

Poetry and Painting in Harmony: Illustrations Facilitating Junior High School Students' Classical Poetry Learning

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Abstract

[Objective] To investigate the influence of different types of ancient poetry illustrations on middle school students' learning outcomes and learning experiences in ancient poetry study. [Method] Experiment 1 used “realistic” illustrations and adopted a mixed experimental design of 2 (ancient poetry difficulty: high difficulty, low difficulty) \times 3 (presence of illustration: no illustration, irrelevant illustration, relevant illustration). Experiment 2 used “freehand” illustrations and adopted the same experimental design as Experiment 1. [Results] When ancient poetry difficulty was low, students could achieve the level of “poetic comprehension” regardless of illustration presence; however, highly relevant illustrations facilitated students' “emotional processing” and “artistic conception generation” (deep-level) learning. When ancient poetry difficulty was high, highly relevant illustrations only promoted students' “poetic comprehension” (shallow-level). Highly relevant “freehand” illustrations enhanced learning motivation and learning satisfaction. [Limitations] The ancient poetry learning materials were limited in variety. [Conclusion] This study is the first to reveal the influence of different types of ancient poetry illustrations on middle school students' learning outcomes and learning experiences in ancient poetry study, providing an empirical foundation for theoretical construction in ancient poetry learning.

Full Text

The Perfect Blend of Poetry and Painting: How Illustrations Facilitate Middle School Students' Classical Poetry Learning

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Abstract

[Objective] This study investigates how different types of illustrations in classical Chinese poetry affect learning outcomes and subjective learning experiences among junior middle school students. **[Methods]** Experiment 1 employed “realistic” illustrations using a mixed design of 2 (difficulty: high vs. low) \times 3 (illustration type: no illustration, irrelevant illustration, relevant illustration). Experiment 2 used “freehand” illustrations with the identical experimental design. **[Results]** For low-difficulty poems, students achieved “poetic understanding” regardless of illustration presence, but highly relevant illustrations facilitated deeper learning at the “emotional processing” and “artistic conception generation” levels. For high-difficulty poems, relevant illustrations only enhanced “poetic understanding” (a shallow level). Highly relevant “freehand” illustrations improved learning motivation and satisfaction. **[Limitations]** The poetry learning materials were limited in variety. **[Conclusions]** This study is the first to demonstrate the effects of different poetry illustration types on learning outcomes and experiences among middle school students, providing an empirical foundation for theoretical construction in classical poetry education.

Keywords: Classical poetry illustration; Classical poetry learning; Junior middle school students; Learning experience

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Classical Chinese poetry represents a treasured component of our national cultural heritage, and its study has received considerable attention at the state level. As early as 1978, Lü Shuxiang noted in the *People's Daily*: “Spending 10 years and over 2,700 class hours studying our native language, yet most students still cannot achieve mastery—this is indeed a strange phenomenon!” In 2014, the Ministry of Education issued the “Guidelines for Improving Education on Excellent Traditional Chinese Culture,” and *China Education Daily* published an article emphasizing that classical poetry itself constitutes an indispensable part of traditional culture. Genuine love, authentic learning, and true understanding are prerequisites for realizing its full value. The 2017 curriculum standards further increased the volume of classical poetry and national classics in textbooks by nearly fourfold, underscoring the state’s commitment to students’ cultural literacy.

Most domestic research on classical poetry instruction has focused on summarizing teaching experiences. The present study adopts an educational psychology experimental approach to examine how poetry illustrations influence middle school students’ learning outcomes.

Reading and appreciating Chinese classical poetry requires students to engage in rich imagination and association based on poetic imagery, construct artistic conception, comprehend deeper meanings, and experience subtle, complex emotions. Poetry appreciation is an active, creative process, particularly evident

in the supplementation and enrichment of poetic imagery—what we might call creative imagination of “images beyond images”—as well as in the discovery and addition of poetic meaning, both of which depend on novel associations. Artistic conception (意境) holds a unique and important position in Chinese poetry. As a significant aesthetic category in traditional Chinese literary theory, artistic conception has long fascinated artists and critics. It refers to the integrated system of imagery where emotion and scene blend, the virtual and real intermingle, creating an aesthetic space for imagination. This concept represents the artistic realm formed by the fusion of the poet’s subjective feelings with objective phenomena, characterized by the principle that “the realm emerges from images yet transcends them.” From a modern literary perspective, artistic conception is a special system of imagery containing both vivid, suggestive life scenes and rich, thought-provoking meanings. Compared to literal comprehension and emotional processing, constructing artistic conception requires deeper learning.

However, while students may understand poetic meaning literally and even perceive subtle emotions, constructing the aesthetic realm of poetry for truly innovative learning proves challenging. Classical Chinese poetry, with its neat structures, tonal patterns, concise language, and profound meanings, presents inherent difficulties. The archaic, implicit language creates a “distance” for modern students due to temporal and linguistic differences, often leading to rote memorization without genuine comprehension. Additionally, heavy teaching loads and time constraints lead many instructors to focus solely on exam requirements rather than allowing students to savor and appreciate poetry. Under exam-oriented education, many students lack motivation and transferable skills, struggling with unfamiliar poems.

Current research on poetry instruction remains largely theoretical, lacking integration with contemporary educational psychology. While various innovative teaching methods have been proposed—such as using multimedia to recreate poetic scenes, questioning techniques to stimulate imagination, the “five methods” for poetry comprehension (background restoration, scene reconstruction, author appreciation, poetic blank space analysis, and imagery interpretation), the “four reading approaches” (initial reading for general meaning, close reading for imagery, intensive reading for poetic eyes, and interpretive reading), and the “five-step teaching method” (recitation, explanation, analysis, comprehension, and practice)—these lack solid psychological foundations and require empirical validation.

Both Chinese and Western literary theories suggest a correspondence between poetry and painting, aligning with Mayer’s (2009) multimedia learning principle of integrating text and images. The Song Dynasty scholar Zhang Shunmin proposed that “poetry is painting without form, painting is poetry with form,” while Su Dongpo praised Wang Wei’s work as having “painting within poetry, poetry within painting.” Similarly, European traditions hold that “poetry is speaking painting, painting is silent poetry.” Both art forms use external scene depiction

to express emotions and create artistic conception. In poetry instruction, effective use of illustrations can actively engage students, reduce comprehension difficulty, enhance appreciation of poetic conception, improve aesthetic ability, and cultivate autonomous learning skills.

According to Mayer's (2009) cognitive principles of multimedia learning, learning involves organizing selected verbal information into a verbal mental model and visual information into a visual model, then integrating these models with prior knowledge. Presenting information through both words and pictures yields better comprehension than text alone. The illustration relevance effect demonstrates that comprehension improves as text-illustration correspondence increases, while irrelevant illustrations interfere with comprehension. Mayer's coherence principle suggests that learning improves when extraneous material is excluded. We therefore hypothesized that relevant illustrations would enhance poetry learning outcomes, while irrelevant illustrations would inhibit them.

Notably, would both "realistic" and "freehand" illustrations facilitate innovative poetry learning? Traditional Chinese painting includes both "academic style painting" (院体画) emphasizing realism and "literati painting" (文人画) focusing on freehand expression. While academic painting features skilled brushwork and brilliant colors, it often lacks profound spiritual content. Literati painting, however, aligns with poetry spiritually, depicting not objects but artistic conception—melding impressions with emotional appeal. This study pioneers the investigation of illustration effects on poetry learning, with Experiment 1 examining realistic illustrations and Experiment 2 examining freehand illustrations. Integrating literary theory and multimedia cognitive theory, we hypothesized that relevant illustrations would facilitate learning, irrelevant illustrations would inhibit it, and that illustration type would differentially affect learning levels: realistic illustrations might excel at shallow comprehension but not necessarily enhance learning experience, while freehand illustrations would prove superior for deep-level emotional processing and artistic conception construction.

Experiment 1: Realistic Illustrations

2.1 Pretest

Twenty-three university students majoring in Chinese literature were randomly selected for a pretest to evaluate illustration-poem correspondence and poem difficulty. Participants rated the match between illustrations and poetic conception on a 7-point Likert scale (1 = very mismatched, 7 = very matched) and the difficulty of two poems ("In the Mountains" and "Quatrain of Impromptu Inspiration, No. 5") on a 7-point scale (1 = very easy, 7 = very difficult).

Results indicated that "Quatrain of Impromptu Inspiration, No. 5" ($n = 23$, $M = 3.26$, $SD = 1.42$) was significantly more difficult than "In the Mountains" ($n = 23$, $M = 2.43$, $SD = 1.16$), $F(1, 22) = 8.79$, $p < 0.01$, $\eta^2 = 0.29$. For illustration relevance, paired t-tests revealed that relevant illustrations for "In the Mountains" ($n = 23$, $M = 4.13$, $SD = 1.79$) were significantly more matched

than irrelevant illustrations ($n = 23$, $M = 2.04$, $SD = 1.19$), $t(22) = 5.39$, $p < 0.001$, $d = 2.30$. Similarly, for “Quatrain of Impromptu Inspiration, No. 5,” relevant illustrations ($n = 23$, $M = 4.09$, $SD = 1.16$) were more matched than irrelevant ones ($n = 23$, $M = 2.35$, $SD = 1.23$), $t(22) = 4.87$, $p < 0.001$, $d = 2.08$.

2.2 Participants

Sixty-three valid participants were randomly selected from two eighth-grade classes at a middle school in Yunnan Province. The sample included 33 males ($Mage = 14.18 \pm 0.58$) and 30 females ($Mage = 14.07 \pm 0.58$).

2.3 Materials

To ensure novelty and appropriate difficulty, two poems were selected: Wang Bo’s “In the Mountains” and Du Fu’s “Quatrain of Impromptu Inspiration, No. 5,” evaluated by middle school Chinese teachers. Each poem’s test comprised three questions totaling 12 points (4 points each), modeled after middle school examination formats: (1) Poetic understanding (“Describe the scene created by this poem”), (2) Emotional processing (“What emotions does the poet express?”), and (3) Artistic conception construction (“What kind of atmosphere does this poem create?”). Two raters independently scored responses using standardized criteria, achieving inter-rater reliability coefficients of 0.75 for “In the Mountains” and 0.78 for “Quatrain of Impromptu Inspiration, No. 5” ($ps < 0.01$).

2.4 Design

A 2 (poem difficulty: high vs. low) \times 3 (illustration type: no illustration, irrelevant illustration, relevant illustration) mixed design was employed. Illustration type was a between-subjects variable, while poem difficulty was within-subjects. The dependent variable was poetry learning performance, comprising three components: poetic understanding, emotional processing, and artistic conception construction.

2.5 Procedure

Experiment 1 was administered to intact classes, with participants randomly assigned to conditions. The session lasted approximately 45 minutes, allowing ample response time. In illustration conditions, participants first read instructions indicating that “the illustration depicts the poetic conception,” then studied the poem and illustration. Afterward, they completed an illustration comprehension test (e.g., naming the illustration, judging emotional valence) to ensure engagement, followed by the poetry test. In the no-illustration condition, participants studied the poem directly before completing the test.

[Figure 1: see original paper] Schematic of experimental materials: Poem “In the Mountains” (no illustration condition)

2.6 Results

(1) Effects of Realistic Illustrations on Low-Difficulty Poetry

For low-difficulty poems, a significant main effect of illustration type emerged, $F(2, 60) = 5.49$, $p = 0.006$, $\eta^2 = 0.16$. Simple effects analysis revealed that relevant illustrations outperformed no-illustration, $t(45) = 3.21$, $p = 0.002$, $d = 0.97$, but did not differ from irrelevant illustrations, $t(32) = 0.91$, $p = 0.370$. Irrelevant illustrations marginally differed from no-illustration, $t(43) = 2.02$, $p = 0.05$, $d = 0.63$. Descriptive statistics appear in Table 1 .

[Figure 2: see original paper] Experiment 2 material schematic: Relevant illustration for “In the Mountains”

[Figure 3: see original paper] Experiment 2 material schematic: Irrelevant illustration for “In the Mountains”

At the “poetic understanding” level, no significant main effect appeared. For “emotional processing,” a significant main effect emerged, $F(2, 60) = 3.43$, $p = 0.039$, $\eta^2 = 0.10$. Relevant illustrations surpassed no-illustration, $t(45) = 2.20$, $p = 0.033$, $d = 0.64$, but not irrelevant illustrations, $t(32) = 0.42$, $p = 0.681$. Irrelevant illustrations marginally exceeded no-illustration, $t(43) = 2.38$, $p = 0.022$, $d = 0.68$. For “artistic conception construction,” a significant main effect appeared, $F(2, 60) = 6.21$, $p = 0.004$, $\eta^2 = 0.17$. Relevant illustrations outperformed no-illustration, $t(45) = 3.34$, $p = 0.002$, $d = 1.03$, and marginally exceeded irrelevant illustrations, $t(32) = 1.71$, $p = 0.096$. Descriptive statistics appear in Table 2 .

(2) Effects of Realistic Illustrations on High-Difficulty Poetry

For high-difficulty poems, a significant main effect of illustration type emerged, $F(2, 60) = 3.60$, $p = 0.034$, $\eta^2 = 0.11$. Relevant illustrations marginally exceeded no-illustration, $t(45) = 1.78$, $p = 0.082$, $d = 0.53$, and significantly outperformed irrelevant illustrations, $t(32) = 2.70$, $p = 0.011$, $d = 0.93$. Descriptive statistics appear in Table 1.

At the “poetic understanding” level, a significant main effect appeared, $F(2, 60) = 3.62$, $p = 0.033$, $\eta^2 = 0.11$. Relevant illustrations marginally exceeded no-illustration, $t(45) = 1.89$, $p = 0.065$, $d = 0.57$, and significantly outperformed irrelevant illustrations, $t(32) = 2.64$, $p = 0.013$, $d = 0.90$. No significant effects emerged for “emotional processing” or “artistic conception construction.” Descriptive statistics appear in Table 2.

Experiment 1 demonstrated that relevant realistic illustrations facilitate poetry learning while irrelevant illustrations inhibit it, supporting Hypothesis 1 and Mayer’ s multimedia learning theory. Illustration relevance and poem difficulty interactively affect learning: for low-difficulty poems, students achieve poetic understanding regardless of illustrations, but relevant illustrations promote deeper emotional processing and artistic conception construction. For high-difficulty poems, relevant illustrations only enhance shallow comprehension. However,

realistic illustrations did not significantly affect learning experiences.

Experiment 2: Freehand Illustrations

3.1 Pretest

Sixty-eight university students majoring in Chinese literature evaluated illustration-poem correspondence. Using the same rating scales as Experiment 1, results showed that for “In the Mountains,” relevant illustrations ($n = 23$, $M = 4.48$, $SD = 1.65$) were significantly more matched than irrelevant illustrations ($n = 23$, $M = 3.09$, $SD = 1.31$), $t(22) = 3.43$, $p < 0.01$, $d = 1.46$. For “Quatrain of Impromptu Inspiration, No. 5,” relevant illustrations ($n = 15$, $M = 5.13$, $SD = 1.51$) exceeded irrelevant illustrations ($n = 15$, $M = 1.27$, $SD = 0.46$), $t(14) = 9.95$, $p < 0.001$, $d = 5.32$.

3.2 Participants

Sixty-eight valid participants were recruited from two eighth-grade classes at the same Yunnan middle school, including 36 males ($M_{age} = 14.17 \pm 0.56$) and 32 females ($M_{age} = 14.03 \pm 0.54$).

3.3 Materials

Three additional items assessed subjective learning experience: mental effort rating (9-point scale), artistic conception learning effectiveness (5-point scale), and learning enthusiasm (5-point scale). All other materials remained identical to Experiment 1. Inter-rater reliability coefficients were 0.79 for “In the Mountains” and 0.81 for “Quatrain of Impromptu Inspiration, No. 5” ($ps < 0.01$).

3.4 Design and Procedure

The experimental design and procedure mirrored Experiment 1, substituting freehand illustrations.

3.5 Results

(1) Effects of Freehand Illustrations on Low-Difficulty Poetry

For low-difficulty poems, a significant main effect emerged, $F(2, 65) = 5.10$, $p = 0.009$, $\eta^2 = 0.136$. Relevant illustrations outperformed both no-illustration, $t(49) = 2.80$, $p = 0.007$, $d = 0.80$, and irrelevant illustrations, $t(37) = 2.73$, $p = 0.010$, $d = 0.90$. Descriptive statistics appear in Table 3.

[Figure 4: see original paper] Experiment 2 material schematic: High-relevance illustration for “In the Mountains”

[Figure 5: see original paper] Experiment 2 material schematic: Irrelevant illustration for “In the Mountains”

At the “poetic understanding” and “emotional processing” levels, no significant effects appeared. For “artistic conception construction,” a significant main effect emerged, $F(2, 65) = 6.38$, $p = 0.003$, $\eta^2 = 0.164$. Relevant illustrations exceeded no-illustration, $t(49) = 3.53$, $p = 0.001$, $d = 1.01$, and marginally exceeded irrelevant illustrations, $t(37) = 1.99$, $p = 0.054$, $d = 0.65$. Descriptive statistics appear in Table 4 .

(2) Effects of Freehand Illustrations on High-Difficulty Poetry

For high-difficulty poems, a significant main effect emerged, $F(2, 65) = 3.79$, $p = 0.028$, $\eta^2 = 0.104$. Relevant illustrations significantly outperformed irrelevant illustrations, $t(37) = 2.87$, $p = 0.007$, $d = 0.94$, but not no-illustration, $t(49) = 1.16$, $p = 0.254$. Descriptive statistics appear in Table 3.

At the “poetic understanding” level, a marginally significant main effect appeared, $F(2, 65) = 2.74$, $p = 0.072$, $\eta^2 = 0.078$, with relevant illustrations exceeding irrelevant illustrations, $t(37) = 2.39$, $p = 0.022$, $d = 0.79$. No significant effects emerged for “emotional processing” or “artistic conception construction.” Descriptive statistics appear in Table 4.

(3) Effects on Subjective Learning Experience

For low-difficulty poems, a significant main effect on mental effort appeared, $F(2, 65) = 5.03$, $p = 0.009$, $\eta^2 = 0.134$. Relevant illustrations reduced mental effort compared to no-illustration, $t(49) = 3.07$, $p = 0.003$, $d = 0.88$, and marginally compared to irrelevant illustrations, $t(37) = 1.91$, $p = 0.065$, $d = 0.63$. For high-difficulty poems, a significant main effect also emerged, $F(2, 65) = 3.30$, $p = 0.043$, $\eta^2 = 0.09$, with relevant illustrations reducing effort compared to no-illustration, $t(49) = 2.47$, $p = 0.017$, $d = 0.71$.

For high-difficulty poems, relevant illustrations significantly enhanced artistic conception learning effectiveness, $t(37) = 2.58$, $p = 0.014$, $d = 0.85$, and learning enthusiasm, $t(37) = 3.59$, $p = 0.001$, $d = 1.18$. Descriptive statistics appear in Table 5 .

Experiment 2 replicated Experiment 1’s findings while demonstrating that relevant freehand illustrations enhance both learning outcomes and positive learning experiences, particularly reducing mental effort and improving learning enthusiasm and artistic conception effectiveness for high-difficulty poems.

4 General Discussion

Classical Chinese poetry represents an enduring cultural treasure. Previous research has predominantly employed humanities-based methods to analyze teaching and learning challenges subjectively, rarely using empirical approaches to investigate deeper facilitative factors. This study addresses the crucial question of how middle school students can penetrate a poet’s inner world and construct poetic conception through mere dozens of characters, resonating with writers

from centuries past. Adopting a text-image integration perspective and psychological methodology, we pioneer the investigation of whether and which types of poetry illustrations enhance learning outcomes and experiences.

Combined findings reveal that both realistic and freehand illustrations show similar patterns: relevant illustrations facilitate learning while irrelevant ones inhibit it. For low-difficulty poems, students achieve basic comprehension regardless of illustrations, but relevant illustrations promote deeper processing. For high-difficulty poems, relevant illustrations only enhance shallow comprehension. However, freehand illustrations uniquely improve subjective learning experiences by reducing mental effort and increasing enthusiasm, particularly for challenging material.

Several limitations warrant future research. First, our sample comprised only middle school students. As Qian Zhongshu noted, poetry appreciation requires “enlightenment” built upon broad knowledge. Readers’ prior experience likely moderates illustration effects, suggesting future studies should examine learners’ knowledge levels. Second, our behavioral findings could be complemented by cognitive neuroscience methods to reveal the neural mechanisms underlying poetry learning and literary theory. Third, measuring artistic conception remains methodologically challenging given ongoing debates in literary theory, necessitating further development of assessment tools for deep-level processing.

In summary, Experiment 1 demonstrated that realistic illustration relevance and poem difficulty interactively affect learning, facilitating deep processing for easy poems but only shallow comprehension for difficult ones, without affecting learning experience. Experiment 2 revealed that freehand illustrations produce similar cognitive effects while additionally enhancing positive learning experiences, particularly for high-difficulty poems. These findings provide empirical support for multimedia learning theory and offer practical guidance for poetry instruction, suggesting that carefully selected, relevant illustrations—particularly freehand styles—can significantly improve both learning outcomes and student engagement in classical poetry education.

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