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Methodology for developing philology students' creative writing competence based on design thinking technology

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Abstract. This study proposes a broadened methodological framework for developing philology students' creative writing competence through Design Thinking technology. Situated within constructivist, sociocultural, and competence-based learning paradigms, the research investigates how the systematic integration of Design Thinking stages - empathy, definition, ideation, prototyping, and testing —transforms writing instruction into an iterative, reflective, and learner-centered process. A qualitative research design was employed, incorporating theoretical analysis, classroom observation, and textual analysis of students' written outputs. The findings indicate that Design Thinking significantly improves learners' ability to generate ideas, structure discourse, and apply lexical and stylistic resources effectively. In addition, it enhances metacognitive awareness, collaborative learning, and learner autonomy. The study concludes that Design Thinking constitutes a robust methodological framework for developing creative writing competence in philological education and supports its integration into modern curriculum design and digital learning environments. The study concludes that Design Thinking constitutes a robust, flexible, and future-oriented methodological framework for developing creative writing competence in philological education. It not only bridges the gap between theory and practice but also aligns effectively with modern pedagogical requirements, including learner-centered instruction and competency-based education. The findings further suggest that its integration into curriculum design, teacher training programs, and digital learning environments can significantly enhance the quality and effectiveness of foreign language writing instruction in higher education contexts.

Keywords: Creative writing; philology education; Design Thinking; linguodidactics; writing competence; constructivism; CEFR; learner-centered pedagogy; innovation; higher education

Introduction

In contemporary higher education, the development of creative writing competence has become a central objective of philological training. Philology students are expected not only to demonstrate linguistic accuracy but also to produce texts that are coherent, contextually appropriate, stylistically rich, and communicatively effective. Writing is therefore understood as a complex cognitive, linguistic, and socio-pragmatic activity that requires the integration of multiple competencies.

Despite this understanding, writing instruction in many educational contexts remains predominantly product-oriented. Traditional approaches tend to emphasize grammatical correctness, error correction, and final output evaluation, often neglecting the recursive and exploratory nature of writing. Consequently, learners may experience difficulties in idea generation, text organization, and expressive language use.

In response to these limitations, contemporary pedagogical research increasingly emphasizes process-oriented and learner-centered approaches. Among them, Design Thinking has emerged as a powerful methodological innovation. Originating in design sciences, it is a human-centered, iterative problem-solving approach that encourages empathy, creativity, collaboration, and experimentation.

In language education, Design Thinking offers a structured framework for transforming writing instruction into an active and reflective process. By engaging learners in real or simulated

communicative problems, it fosters deeper cognitive involvement and meaningful language use. This study aims to broaden the methodological understanding of how Design Thinking can be systematically applied to enhance creative writing competence in philology education.

Theoretical Framework

The theoretical foundation of this study integrates three major educational paradigms: constructivism, sociocultural theory, and competence-based education.

Constructivist theory posits that knowledge is actively constructed through experience and interaction rather than passively transmitted. In writing instruction, this implies that learners develop competence through continuous engagement in drafting, revising, and reflecting on texts.

Sociocultural theory emphasizes the role of social interaction and mediation in cognitive development. Collaborative writing activities, peer feedback, and teacher scaffolding play a crucial role in enhancing learners' linguistic and cognitive growth.

Competence-based education focuses on the integration of knowledge, skills, and attitudes necessary for real-world performance. In the context of writing, this includes linguistic competence, discourse competence, and pragmatic competence.

Design Thinking aligns with these paradigms through its iterative, collaborative, and human-centered structure. Its cyclical process reflects authentic writing practices, where ideas evolve through continuous refinement and feedback.

Methods

Research Design

The study employs a qualitative research design aimed at exploring the pedagogical impact of Design Thinking on creative writing competence. This approach enables an in-depth analysis of learning processes, classroom interaction, and student development.

Participants and Context

The research was conducted in a higher education philology program involving undergraduate students at B1–C1 CEFR levels. The participants were enrolled in academic writing courses where Design Thinking-based instruction was systematically implemented.

Data Collection Methods

Multiple sources of qualitative data were systematically employed in this study to ensure methodological triangulation, enhance validity, and provide a comprehensive understanding of the pedagogical impact of Design Thinking on creative writing competence. The use of diverse data sources allowed for cross-verification of findings and reduced the risk of interpretive bias, thereby strengthening the reliability of the research outcomes.

First, a systematic literature analysis was conducted focusing on Design Thinking theory, linguodidactic principles, and writing pedagogy. This phase established the conceptual foundation of the study and identified key theoretical constructs relevant to creative writing development, such as process-oriented instruction, learner autonomy, and communicative competence.

Second, non-participant classroom observations were carried out during writing instruction sessions where Design Thinking methodology was implemented. These observations focused on learner engagement, interaction patterns, group collaboration, task completion strategies, and teacher scaffolding practices. Particular attention was given to how students responded to each stage of the Design Thinking cycle in real instructional contexts.

Third, a comprehensive collection of student writing samples was conducted across all phases of the Design Thinking process. These texts included initial drafts, revised versions, and final outputs. This longitudinal collection enabled detailed tracking of learners' progress in idea development, textual organization, and linguistic accuracy over time. The writing samples served as primary evidence for analyzing developmental changes in creative writing competence.

Fourth, reflective learner journals and feedback instruments were utilized to capture students' subjective experiences of the learning process. These reflections provided insights into learners' cognitive and emotional engagement, perceived difficulties, motivation levels, and self-assessment of

writing improvement. In addition, peer feedback data were analyzed to understand collaborative learning dynamics within the Design Thinking framework.

Fifth, a comparative instructional analysis was conducted between traditional writing instruction and Design Thinking-based instruction. This comparison enabled the identification of key pedagogical differences in teaching strategies, learner participation, and writing outcomes. The comparative dimension of the study helped to isolate the specific contribution of Design Thinking to writing competence development.

Analytical Framework

The analytical framework of this study is structured around the five iterative stages of the Design Thinking model: empathy, definition, ideation, prototyping, and testing. Each stage represents a distinct phase of cognitive, linguistic, and creative engagement, and is systematically mapped onto the core components of creative writing competence.

At the empathy stage, analysis focuses on learners' ability to understand audience needs, communicative purpose, and contextual relevance. This stage is associated with the development of pragmatic awareness, including sensitivity to register, tone, and sociocultural appropriateness in writing.

The definition stage is analyzed in terms of learners' ability to identify writing problems, formulate clear topics, and establish communicative objectives. This phase corresponds to discourse organization skills, particularly coherence at the macro-structural level and logical sequencing of ideas.

The ideation stage is examined through the lens of idea generation capacity and linguistic creativity. Here, attention is given to learners' ability to produce multiple conceptual alternatives, expand thematic possibilities, and employ diverse lexical and stylistic resources. This stage is crucial for fostering originality and expressive richness in writing.

During the prototyping stage, the focus shifts to the transformation of ideas into structured written texts. This includes analysis of coherence and cohesion, paragraph development, argument construction, and textual fluency. Learners' ability to translate abstract ideas into organized written forms is considered a key indicator of writing competence development.

The testing stage involves iterative revision processes, including peer review, teacher feedback, and self-correction. This phase is analyzed in terms of grammatical accuracy, refinement of lexical choices, and overall communicative effectiveness. It also reflects the development of metacognitive and reflective skills, as learners critically evaluate and improve their own writing.

To ensure standardization and comparability of results, the entire analytical process is aligned with CEFR descriptors (B1–C1 levels). These descriptors provide a validated framework for assessing writing proficiency across multiple dimensions, including coherence, cohesion, lexical range, grammatical control, and pragmatic appropriateness. This alignment enables a structured interpretation of learner progress and ensures that findings are consistent with internationally recognized language proficiency standards.

Results

Empathy Stage

The empathy stage enables learners to engage deeply with communicative context, audience needs, and situational relevance. Students demonstrate improved ability to adapt tone, register, and content according to purpose and reader expectations. This stage significantly enhances pragmatic competence and contextual awareness.

Definition Stage

At this stage, learners identify writing problems, define topics, and establish communicative goals. This process strengthens analytical thinking and improves discourse planning. Students begin producing more logically structured texts with clearer thematic progression.

Ideation Stage

The ideation stage fosters creativity, divergent thinking, and lexical expansion. Learners generate multiple ideas, explore alternative perspectives, and experiment with language use. This leads to increased originality, lexical diversity, and stylistic flexibility in writing.

Prototyping Stage

During prototyping, students transform ideas into structured drafts. This stage supports paragraph development, argumentation, and textual coherence. Learners gradually improve their ability to organize complex ideas into unified written discourse.

Testing Stage

The testing phase involves peer review, teacher feedback, and iterative revision. Students engage in reflective evaluation, identify weaknesses, and refine their texts accordingly. This process strengthens metacognitive awareness and improves overall writing quality.

Overall Impact

Across all stages, learners demonstrate increased motivation, engagement, and autonomy. Writing becomes a dynamic, iterative process rather than a static task. Significant improvements are observed in coherence, lexical richness, grammatical control, and communicative effectiveness.

Discussion

The findings of this study confirm that Design Thinking represents a highly effective methodological innovation within philological education, particularly in the development of creative writing competence. Its pedagogical significance lies in its ability to integrate cognitive, linguistic, and social dimensions of learning into a coherent and unified instructional framework. This integration is especially important in contemporary language education, where communicative competence is understood as a multidimensional construct that extends beyond grammatical accuracy to include discourse organization, pragmatic appropriateness, and socio-cognitive engagement.

Unlike traditional writing instruction, which tends to prioritize the final written product and emphasize error correction, Design Thinking fundamentally reconfigures the learning process by foregrounding process-oriented pedagogy. In this model, writing is not viewed as a linear act of producing a finished text, but rather as a recursive and iterative process involving continuous cycles of ideation, drafting, evaluation, and revision. This cyclical structure mirrors authentic academic and professional writing practices, where texts are constantly refined based on feedback, audience expectations, and contextual demands. As a result, learners develop a more realistic understanding of writing as a dynamic and evolving communicative activity.

Moreover, Design Thinking enhances the epistemological role of the learner by positioning students as active problem-solvers rather than passive recipients of linguistic knowledge. This shift significantly increases intrinsic motivation, as learners are engaged in meaningful tasks that require creativity, critical thinking, and personal investment. By working on real or simulated communicative problems, students perceive writing tasks as purposeful and relevant, which in turn fosters deeper cognitive engagement and sustained attention throughout the learning process.

In addition, the collaborative nature of Design Thinking contributes to the development of social learning environments where knowledge is co-constructed through interaction. Peer feedback, group ideation, and collective problem-solving activities enable learners to benefit from diverse perspectives and shared cognitive resources. This social dimension not only improves the quality of written outputs but also strengthens interpersonal communication skills and fosters a sense of shared responsibility for learning outcomes. Consequently, writing becomes both an individual and a collaborative act of meaning-making.

From a pedagogical perspective, Design Thinking also supports the development of metacognitive awareness. Through iterative reflection and revision, learners become more conscious of their writing strategies, strengths, and weaknesses. This self-regulatory capacity is essential for long-term writing development and aligns with contemporary theories of autonomous learning.

However, despite its pedagogical advantages, the implementation of Design Thinking in philological education is accompanied by several practical and systemic challenges. One of the primary

limitations is the level of teacher preparedness. Effective facilitation of Design Thinking requires educators to adopt new instructional roles, moving from knowledge transmitters to learning facilitators capable of guiding open-ended, student-centered activities. Without adequate professional training and methodological support, the effectiveness of this approach may be significantly reduced.

Another critical constraint is the limitation of instructional time. Design Thinking-based activities are inherently process-intensive, requiring sufficient time for brainstorming, collaboration, drafting, feedback, and revision. In many institutional contexts, rigid curricula and time-restricted syllabi may hinder the full implementation of all stages of the Design Thinking cycle.

Furthermore, misalignment between innovative pedagogical approaches and traditional assessment systems presents an additional challenge. Conventional assessment methods often prioritize final product accuracy, whereas Design Thinking emphasizes process, creativity, and iterative improvement. This discrepancy necessitates a reconsideration of assessment strategies to ensure that evaluation practices are consistent with instructional objectives.

Therefore, effective integration of Design Thinking into philological education requires a systemic transformation that includes curriculum redesign, targeted professional development programs for teachers, and institutional support mechanisms. Only through such comprehensive reforms can the full pedagogical potential of Design Thinking be realized in enhancing creative writing competence and broader communicative abilities.

Conclusion

This study demonstrates that Design Thinking provides a comprehensive, flexible, and pedagogically effective methodological framework for the development of creative writing competence in philology education. By structuring the writing process into iterative stages—empathy, definition, ideation, prototyping, and testing—it transforms writing instruction from a linear, product-oriented activity into a dynamic, process-based and learner-centered learning experience. Within this framework, students are not passive recipients of linguistic knowledge but active participants in meaning-making, problem-solving, and textual creation.

The findings indicate that Design Thinking significantly enhances multiple dimensions of writing competence. In particular, it strengthens learners' ability to generate original ideas, organize discourse logically, and construct coherent and cohesive texts. In addition, it contributes to improved linguistic accuracy, including grammar, vocabulary usage, and stylistic appropriateness. Equally important is the development of reflective writing skills, as learners continuously revise, evaluate, and refine their texts based on feedback and self-assessment. This iterative cycle of improvement fosters deeper cognitive engagement and supports long-term writing development.

Beyond purely linguistic outcomes, the study highlights the broader educational value of Design Thinking in fostering essential 21st-century competencies. These include critical thinking, as students are required to analyze problems and evaluate multiple solutions; collaboration, as learners engage in peer interaction and collective knowledge construction; and learner autonomy, as students take greater responsibility for their own learning processes. As a result, Design Thinking contributes not only to writing proficiency but also to the holistic intellectual and personal development of learners. Furthermore, the integration of Design Thinking into writing instruction fundamentally transforms the nature of classroom learning. It creates an interactive, iterative, and meaning-focused learning environment in which experimentation, creativity, and reflection are central. This shift aligns closely with contemporary educational paradigms that emphasize active learning, authenticity, and competence-based outcomes. In this sense, Design Thinking serves as a bridge between theoretical knowledge and practical application, enabling learners to connect linguistic resources with real communicative purposes.

Despite these promising outcomes, further research is required to fully establish the effectiveness and scalability of this methodological approach. Future studies should prioritize experimental validation, employing controlled pre-test and post-test designs to measure the direct impact of Design Thinking on specific writing sub-skills. In addition, longitudinal research is necessary

to examine the sustained effects of this approach on learners' writing development over extended periods of instruction.

Another important direction for future inquiry is the integration of digital technologies and artificial intelligence-supported learning environments. Digital tools such as collaborative writing platforms, automated feedback systems, and AI-assisted writing assistants have the potential to significantly enhance each stage of the Design Thinking process. Their incorporation could improve feedback quality, increase learner engagement, and provide more personalized learning experiences.

In conclusion, Design Thinking represents a powerful and future-oriented pedagogical approach that aligns with the demands of modern language education. Its adoption in philology education not only improves creative writing competence but also prepares learners for complex communicative and professional challenges in an increasingly digital and interconnected world.

References

1. Brown T. *Change by Design: How Design Thinking Transforms Organizations and Inspires Innovation*. – New York: Harper Business, 2009. – 264 p.
2. Denzin N., Lincoln Y. *The SAGE Handbook of Qualitative Research*. – Thousand Oaks: Sage Publications, 2011. – 785 p.
3. Nunan D. *Learner-Centered Language Teaching*. – Cambridge: Cambridge University Press, 1998. – 240 p.
4. Richards J., Rodgers T. *Approaches and Methods in Language Teaching*. – Cambridge: Cambridge University Press, 2014. – 410 p.
5. Vygotsky L. S. *Mind in Society: The Development of Higher Psychological Processes*. – Cambridge: Harvard University Press, 1978.
6. Swallow D., Tomalin B. Design thinking in education: A paradigm shift in language learning // *Training, Language and Culture*. – 2024. – Vol. 8(4). – P. 86–94.
7. Griffith M., Lechuga-Jimenez C. Design Thinking in higher education: disciplinary contrasts // *Education Sciences*. – 2024. – Vol. 14(1).
8. Novo C. et al. Design Thinking in secondary education: required teacher skills // *Education Sciences*. – 2023. – Vol. 13(10).
9. Liu T., Zhang Z., Gao X. Pedagogical design in technology-enhanced language education // *Sustainability*. – 2023. – Vol. 15(7).
10. Li T., Zhan Z. Systematic review of Design Thinking in education // *Applied Sciences*. – 2022. – Vol. 12(16).
11. Díaz-Lauzurica B., Moreno-Salinas D. Design Thinking in programming education // *Applied Sciences*. – 2023. – Vol. 13(23).
12. Council of Europe. *Common European Framework of Reference for Languages (CEFR)*. – Cambridge: Cambridge University Press, 2001.
13. OECD. *Innovating Education and Educating for Innovation*. – Paris: OECD Publishing, 2016.