, provides a number of insights into the knowledge of the  
457 Chinese character teaching to learners whose cultural backgrounds, are not Chinese characters.  
458 In a practical sense, the results indicate that the story-based approach is best considered as an  
459 addition to, but not a replacement of, the traditional method of teaching with a stroke. In Pakistan  
460 and other contexts, teachers can think of an integrated approach; use engaging stories to introduce  
461 characters and establish meaningful form-meaning relationships, and employ systematic stroke  
462 and component teaching to make sure that the writing is accurate. This two phase plan achieves  
463 the motivational advantages of narrative techniques with the accuracy needed to master  
464 orthography. The teachers interviewed in this study were in agreement that story-based instruction

465 cannot be independent but rather works best when incorporating explicit skill building.  
466 Theoretically speaking, what the study has shown is that in the case of learners with  
467 phonetic-language backgrounds, establishing meaningful links between the form of characters and  
468 the semantic information that they convey, is no less important than, or in addition to, repeated  
469 motor practice in the interests of long-term retention. This questions the implicit assumption in  
470 most Pakistani classrooms that learning character is a largely a matter of repetitive writing. The  
471 findings indicate that spending instructional time in the development of meaningful elaborations,  
472 such as through stories, images, or semantic analyses, can potentially have long-lasting positive  
473 effects.

#### 474 **Guidelines on Future Research.**

475 The limitations of this study give several guidelines on how future research ought to be conducted.  
476 Increased and more diverse sample: Future research should use larger samples (minimum N = 50  
477 per group) and more diverse samples, including samples from different Confucius Institutes and  
478 teaching sites across the different Pakistani cities (Islamabad, Karachi, Lahore, Multan). It would  
479 allow more strong statistical testing and enhance the external validity.

480 Increased intervention and follow-up durations: To determine the persistence of retention benefits,  
481 future research should extend the intervention period to one full semester (1216 weeks) and  
482 include other tests of delayed benefits at three months and half a year post-intervention.

483 Direct measures inclusion: Future studies should provide direct measures of the mechanisms  
484 proposed in this discussion, instead of indirectly testing the mechanisms through outcome data.

485 Systematic analysis of effects of character types: Future research would design an experiment that  
486 systematically manipulates an independent variable, which is character type (pictograph,  
487 associative compound, phonetic compound, self-explanatory).

488 Equal gender sampling: Future research should sample equal gender (approximately equal  
489 numbers of male and female participants) and determine learning style preference measures.

490 Comparative effectiveness research: Future research may compare the story-based method, with  
491 other meaning-based methods (e.g., keyword method, imagery-based instruction) to determine  
492 whether there are unique advantages to story contexts, beyond the general benefits of semantic  
493 elaboration.

#### 494 **Conclusion**

495 In summary, this study provides preliminary evidence that story-based instruction may offer  
496 advantages for long-term character retention among Pakistani beginner learners, particularly when  
497 used as a supplement to traditional stroke-based teaching. The lack of significant difference on the  
498 immediate test and the emergence of a significant difference on the delayed test suggest that the  
499 story-based method's primary benefit lies in promoting durable memory rather than short-term  
500 mastery. However, these findings must be interpreted with caution due to the small sample size,  
501 short intervention period, single-site design, and lack of direct measures of affective and cognitive  
502 mechanisms. The study's potential contributions—including the need to distinguish character type  
503 effects and the presence of possible gender differences—remain to be confirmed through larger,  
504 more rigorously controlled research. Pending such replication, practitioners may reasonably  
505 consider story-based instruction as one valuable tool in the character-teaching repertoire,  
506 particularly for introducing characters with transparent form-meaning relationships, while  
507 continuing to rely on systematic stroke and component instruction to ensure accurate writing.

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- 579 23.

## 580 **Ethical Considerations**

581 This study was conducted in accordance with ethical guidelines for educational research. All  
582 participants provided informed consent. Participants were informed of their right to withdraw at  
583 any time without penalty. Data were anonymized prior to analysis. No identifying information  
584 appears in any publication arising from this study.

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