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Review of Transforming Hanzi Pedagogy in the Digital Age

HELENA CASAS-TOST

*Departament de Traducció i d'Interpretació i d'Estudis de l'Àsia Oriental,
Universitat Autònoma de Barcelona, Spain*
Helena.Casas@uab.cat

Rapid technological advancements have transformed communication. While digital writing has largely supplanted handwriting in most contexts, the teaching and learning of Chinese characters remains anchored to tradition, failing to address the major changes in communication in the digital age.

Transforming Hanzi Pedagogy in the Digital Age. Theory, Research, and Practice is an edited volume that advocates a paradigm shift in teaching and learning Chinese characters, from traditional handwriting methods to an innovative e-writing approach. Although Allen (2008) introduced that idea, this book is the first to present a revolutionary approach with a comprehensive framework encompassing theory, research, and practice.

The book's 19 chapters are organized into four parts: theory, research findings, practical applications, and personal reflections. Part one, on theory, features three chapters. Chengzhi Chu's chapter explores the challenges of learning Chinese characters, addressing historical and cultural biases held by westerners and native Chinese people. He proposes adopting e-writing, focusing on learners outside China, to significantly reduce the time spent on character learning, boost students' sense of achievement, alleviate frustration, and improve overall character acquisition efficiency. Chu identifies digital writing as the third stage in the evolution of Chinese character writing and concludes that e-writing is essential for Chinese as a second language (L2) instruction.

Matthew D. Coss' chapter explores key – and often misunderstood – concepts regarding L2 learners' Chinese literacy and character proficiency. Weighing the pros and cons of e-writing, Coss ultimately endorses it as an effective and promising alternative for most L2 Chinese learners in the 21st century.

In chapter three, mirroring Chu's argument, Zheng-sheng Zhang demonstrates that typing Chinese characters is not only unavoidable, but also pedagogically advantageous, particularly in priority-setting and skill integration for L2 Chinese learners. Zhang outlines e-writing's numerous benefits over handwriting, including saving time and effort; connecting sound, shape, and meaning; strengthening character recognition and components; and reducing anxiety, among others. Zhang also reviews general technical benefits of digital texts and concludes that typing is a "game-changer" in learning and teaching Chinese overseas.

Part two, on research outcomes, features three quantitative studies and a synthesis chapter. Chapter four, by Phyllis N. Zhang, builds on a 2021 study of the effects of phonological and visual chunking associated with pinyin-based typing. Zhang's quasi-experimental study compares three character learning approaches among first-year students over six years: balanced, typing-primary, and typing-only with systematic audio-chunk practice. Results show that audio-enhanced typing-based character learning significantly improves writing fluency, complexity, and lexical recognition and recall, highlighting its greater effectiveness and sustainability for developing balanced language skills.

In chapter five, Lu Xiwen and colleagues present a study conducted with beginner and intermediate-level Chinese language learners at different US universities, comparing handwriting and non-handwriting practices for word recognition through four online experiments. Their conclusion is that e-writing is more efficient for word recognition and literacy development, challenging the common belief that handwriting is essential for vocabulary retention. The authors recommend prioritising listening, speaking, reading, and e-writing skills to maximise learning within limited time constraints.

Chapter six sees Jun Da and colleagues analyse the potential of voice typing as an alternative to handwriting. They present an exploratory study assessing the accuracy of speech recognition software in transcribing the speech of beginner and intermediate-level students. The accuracy rate for recognition and conversion into text ranged from 50% to 80%, depending on utterance complexity. While acknowledging the main limitations of the technology, they emphasise its potential as a tool for self-guided language learning.

Luyao Zhang and colleagues review the literature on e-writing in the context of L2 Chinese learning and analyse 25 empirical studies dating from 2010 – 2021. Their findings suggest that typing can enhance character learning by strengthening connections between sound, form, and meaning, improving phonological awareness and reinforcing phonology's links with orthography and semantics. The authors advocate transitioning to a new approach to teaching Chinese characters, while acknowledging the limitations of current research.

Part three of the book describes successful applications of e-writing across diverse contexts and learner groups. Chapter eight, by Qian Wang and Hsiang-ning Wang, illustrates the long-term benefits of e-writing, with significant improvements in student progress, teacher satisfaction, and overall university programme development, including student grades and enrolment rates. The authors provide a comprehensive set of sample e-writing tasks and underline the importance of involving all stakeholders in the transition, as well as the need for flexibility and continuous adaptation to address students' needs and educational challenges.

Xiaoyan Hu and Wayne Wenchao He outline the rationale for adopting a computerised writing approach in a proficiency-oriented, college-level Chinese language programme in the US. They address key implementation issues, including curriculum design, learning objectives, and teaching and assessment procedures at beginner and intermediate levels. Emphasising the need for realistic objectives, assessment measures, and adaptable curricular and pedagogical approaches, they provide examples of technology-integrated teaching tasks that enhance language proficiency and cultural understanding without completely abandoning handwriting.

Chapter ten, by Matthew D. Coss, presents a systematic, analytical, and holistic approach to teaching Chinese characters in the digital age. Coss explores key questions regarding character instruction, offers examples of writing tasks, and discusses sequencing of skills to promote a student-centred, structured e-writing approach.

Part four of the book comprises nine short opinion essays by scholars representing different generations of Chinese learners at various stages of their careers in L2 Chinese teaching across different parts of the world. They all agree on the necessity of adopting an e-writing approach and argue, explicitly or implicitly, that this is the only reasonable path forward in an era of predominantly digital written communication.

Focusing on programmes outside China, the book addresses an issue L2 Chinese teachers can no longer ignore: the shift towards digital-input methods, which has significantly reduced the use of handwriting beyond the classroom.

Given the significant time investment required for mastering handwriting in Chinese language courses and its impact on students' proficiency level, it is essential for anyone involved in Chinese language education to assess the role of digital writing in instruction. Although e-writing has been introduced in some curricula, its adoption remains modest compared to the comprehensive approach proposed in the book. This may be partly due to the cultural significance traditionally attributed to the Chinese writing system, as well as to resistance to change among teachers. Combining theory and practice, this volume demonstrates that e-writing is both feasible and pedagogically beneficial, enhancing language proficiency. However, further reflection on the cultural significance of Chinese characters, briefly mentioned by Chu, could strengthen support for its adoption.

The first two parts of the book provide a sound theoretical framework for understanding Chinese writing and character acquisition. It demonstrates that pinyin-based typing enhances character learning by reinforcing sound-form-meaning connections. This approach improves pronunciation, aids character recognition and retention, and boosts overall Chinese language proficiency.

The book serves as an important first step in analysing the benefits and challenges of transitioning to e-writing and shows how to bridge research and classroom practice. Although current studies suggest that e-writing enhances overall language proficiency and character recognition and writing, further quantitative, qualitative, and longitudinal research with longer timeframes and more diverse samples is needed to fully assess its impact, providing stronger evidence for the transition from handwriting to e-writing in Chinese.

With a wide range of tasks and activities, illustrated with inspiring figures, chapters three, eight, and ten show how a systematic, analytical approach to Chinese characters, resulting in comprehensive integration of e-writing into curricula, can be effectively implemented with real students. These examples are especially valuable for teachers considering such a transition or for those who remain sceptical but are open to testing this new methodology. This is particularly relevant given that such

a shift cannot depend solely on individuals' initiatives and requires discussion and consensus among colleagues and programmes. This may be one of the main hurdles to adopting e-writing and overcoming it may prove highly time-consuming even if teachers are already supportive of change.

Other publications – e.g., Osborne et al. (2024), influenced by the unprecedented challenges of the COVID-19 pandemic, which prompted a rapid shift to online teaching and highlighted the complexities of character-writing instruction – have explored this topic. However, none makes as compelling a case for embracing digital writing as *Transforming Hanzi Pedagogy in the Digital Age*.

This volume is primarily authored by US-based researchers and educators, with contributions from China but only one from Europe (in the final, reflective section). It is time for Chinese language programmes outside China, including in Europe and Australia, to seriously consider adopting this approach to address the challenges the digital era poses for Chinese language teaching and learning. While technology has greatly simplified the digital input of Chinese characters, it has also contributed to "character amnesia", with foreign learners and native speakers alike increasingly forgetting how to handwrite characters. As digital writing is now an indispensable part of our lives, it must be integrated into curricula.

I see deeply rooted philosophical and cultural beliefs as the greatest challenge to this new approach: the teachers responsible for implementing it were themselves taught Chinese characters through traditional methods, which view handwriting as a cornerstone of Chinese culture and a symbol of the dedication required to master it. To genuinely adopt or at least consider this approach, those beliefs must first be confronted and reevaluated. This book serves as a valuable resource for those open to change and a starting point for those who need more evidence before considering embracing it.

In conclusion, this volume's advocacy of a research-based shift to e-writing makes it a landmark contribution to Chinese language teaching. *Transforming Hanzi Pedagogy in the Digital Age* bridges theory, research, and practice to provide an effective, learner-centred approach to Chinese character instruction. For educators, administrators, and students, it is an invaluable resource for reimagining traditional pedagogies in an increasingly digital age. In my opinion, as an L2 learner of Chinese for several decades and now a teacher, if current and future learners of Chinese are to achieve language proficiency more efficiently, it is imperative to embrace innovative methodologies like e-writing and thoughtfully integrate them into modern curricula.

References

Allen, J. R. (2008). Why learning to write Chinese is a waste of time: A modest proposal. *Foreign Language Annals*, *41*(2), 237-251. https://doi.org/10.1111/j.1944-9720.2008.tb03291.x

Osborne, C., Wang, D., & Zhang, Q. (eds.) (2024). *Teaching Chinese characters in the digital age*. Springer.