

Embodied pedagogy in language acquisition

Integrating ballet movement to teach French grammar to adult beginner learners

Pu WANG

Abstract

This study report proposes and preliminarily validates an innovative pedagogical framework that integrates classical ballet movements into French grammar instruction for adult beginners. This framework is grounded in the theory of embodied cognition. The methodology effectively links ballet terminology to specific grammatical structures, providing students with comprehensible input that moves beyond purely cognitive processing. Survey results reveal highly positive student feedback, with salient keywords such as "novel," "fun," and "elegant" underscoring the method's success in enhancing engagement and fostering a motivating learning environment. More significantly, the core principle of this approach—the strategic re-embodiment of linguistic elements from a language's cultural matrix—could be extended to the teaching of Chinese characters. This is demonstrated through a "Body-Logogram" model, where learners kinaesthetically interpret Oracle Bone Scripts by using their bodies to sculpt pictographs and narrate compound ideographs. The study concludes that this embodied pedagogy offers a replicable and transferable teaching model, demonstrating that the creative adaptation of movement principles can transcend conventional grammar instruction and open new avenues for multisensory language acquisition across diverse linguistic contexts.

1. Research background

The art of ballet emerged during the Renaissance period in 15th-century Italy. Ballet, as a universal art form, flourished during the era of Louis XIV as a courtly dance, later evolving into ballet dramas to express human emotions and ideas. The first Royal Dance Academy was established in France in 1661, where classical ballet movements were categorized and linked to specific aesthetic standards. The French terms created for these ballet movements have since become globally recognized ballet terminology.

To date, research has not yet focused on teaching French through ballet. This review synthesizes studies on integrating dance into foreign language instruction, covering vocabulary acquisition, grammar, and cultural understanding. The author, who holds a ballet teaching qualification from the Beijing Dance Academy, explores the potential of embodied

Wang: Embodied pedagogy in language acquisition

cognition in French language teaching and discusses relevant instructional strategies, offering a new perspective on French language acquisition.

2. Theoretical foundations

2.1 Teaching methods of language instruction

Second language (L2) teaching approaches can be categorized into *implicit* and *explicit* methods. Implicit instruction, exemplified through grammar-translation techniques, emphasizes rule-based learning and conscious knowledge acquisition (Cook, 2016). In contrast, approaches that deliberately structure interaction around real-life communication—often labelled “communicative” or “explicit”—position dialogue at the centre of second-language growth. Studies show that when learners are surrounded by the target language alone, the gains are largest. Yet success still hinges on individual variables such as drive, worry, age, and first-language strength.

Effective instruction therefore involves intuitive immersion through carefully planned communicative tasks, with the mix adjusted to suit each learner's profile.

2.2 Embodied language education

Embodied cognition theory emerged in the late 1990s. It represents a response to the scientific impasse encountered in the development and application of traditional "disembodied" cognitive processes based on the first generation of cognitive science, which relied on computer simulation and propositional symbol processing (Wang et al., 2022, p. 1).

With applications spanning disciplines such as language, mathematics, physics, and music (Ye, 2015), embodied education emphasizes the involvement of the body, its sensory perceptions, and actions in the process of knowledge generation. It explores the essence of learning science based on cognitive principles, highlighting a bottom-up process from concrete experiences to abstract concepts in the generation of knowledge, skills, and emotional attitudes. Studies indicate that the involvement of multiple sensory channels such as vision, hearing, and smell enhances individual cognitive effects (Wang et al., 2022, p. 21).

Regarding the research and application of embodied language education, studies in cognitive neuroscience indicate that when understanding action-related words and sentences, the sensory motor cortex in the brain associated with the corresponding actions is activated (Wang et al., 2022, p. 31).

Hauk et. al. (2004) used rain imaging techniques to record brain region activity in response to understanding hand or foot verbs, comparing it with rain activity during actual hand or foot

Wang: Embodied pedagogy in language acquisition

movements. The research results confirm the overlap between the semantic understanding of hand and foot verbs and the motor areas in the brain. Hands and gestures are believed to facilitate language learning and comprehension. Macedonia (2011) studied German-speaking adults as research subjects and found that meaningful gestures were more effective in promoting vocabulary learning during the teaching of foreign language vocabulary compared to meaningless gestures. Hands and arms, as part of the body, shape the bodily experiences, cognitive processes, and steps, which are fundamentally determined by the physical attributes of the body (Ye, 2010).

3. Literature review

The practice of arts is often seen as a catalyst for invigorating language teaching, creating integrated learning environments where language learning transcends being purely an abstract, cognitive brain process and becomes a process that incorporates action, emotion, and aesthetic perception (Fleming, 2023). The idea of using arts-based activities in second language and foreign language teaching is not new, with previous research focusing on drama (Cannon, 2016; Ludke, 2016) and singing (Ludke, 2016).

3.1 Dance integration into language learning

Although the role of music in language teaching is widely recognised, dance was rarely referenced in language instruction literature prior to this work (Corrales-Martín, 2001; Ludke, 2018). Pinter (1999) proposes dance as a holistic second language acquisition strategy grounded in embodied cognition principles. Although early proponents of dancing can be traced back to the 1990s (Bell, 1997), empirical research on integrating dance into language learning is scarce (Korpinen, 2024).

3.1.1 Vocabulary acquisition

Research consistently shows that dance and movement activities, often combined with music or songs, enhance vocabulary retention by providing rhythmic, kinesthetic, and contextual cues that support memorization (Bergner, 2006). Below are two examples of empirical studies conducted with a focus on instructional processes in the teaching of Chinese and Swedish.

While completing her doctorate at Monash University in Melbourne, Zhang et. al. published “Integrating Dance into Chinese Language Pedagogy,” a paper that translates her extensive dance-teaching expertise into the primary classroom (2021). By guiding pupils to observe and mirror the poised undulations of a peacock’s neck and tail, she helped them internalize descriptive Chinese expressions, then deepened their learning by having them sketch the movements—an elegant fusion of kinesthetic, visual, and linguistic modes.

Wang: Embodied pedagogy in language acquisition

Kaisa Korpinen (2023), a doctoral researcher from Finland, initiated a project titled "Teaching Swedish to Finnish Primary School Students through Dance", supported by the Cultural Department of the Swedish Embassy in Finland. The project, comprising a professional dancer, a lead teacher, and Kaisa herself, details the formation and challenges of teacher team collaboration in a paper. Recently, she published an academic paper (2024) that merges animal-themed dance teaching with Swedish language teaching. In this paper, the scholar explores the excitement felt by students when allowed to freely create animal stories. Furthermore, the author uses a unique research method, presenting key content in the form of photographs combined with comic text, as part of classroom records.

Despite positive findings, the integration of dance with vocabulary learning is often conflated with music or song-based methods, complicating attribution of effects specifically to dance.

3.1.2 Grammar instruction

Dance combined with music and song has been used to teach grammatical structures through semantic-communicative approaches, facilitating pragmatic understanding and syntactic exploration in an engaging manner (Corrales-Martín, 2001). However, few studies systematically assess grammatical outcomes or compare dance-integrated methods with traditional grammar instruction.

3.1.3 Cultural understanding

Dance is recognized as a powerful medium for conveying cultural knowledge and fostering intercultural competence, especially when integrated with language instruction that emphasizes cultural narratives and social concepts (Zheng & Zhao, 2018). Research on cultural understanding tends to be descriptive and qualitative, with limited empirical measurement of intercultural competence gains.

3.1.4 Positive emotional and social effects

Learning a second language through dance can elicit positive emotional responses from students (Eckstein & Hanks, 2019), as emotional factors are seen as a key indicator affecting student learning outcomes (Rockafellow & Saules, 2006). Dance enables students to establish meaningful relationships—both with themselves and their community—a crucial element in second language acquisition.

3.1.5 Pedagogical models and collaboration

Innovative models involving multiprofessional collaboration between dance educators, language teachers, and researchers demonstrate promising approaches to co-designing

Wang: Embodied pedagogy in language acquisition

integrated curricula that address both linguistic and embodied learning goals (Korpinen & Anttila, 2023). These models foster holistic and interdisciplinary pedagogy.

Challenges include the complexity of coordination across disciplines, resource intensiveness, and the need for specialized teacher training.

3.2 Research gaps

The literature on integrating dance into foreign language teaching reveals a promising interdisciplinary approach that combines embodied learning with linguistic and cultural development. This holistic view of language learning suggests that learning occurs within the entire human body and their social-material environment. However, there still exists some research limitations, as the following points demonstrate:

- 1) *Limited Focus on Grammar*: While vocabulary acquisition is well-studied, empirical research on dance-integrated *grammar* instruction remains scarce, leaving its pedagogical impact unclear.
- 2) *Age bias*: Most studies target young or adolescent learners, neglecting adults and diverse age groups, thus limiting generalizability.
- 3) *Methodological Weaknesses*: Despite acknowledging dance's multi-modal benefits, many studies rely on exploratory or quasi-experimental designs without rigorous controls (e.g., randomization), undermining causal validity.
- 4) *Unclear Cognitive Mechanisms*: The precise cognitive and neurological mechanisms by which dance facilitates vocabulary, grammar, and cultural learning remain under-explored.

To begin addressing the gap in dance-integrated grammar instruction, particularly for adult learners, this study explores the use of ballet-infused instruction to teach French grammar to university students with no prior exposure to the language. While this work does not resolve all methodological or theoretical limitations, it offers an initial step toward understanding how embodied movement approaches may support grammatical learning in higher education contexts.

4. Ballet-infused French grammar instruction: A multi-sensory framework

The aim of this study is to enhance students' actual French language proficiency through the fusion of ballet as an art form. The research seeks to answer the following questions:

- In what ways can students effectively apply their understanding of ballet terminology to everyday language use?

Wang: Embodied pedagogy in language acquisition

- Does this method effectively enhance students' affective attitudes toward learning French?

The methodology progresses from foundational to complex linguistic structures, each mapped onto corresponding movement principles:

- 1) *Verb Morphology*: Regular first-group verbs (-er infinitives) are introduced via basic ballet positions (e.g., *plié* for *plier* → *plié*), while irregular third-group forms (e.g., *avoir* → *eu*) are reinforced through advanced movements (*tendu*, *plié-soutenu*). Past participles are contextualized either in compound tenses ("*J'ai fait plié*") and as adjectives, with postural adjustments (e.g., arm positions).
- 2) *Tense and Syntax*: Temporal markers (*venir de*, *aller + inf.*) are enacted through directional gestures, and interrogative structures are drilled choreographically. Prepositions (*de*, *avec*) and imperative mood are extracted from ballet commands ("*Faites demi-plié avec les bras!*"), merging syntactic accuracy with kinetic execution.
- 3) *Lexical and Logical Systems*: Noun gender distinctions (*épaule* [f.] vs. *épaulement* [m.]) are clarified through contrasting poses, pronouns streamline directives ("*Lève-la*"), and adverbs (*lentement*) synchronize movement quality with linguistic precision. Negation is gamified ("*Ne sautez pas—glissez !*"), while conditional *si* clauses structure cause-effect choreography ("*Si Maxime plie, Hugo saute*").
- 4) *Numerical Integration*: Cardinal and ordinal numbers are embedded in *port de bras* sequences (e.g. *cinquième position*), linking phonological and mathematical fluency.

4.1 Verb morphology: From conjugation to past participles

4.1.1 First-group verbs (-er infinitives)

Firstly, through the teacher's demonstration of several basic ballet movements such as squatting, kicking, and small jumps, and their corresponding French names are introduced: "*plié*," "*jeté*," and "*sauté*." These names are derived from the respective verbal transformations, namely "*plier*," "*jeter*," and "*sauter*." Students are then prompted to observe the characteristics of these verbs' endings, thereby deducing the characteristics of verb endings in the first group of French verbs and how verbs in the first group map to their corresponding past participles. Following this, the action of "*relevé*" (to rise onto half-toe) is used to test whether students can identify it as belonging to the first group of verbs.

Another movement called *piqué* can be introduced—the teacher can explain its meaning and then encourage students to imagine, in groups, how to embody the sensation of being pricked by a needle. Similar exercises can be extended to other movements, such as *balancé*, where the teacher might guide students to mimic the swinging motion of a pendulum.

Wang: Embodied pedagogy in language acquisition

In this context, it is recommended that the instructor provides additional examples of conjugation exercises in complete yet concise sentences, incorporating subject pronouns (*pronoms personnels sujets*) in the present indicative tense (*présent de l'indicatif*). For instance: *je parle chinois, tu parles chinois...*

4.1.2 Third-group verbs

In the subsequent lessons, the instruction for "*tendu*" (to stretch) is introduced, with its verb root being "*tendre*" (to extend), guiding students to imagine how the action of stretching the foot progresses from the sole to the arch and then to the tip of the toes.

Next, a new movement *plié-soutenu* is introduced (*see Photo 1*). Since students are already familiar with *plié*, the teacher can demonstrate this variation and encourage the students to deduce the meaning of *soutenir* by observing how the supporting leg stabilizes the body. Following this physical engagement, students will be guided to recall and summarize all past participles ending in **-u**.

As these verbs belong to the irregular third group, students will first organize their notes, classifying the examples they identify. The teacher can then supplement their findings with additional verbs, such as:

- *Avoir* → *eu*
- *Boire* → *bu*
- *Connaître* → *connu*
- *Devoir* → *dû*



Photo 1: *Plié-soutenu*

Subsequently, it is recommended to present the remaining second group of verbs, thereby providing students with a comprehensive understanding of all three French verb categories.

4.1.3 Compound tenses

Two students are invited to perform previously learned ballet movements, such as *plié* and *tendu*. Afterward, the teacher asks the first student:

"*Qu'est-ce que tu fais?*" (What are you doing?)

prompting the student to respond using the target structure:

Wang: Embodied pedagogy in language acquisition

"*J'ai fait plié.*"

Next, the teacher asks the second student:

"*Qu'est-ce qu'il/elle fait?*" (What is s/he doing?)

guiding the student to reply:

"*Il a / Elle a fait plié.*" (S/He is bending)".

Through this exercise, students observe and internalize the sentence structure (subject + auxiliary verb + past participle). The instructor may then provide additional clarification, reinforcing the grammatical rule and its application.

4.1.4 Adjectival participles

In French, past participles can function as stand-alone adjectives to modify nouns. When used this way, they:

1. Follow the noun (postpositive position)
2. Agree in gender and number with the noun they modify

Following the previous session, the teacher may introduce another movement called *pas couru*. This involves a series of quick, small steps performed close to the floor, where the free leg is carried forward and to the side with a smooth weight transfer, and it serves to connect movements. In this context, the teacher can guide students to analyse the grammatical function of the past participle as an adjective and its syntactic positioning within the sentence.

Similar movements include *pas sauté* (jump), *pas échappé* (slide), *pas assemblé* (step together).

4.2 Tense and interrogative structures

In this teaching segment, coinciding with the beginning of the Minor Snow season, the teacher uses a song adapted from a short poem as an introduction:

"*L'hiver est arrivé, le printemps va arriver, soyez patient, bonne journée!*"

(Winter has arrived, spring is coming, be patient, have a good day!).

Next, the teacher will introduce the structure and usage of the recent past tense (*venir de + infinitive*) and the near future tense (*aller + infinitive*), instructing students to physically represent these two compound tenses using their left and right hands respectively.

Subsequently, the teacher will give a movement command—for example,

Wang: Embodied pedagogy in language acquisition

“Liame, fais demi-plié vite une fois.”

(Liame, do a half-bend once.)

and, before execution, pose the question:

“Liame, tu vas faire demi-plié.”

(Liame, you are going to do a half-bend.)

Students are expected to respond briefly with *“oui”* or *“non.”* In the early learning phase, single-word answers are sufficient. The teacher will then recast and write the full response on the board:

“Oui, je vais faire demi-plié.”

(Yes, I will do a half-bend.)

To further scaffold understanding, the teacher may continue with a binary-choice question such as:

“Qu’est-ce que tu vas faire? Demi-plié ou grand-plié?”

(What are you going to do? A demi-plié or a grand plié?)

Through these scaffolded questions—progressing from yes/no responses to binary choices—the teacher reinforces the target structure via repetitive yet contextually varied prompts.

Next, the instructor guides students to observe and summarize the characteristics of these two types of interrogative sentence structures. Simultaneously, this can be transformed to inquire about another classmate:

Liame, fais demi-plié deux fois. (Liame, do a half- plié twice.)

Hugo, qu’est-ce que Liame va faire? (Hugo, what is Liame going to do?)

Liame, fais demi-plié deux fois. (Liame, do a half- plié twice.)

Hugo, qu’est-ce que Liame a fait? (Hugo, what has Liame just done?)

Through this design, students are able to deepen their understanding and application of the recent past tense and the near future tense, thus enhancing their comprehension of these two tenses.

4.3 Transition between cardinal and ordinal numbers

In previous movement exercises, students have become familiar with the expression of cardinal numbers from 1-8. Next, during upper body *port de bras* training, the practice of the seven hand positions in ballet introduces ordinal numbers. The teacher provides the ordinal numbers for the first three digits, prompting students to observe the differences in their

Wang: Embodied pedagogy in language acquisition

formation, after which students attempt to convert the remaining four numbers into ordinal numbers. The teacher notes that certain words need to change due to pronunciation requirements, for instance, "*cinq*" becomes "*cinquième*."

4.4 Prepositions

4.4.1 Prepositions 'de'

In the previous section, the teacher introduced the seven basic hand positions in ballet to illustrate ordinal numbers. Building on that foundation, the overarching term for this category of movement—*port de bras*—is now introduced. By examining the phrase structure, students can readily identify the preposition *de* connecting the two nouns. The teacher may then demonstrate contrasting movements such as *rond de jambe par terre en dehors* versus *rond de jambe par terre en dedans*, prompting students to locate additional prepositions and directional modifiers (e.g., *par, en*) within these terms. Through this process, students embody and internalize the spatial and directional distinctions embedded in fundamental ballet vocabulary.

4.4.2 Prepositions & imperative mood

Divide the students into two groups named "Group A" and "Group B". First, Group A performs the half-*plié* movement, then invite Group B to follow, with instructions as follows: "*Group A, faites demi-plié.*" (Group A, do the half-*plié*.)

"*Group B, faites demi-plié avec Group A.*" (Group B, do the half-*plié* with Group A.)

Throughout this process, the teacher first introduces the present indicative conjugation of the irregular verb "faire" from the third group, then guides students to deduce the formation and usage of French imperative mood are supplemented through observation. Additionally, other relevant uses of the imperative mood, such as expressing requests or suggestions. Next, another preposition, "*sans*" is introduced through the following action instructions:

"*Group A, reposez-vous.*" (Group A, rest.)

"*Group B, faites demi-plié sans Group A.*" (Group B, do the half-*plié* without Group A.)

Building on this foundation, students are now guided to analyze the prepositions '*avec*' and '*sans*' within various sentence structures. Through careful observation, they should be able to recognize that these prepositions, like others, serve as relational connectors—establishing meaningful links between different elements in a sentence.

4.5 The gender of French nouns

Wang: Embodied pedagogy in language acquisition

In ballet, certain postures can be effectively linked to teaching French noun genders, such as épaulement, a shoulder technique.

First, the teacher can demonstrate the ending ballet posture, *révérence*, which is a curtsy technique (see Photo 2).



Photo 2: *Révérence*

Next, the teacher can introduce the word *épaule* (shoulder) and demonstrate the ballet position *épaulement*—a fundamental stance where the dancer faces the diagonal of the classroom. This practical example "*épaule*" and "*épaulement*" serve as excellent examples to illustrate how French nouns are categorized into feminine and masculine genders. Through guided observation of word endings, students can identify patterns in French noun genders: words ending in *-e* (such as *tale*, *rue*, and *pomme*) are typically feminine, while those ending in *-ment* (like *changement* in *changement de pied*) are generally masculine. The lesson then returns to the reverence position, prompting students to analyse and identify the grammatical gender of this ballet term.

4.6 Roles of pronouns

Pronouns serve to make expressions more concise when the objects are clear to other parties involved in the action. Therefore, following the preposition classes above, there is an expansion into an explanation of pronouns, focusing on stressed personal pronouns (after prepositions) and direct object personal pronouns.

“Maxime, fais demi-plié une fois avec Sara”. (Maxime, do a half-plié once with Sara.)

“Maxime, fais-le avec elle.” (Maxime, do it with her.)

Since students already comprehend that prepositions function as connectors between sentence elements, they should readily grasp the first sentence. When presenting the second expression, the teacher can then explain its purpose in avoiding repetition.

4.7 Significance of adverbs

Next, the teacher can demonstrate how to present the same action with different intensity and rhythm. The addition of adverbs makes sentences more precise, rich, vivid, and

Wang: Embodied pedagogy in language acquisition

descriptive, as shown in:

"Maxime, fais grand-plié lentement et doucement".

(Maxime, do a grand plié slowly and gently/smoothly.)

"Maxime, faire sauté vite".

(Maxime, jump quickly.)

Simultaneously, the teacher can use the blackboard to demonstrate the masculine and feminine forms of French adjectives, along with their corresponding adverb forms, guiding students to observe how French adverbs evolve from the corresponding feminine adjective forms.

4.8 Negative sentences

The game "Pancho Crancho Says" is suitable for reinforcing practice with negative sentences. The teacher starts by saying "Pancho Crancho ate the pizza," and students need to negate this statement and express it in a new sentence, such as "Pancho Crancho didn't eat the pizza, he ate the apple."

In my teaching practice, I have designed a variation of the Pancho Crancho game as follows: three students work together, where Student C performs an action, Student A describes the action incorrectly, and Student B describes the action correctly.

Student A: *"Alida fait grand-plié une fois."* (Alida does a grand plié once.)

Student B: *"Alida ne fait pas grand-plié, elle fait demi-plié."* (Alida is not doing a grand-plié; she is doing a demi-plié.)

This method improves on traditional drills by integrating kinesthetic learning, deliberate errors, and peer correction. To further increase engagement, instructors may introduce humorous imperative constructions, e.g., *"Ne sautez pas, glissez!"* (*Don't jump, slide*), which simultaneously reinforce grammatical negation while maintaining a lively classroom atmosphere.

4.9 Usage of conditional clauses introduced by "si"

The imperative structure

"Hugo, fais demi-plié deux fois si Maxime fait grand-plié une fois".

(Hugo, do two demi-pliés when Maxime does one grand-plié.)

demonstrates a scaffolded approach to kinaesthetic learning.

This conditional command structure effectively merges language acquisition with physical training by incorporating ballet terms (e.g., *demi-plié*) within *if-then* frameworks, it

Wang: Embodied pedagogy in language acquisition

simultaneously teaches dance vocabulary and reinforces grammatical structures. Educators can design nested commands ("Do X until Y") or, for tech-savvy students, develop 'command trees' with branching sequences. This approach integrates linguistic, mathematical, and motor skill development through real-time cognitive engagement.

5. Applicability and limitations of the method

5.1 Analysis of student feedback and teacher's reflection

Additionally, there was an effective survey conducted through the Questionnaire Star platform to gain deeper insights into students' perceptions of this teaching method. For detailed word cloud analysis and survey content see Appendix.

The word cloud analysis indicates that words such as "novel," "interesting," and "elegant" have higher frequencies. Furthermore, students' class notes reflect opinions such as "music and dance help in focusing attention."

While most of the student feedback was positive, the occasional perception of the pedagogy as "boring" merits thoughtful consideration. This response prompted a critical reflection on our instructional approach, particularly given that the participant pool predominantly consisted of male students from STEM fields. It can be therefore hypothesized that a pre-existing cultural or perceptual distance from ballet as a discipline may have contributed to this sentiment among a minority of learners.

This observation fundamentally reinforces the core principle of this pedagogical intervention: that learning ballet is not the objective. Instead, the goal is to harness its movement vocabulary as an embodied scaffold for grammatical concepts. Consequently, the focus must shift decisively toward de-emphasizing ballet's performative connotations and amplifying its function as a physical coding system.

Going forward, teacher training and lesson design should prioritise developing incorporated games that convert movement terms into domain-specific cognitive frameworks. For instance, for computer science majors, a sequence of movements could be conceptualized as a set of executable instructions embodying "recursion" or "loop" structures. Within this paradigm, students are not "dancing" but rather "executing" a physical program, thereby internalizing grammatical rules through a dynamic, gamified experience. By transferring the focus entirely from aesthetic performance to logical function, the aim is to achieve broader engagement and deeper learning across the entire student cohort.

5.2 Pedagogical applicability and implementation

Wang: Embodied pedagogy in language acquisition

Professional ballet dancers must adhere to the fundamental principles of "turn-out, pointed feet, and straight posture." However, this pedagogical approach does not require instructors to demonstrate technical mastery of these movements.

Instead, the emphasis lies in effectively correlating the biomechanical execution of movements with the semantic meaning of target vocabulary, thereby leveraging kinesthetic learning to reinforce French language acquisition. To further facilitate comprehension, instructors may incorporate supplementary multimedia resources (e.g., instructional videos or annotated imagery) during explanations.

In essence, ballet serves as a pedagogical vehicle to provide students with comprehensible input. Take the movement attitude as an example. Recognizing that the professional execution may be technically demanding for beginners, the instructor can have students work in pairs: one student creates a personalized posture since the term itself denotes a pose, while the partner captures the pose photographically and verbally reinforces the term by saying "attitude" aloud (see Photo 3).



Photo 3: Attitude

5.3 From ballet to body-logograms: Extending the embodied pedagogy to Chinese character learning

The core principle of "re-embodiment" language rules from their cultural matrix finds a profound application in Chinese language teaching, moving beyond the ballet-infused model for French. This pedagogical extension leverages the unique nature of Chinese characters, whose origins in Oracle Bone Scripts (甲骨文) are inherently embodied, based on ancient observations of the human body and the natural world. We propose a shift from learning characters through visual memorization to understanding them through *kinesthetic interpretation*, where students use their bodies to "sculpt" and "narrate" the logograms.

Wang: Embodied pedagogy in language acquisition

This "body-logogram" approach can be implemented on three scaffolded levels:

Static Sculpting of Pictographs: Students use their postures to form the shapes of simple, pictographic characters. For instance, they can stand sideways with arms slightly extended to embody "人" (person), or crouch down to represent "女" (woman), intuitively grasping the original pictographic meaning through proprioceptive experience.

Dynamic Ensemble for Compound Ideographs: For compound characters (会意字), small groups collaborate to act out the component relationships. To learn "休" (to rest), one student becomes the "人" (person) leaning against another student who forms the shape of "木" (tree). This transforms the abstract structural logic of the character into a memorable, collaborative story.

Sequential Narrative for Meaning and Grammar: The approach can extend to illustrating word evolution and basic syntax. A sequence of actions can be choreographed: a student points into the distance ("目" - eye, meaning "to look"), then another student runs to a spot ("至" - to arrive), and finally presents an object ("献" - to offer). This kinetic narrative encapsulates the original meanings and naturally leads to the formation of short phrases or sentences.

In conclusion, this pedagogical extension shows that the essence of the ballet-infused method lies not in the art form itself, but in the strategic "re-embodiment" of linguistic elements. By rooting the physical practice directly in the cultural and historical substrate of the target language—in this case, the embodied origins of Chinese characters—there is the creation of a deeply authentic, coherent, and effective embodied learning paradigm that transcends specific language pairs.

5.4 Recognized Limitations

Upon examining classical ballet terminology more closely, certain limitations to this embodied learning approach can be noted. Since some ballet terms lack clear, intuitive movement correlations, their suitability for this pedagogical method remains limited. Notably, it fails to comprehensively address all grammatical concepts, for instance, second-group verbs are virtually absent from ballet vocabulary.

6. Conclusion

This chapter provides a comprehensive summary of the study, which aimed to systematically explore how classical ballet could be integrated into French grammar instruction for adult

Wang: Embodied pedagogy in language acquisition

beginner learners and to evaluate the effectiveness of this embodied approach in enhancing student engagement and motivation.

The findings demonstrate the successful development of a structured pedagogical framework that creatively pairs ballet terminology and movement sequences with fundamental French grammar points, such as verb conjugation, prepositions, and sentence structures. Analysis of student feedback confirmed the method's positive impact on stimulating interest and fostering an interactive classroom atmosphere. Furthermore, critical reflection on occasional negative responses highlighted the importance of de-emphasizing ballet's performative aspects and reinforcing its function as a logical coding system, particularly for specific student demographics, such as those from STEM backgrounds.

The study further substantiates the practical applicability of this pedagogy, emphasizing that it does not require instructors to possess professional dance expertise. Instead, teachers act as facilitators who creatively adapt and employ movement principles to achieve language learning objectives, as illustrated by specific teaching examples provided in this work. What's more, the core idea behind this methodology is highly transferable. Preliminary exploration has shown that the 'embodiment' principle extracted from the 'ballet-French' model can be effectively extended to the teaching of Chinese characters through a 'body-logogram' approach, in which students physically recreate the formation of logograms.

Finally, this chapter acknowledges the study's limitations. Firstly, the integrated approach does not cover all grammatical concepts, such as second-group verbs. Secondly, the approach is better suited to action-oriented grammar than to abstract concepts. Despite the acknowledged limitations, this work makes a meaningful contribution to the broader field of embodied language education. It provides a replicable teaching model that goes beyond traditional grammar instruction, showing that teachers do not need to be expert dancers. Instead, they can be guided in adapting fundamental movement principles or discovering culturally resonant embodied practices to reinforce the acquisition of diverse linguistic structures.

Future research could employ neuroscience-based methodologies, such as functional magnetic resonance imaging (fMRI) or electroencephalography (EEG), to examine the neural correlates of this pedagogy, thereby validating its efficacy from a biological perspective.

References:

Bell, D. M. (1997). Steps to dance in the adult EFL classroom. *Journal Of the Imagination in Language Learning* 4, 34-39.

Wang: Embodied pedagogy in language acquisition

- Bergner, G. (2006). Die Rolle form- und bewegungsabbildender Gesten bei der rezeptiven Aneignung von Vokabular aus einem action song durch acht- bis zehnjährige Grundschüler unter Berücksichtigung innerer und äußerer Faktoren. http://www.db-thueringen.de/receive/dbt_mods_00007018
- Cannon, A. (2016). When statues come alive: Teaching and learning academic vocabulary through drama in schools. *Tesol Quarterly*, 51(2), 383-407. <http://doi.org/https://onlinelibrary.wiley.com/doi/10.1002/tesq.344>
- Cook, V. (2016). *Second language learning and language teaching* (Fifth Edition). Routledge.
- Corrales-Martín, N. (2001). Enseñanza de la gramática y la cultura hispánicas a través de música caribeña. *CAUCE, Revista de Filología y su Didáctica*, 24, 405-416.
- Eckstein, G., & Hanks, E. (2019). Increasing English learners' positive emotional response to learning through dance. *Brigham Young University Faculty Publications*, 52, 72-93.
- Fleming, M. (2023). Arts, language and intercultural education. *Language Teaching Research*, 27(2), 261-275. <http://doi.org/10.1177/13621688211044244>
- Hauk, O., Johnsrude, I., & Pulvermüller, F. (2004). Somatotopic representation of action words in human motor and premotor cortex. *Neuron*, 41(2), 301-307.
- Korpinen, K. (2024). "Wild" languaging: A practice of embodied language learning when integrating dance in early additional language education. *Journal of Applied Language Studies*, 18(4), 25-51. <http://doi.org/10.47862/apples.138534>
- Korpinen, K., & Anttila, E. (2023). The potential of multiprofessional collaboration in integrating dance in early additional language education in primary school. *Dance Articulated*, 9(1). <http://doi.org/10.5324/da.v9i1.5053>
- Ludke, K. M. (2016). Singing and arts activities in support of foreign language learning: an exploratory study. *Innovation in Language Learning and Teaching*, 12(4), 371-386. <http://doi.org/https://doi.org/10.1080/17501229.2016.1253700>
- Macedonia, M., Muller, K., Friederici, A. D. (2011). The impact of iconic gestures on foreign language word learning and its neural substrate. *Human Brain Mapping*, 32(6), 982–998. <https://doi.org/10.1002/hbm.21084>
- Pinter, I. (1999). Second language development through the use of dance. *Brock Education Journal*, 1(9), 13-20. <https://doi.org/10.26522/brocked.v9i1.327>
- Rockafellow, B. D., & Saules, K. K. (2006). Substance use by college students: The role of intrinsic versus extrinsic motivation for athletic involvement. *Psychology of Addictive Behaviors*, 20(3), 279-287. <https://doi.org/10.1037/0893-164X.20.3.279>
- Wang, Z., Zhang, P., & Yue. (2022). *Cognitive Development in Children and Embodied Education*. Tsinghua University Press. [10.12738/estp.2018.6.220](https://doi.org/10.12738/estp.2018.6.220)
- Ye, H. S. (2010). Embodied cognition: A new approach in cognitive psychology. *Advances in Psychological Science*, 18(5), 705-710.

Wang: Embodied pedagogy in language acquisition

Ye, H. S. (2015). The body and learning: embodied cognition and its impact on traditional view of education. *Educational Research*, 36(4), 104-114.

Zheng, D., & Zhao, Y. (2018). Innovative education method of the integration of cultural communication and dance art design. *Educational Sciences: Theory and Practice*, 18(6), 3169-3176.

Appendix

Thanks to:

Project Title: Research on Children's French Teaching Integrating Nature Education from the Perspective of Embodied Cognition

Project Number: 23B0338

Funder: Youth Project of the Education Department of Hunan Province, China

Survey question response:

Describe your feelings about the integration of ballet with French learning in three words.



English translation of words:

joyful, ingenious, taste, appreciation, unparalleled, elegant, boring, practical, vivid & interesting, wonderful, abundant