Online at www.e-iph.co.uk
Indexed in Clarivate Analytics WoS,

E-B Environment - Behaviour Proceedings Journal

ICLT2024NakhonPathom
https://iclt.uitm.edu.my/

e-IPH e-International Publishing House Ltd., United Kingdom

3rd International Conference on Logistics and Transportation
SSRU, Nakhon Pathom, Thailand, 24 - 25 Oct 2024
Organised by: Research Nexus UiTM (ReNeU), Universiti Teknologi MARA

Importance of Printmaking in Children's Art Education: A thematic review of Chinese kindergarten contexts

Jun Wang[1], Siti Farhana Zakaria[2*], Yuyang Tian[3]
**Corresponding Author*

[1] Huizhou Economics Vocational and Technical College, Guangdong Province, China
[2] Faculty of Art & Design, Universiti Teknologi MARA, 40450 Shah Alam, Selangor, Malaysia
[3] Faculty of Arts and Media, Nanning College of Technology, Nanning, Guangxi, 530000, China

2021684716@student.uitm.edu.my, farha981@uitm.edu.my, 2022790015@student uitm.edu.my
Tel: 1st +60 0127184750

Abstract
This study presents a qualitative thematic review examining the educational significance of printmaking in early childhood art education, with particular emphasis on Chinese kindergarten contexts. Peer-reviewed literature published between 2020 and 2025 was systematically analysed to identify recurring themes related to artistic development, cognitive–sensory learning, and cultural awareness. The findings indicate that printmaking supports fine motor coordination, creative thinking, and experiential learning, while also fostering positive learning behaviours, cultural identity formation, and early global literacy. By synthesising recent scholarship, this review addresses gaps in culturally contextualised early childhood art education research and offers pedagogical insights relevant to curriculum development and educational policy.

Keywords: Printmaking Education; Early Childhood Development; Creativity and Fine Motor Skills; Global Literacy and Cultural Awareness.

eISSN: 2398-4287 © 2025. The Authors. Published for AMER by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (http://c5eativecommons.org/licenses/by-nc-nd/4.0/). Peer–review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers
DOI: https://doi.org/10.21834/e-bpj.v10iSI42.7741

1.0 Introduction

Art education plays a critical role in early childhood development by supporting cognitive, motor, emotional, and socio-cultural growth. Within early learning environments, visual art activities provide children with opportunities to explore ideas, materials, and meanings through hands-on engagement. Among various visual art practices, printmaking offers distinctive educational value due to its process-oriented nature, multisensory engagement, and integration of creativity with structured problem-solving. Once regarded primarily as a reproductive technique, printmaking has increasingly been recognised as an independent artistic and pedagogical practice with significant relevance to early childhood education (Vojvodić & Sredanović, 2020, Frikha & Alharbi, 2023).

For children aged four to six, printmaking provides developmentally appropriate opportunities to explore texture, pattern, colour, and form through tactile and visual experimentation. Activities such as stamping, rubbing, monoprinting, and basic relief printing contribute to the development of fine motor coordination, hand–eye integration, and spatial awareness, which are foundational to early literacy and academic readiness (Anderson, 2024). The iterative and exploratory nature of printmaking also encourages creativity, decision-making, and reflective thinking, aligning with constructivist and experiential learning theories that emphasise learning through active participation (Hatzigianni et al., 2021). Within the Chinese early childhood education context, printmaking has gained increasing attention as national

eISSN: 2398-4287 © 2025. The Authors. Published for AMER by e-International Publishing House, Ltd., UK. This is an open access article under the CC BY-NC-ND license (http://c5eativecommons.org/licenses/by-nc-nd/4.0/). Peer–review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers
DOI: https://doi.org/10.21834/e-bpj.v10iSI42.7741

curriculum frameworks emphasize creativity, aesthetic development, and culturally grounded learning experiences. (Li & Dan, 2020). Many kindergartens incorporate printmaking into art programmes to support artistic expression while introducing children to traditional visual motifs, symbolic forms, and cultural narratives. Through this approach, printmaking functions not only as an artistic activity but also as a medium for cultural transmission and early global literacy, fostering both local identity and openness to global perspectives.

This study aims to examine the educational importance of printmaking in early childhood art education through a thematic review of recent literature, with particular reference to Chinese kindergarten settings. This study offers two objectives as follows:

i. To identify key developmental outcomes of printmaking, including artistic, cognitive–sensory, and fine motor development.

ii. To examine the role of printmaking in fostering cultural awareness and early global literacy within Chinese kindergarten contexts.

Despite growing international scholarship on printmaking in early childhood education, existing research remains largely concentrated in Western contexts. Studies that synthesise recent literature through a culturally contextualised lens, particularly within Chinese kindergarten settings, remain limited. Furthermore, much of the literature examines printmaking as a technical or expressive activity rather than as a holistic educational practice that integrates artistic, cognitive, sensory, and cultural dimensions. To address these gaps, this study presents a qualitative thematic review of recent literature on printmaking in early childhood art education, with a specific focus on Chinese kindergarten contexts.

2.0 Literature Review

Recent studies increasingly recognise printmaking as a meaningful pedagogical practice in early childhood art education, emphasising its contributions to children's holistic development. Contemporary research highlights that printmaking supports fine motor skills, creativity, sensory integration, and cultural learning by engaging children in embodied and experiential processes rather than outcome-driven art production (Die & Li, 2023; Frikha & Alharbi, 2023; Klippen et al., 2024). Historically elevated from a reproductive craft to an autonomous art form, printmaking's pedagogical relevance has been reinforced by its emphasis on process, experimentation, and material engagement (Vojvodić & Sredanović, 2020).

From a developmental perspective, fine motor coordination remains a central theme in the literature. Precision-based actions involved in printmaking activities such as applying pressure, controlling movement, and coordinating both hands have been shown to strengthen dexterity, hand–eye coordination, and motor planning (Pendergast et al. 2023; Vasilaki, 2024). Recent empirical studies in early childhood education confirm that visual art activities involving tactile manipulation significantly enhance children's motor readiness and attentional control, supporting early writing and self-care skills (Frikha & Alharbi, 2023; Pendergast et al., 2023).

Creativity and higher-order thinking are also consistently linked to printmaking practices. Unlike representational drawing tasks, printmaking introduces elements of unpredictability that require children to plan, experiment, adapt, and reflect (Hatzigianni et al., 2021; Edwards & Cutter-Mackenzie-Knowles, 2023). From a cultural perspective, scholars highlight printmaking's potential to transmit traditional values and visual heritage, particularly within Chinese educational settings, while also supporting intercultural understanding and global literacy (Chen, J. 2023; Zhang, 2025).

Across the reviewed studies, a recurring emphasis is placed on the alignment between printmaking practices and constructivist approaches to early childhood learning. Printmaking is frequently positioned as an experiential medium through which children actively construct knowledge (Fleer, 2023; Siraj et al., 2024) by engaging with materials, processes, and outcomes rather than passively reproducing visual forms. This pedagogical alignment is particularly evident in studies that highlight children's agency, experimentation, and reflective engagement during printmaking activities. Furthermore, the literature suggests that printmaking bridges artistic learning with broader educational objectives by integrating cognitive, sensory, and cultural dimensions within a single practice. Such integrative potential distinguishes printmaking from other visual art activities and reinforces its relevance within contemporary early childhood curricula.

Collectively, recent literature positions printmaking as a comprehensive educational medium that integrates artistic expression with cognitive development, sensory learning, and cultural awareness. However, there remains a need for thematic synthesis that consolidates these fragmented findings within culturally specific contexts. This review responds to that need by systematically examining recent scholarship through a Chinese kindergarten lens.

3.0 Method of Review

This study employs a qualitative thematic review methodology to synthesize recent scholarly literature on printmaking in early childhood art education, with a specific focus on Chinese kindergarten contexts. A thematic review was selected for its suitability in identifying recurring patterns, conceptual relationships, and educational implications across diverse studies, thereby enabling a structured understanding of printmaking as a holistic pedagogical practice.

3.1 Literature Selection Criteria

The literature selection was guided by defined inclusion criteria to ensure relevance and quality. First, peer-reviewed publications published between 2020 and 2025 were prioritised to reflect current educational practices and theoretical developments. Selected foundational works published before this period were included only when necessary to provide conceptual grounding. Second, sources

were retrieved from recognised academic databases, including Web of Science, Scopus, ERIC, JSTOR, CNKI, and Google Scholar. Third, both English- and Chinese-language publications were considered to ensure contextual relevance to Chinese kindergarten education. Studies were included if they addressed printmaking in early childhood settings and examined at least one of the following domains: artistic development, fine motor skills, cognitive or sensory learning, creativity, or cultural awareness.

3.2 Data Analysis Procedure

The selected literature was analysed using a thematic analysis approach, following an iterative process of familiarisation, coding, and theme development. Studies were examined to identify recurring concepts and educational outcomes related to printmaking practices. These codes were subsequently organised into broader analytical themes that reflect the educational contributions of printmaking across artistic, cognitive–sensory, and cultural dimensions. This process enabled systematic comparison across studies while preserving contextual specificity.

3.3 Analytical Framework

Three primary analytical dimensions guided the thematic synthesis:
(1) Artistic Development, focusing on creativity, visual literacy, and self-expression;
(2) Cognitive and Sensory Growth, examining fine motor coordination, problem-solving, attention, and multisensory engagement; and
(3) Cultural Awareness and Global Literacy, addressing cultural identity, heritage transmission, and intercultural understanding.

3.4 Methodological Limitations

While this review provides a structured synthesis of recent literature, several limitations should be acknowledged. First, the reliance on published peer-reviewed sources may exclude valuable practitioner-based insights from classroom contexts. Second, although both English and Chinese sources were included, variations in methodological rigor across studies may influence thematic interpretation. Finally, as a qualitative thematic review, the findings are interpretive rather than generalisable, underscoring the need for empirical validation through classroom-based research.

These dimensions provided a coherent framework for interpreting how printmaking functions as an educational tool within early childhood learning environments.

4.0 Thematic Review Findings

This section synthesises the reviewed literature into key thematic findings that demonstrate the educational significance of printmaking in early childhood education, particularly within Chinese kindergarten contexts.

4.1 Printmaking and Fine Motor Skills Development

The literature consistently identifies printmaking as an effective medium for developing fine motor coordination in young children. Activities such as stamping, rubbing, and basic carving require controlled hand movements, strengthening finger grip, hand–eye coordination, and muscular precision. These skills are foundational for early literacy tasks, including writing and tool manipulation (Frikha & Alharbi, 2023; Pendergast et al., 2023).

4.2 Printmaking and Creativity and Problem Solving

Printmaking supports creative thinking by engaging children in iterative processes involving planning, experimentation, and reflection. Through visualising outcomes, selecting materials, and adjusting techniques, children develop flexible thinking and independent decision-making (Hatzigianni et al., 2021; Edwards & Cutter-Mackenzie-Knowles, 2023). The inherent unpredictability of printmaking encourages exploration and risk-taking, fostering confidence in self-expression and creative problem-solving—competencies increasingly emphasised in contemporary early childhood education (Hatzigianni et al., 2021).

Across the reviewed studies, creativity in printmaking is consistently conceptualised as a process rather than an outcome. Unlike drawing-based activities that prioritise representational accuracy, printmaking requires children to adapt, revise, and reflect through repeated engagement. This process aligns with design thinking approaches in early childhood learning, where experimentation and error contribute to cognitive growth and creative resilience.

4.3 Printmaking and Sensory-Cognitive Growth

Printmaking provides rich multisensory learning experiences that integrate tactile, visual, and kinaesthetic engagement. The physical interaction with materials and observation of visual outcomes enhance children's sensory integration, attention, and memory (Fleer, 2023). These experiences also support cognitive processes such as spatial reasoning, cause–effect understanding, and pattern recognition. Through repeated engagement, children construct conceptual knowledge grounded in embodied learning, aligning with experiential and constructivist educational frameworks.

4.4 Printmaking and Cultural Awareness

Beyond developmental benefits, printmaking functions as a culturally meaningful educational practice. Studies highlight its role in introducing children to traditional visual motifs, symbolic representation, and collective cultural values, particularly within Chinese

contexts (Chen, 2023; He, Wang, & Liu, 2024). Exposure to diverse print traditions from different cultures further promotes intercultural understanding and early global literacy. As such, printmaking supports identity formation while encouraging respect for cultural diversity.

4.5 Printmaking in Educational Practice

Effective implementation of printmaking in early childhood education depends on developmentally appropriate pedagogy and curricular integration. The literature emphasises the importance of scaffolded instruction, collaborative activities, and culturally responsive themes to maximise learning outcomes (Siraj et al., 2024; Zhao & Huang, 2024). Integrating printmaking with interdisciplinary learning and sustainable material practices further enhances its educational relevance, positioning printmaking as both an artistic and pedagogical strategy.

4.6 Integrative Synthesis of Thematic Findings

Across the thematic domains identified, the literature consistently emphasises the interconnected nature of artistic, cognitive, and cultural learning in printmaking activities (Edwards & Cutter-Mackenzie-Knowles, 2023; Fleer, 2023). Rather than functioning as isolated outcomes, fine motor development, creativity, sensory engagement, and cultural awareness emerge as mutually reinforcing processes within printmaking pedagogy. The physical manipulation of materials not only refines motor coordination but also facilitates cognitive engagement through decision-making, experimentation, and reflection, supporting embodied learning in which children construct understanding through direct interaction with materials and processes (Frikha & Alharbi, 2023).

In addition to individual learning benefits, the literature highlights the social dimension of printmaking in collaborative classroom settings. Group-based printmaking activities promote communication, negotiation, and shared problem-solving, contributing to children's social and emotional development alongside artistic growth (Pendergast et al., 2023; Siraj et al., 2024). Such collaborative practices align with early childhood pedagogies that prioritise peer interaction and collective meaning-making.

Importantly, the educational value of printmaking is maximised when activities are embedded within culturally meaningful themes. In Chinese kindergarten contexts, incorporating traditional motifs, narratives, or seasonal practices enhances children's engagement and strengthens cultural identity while maintaining openness to global perspectives (Chen, 2023; He, Wang, & Liu, 2024). Collectively, these findings demonstrate that printmaking functions as an integrative pedagogical practice supporting developmental learning, creative expression, and cultural literacy in early childhood education.

5.0 Discussion

The findings of this thematic review highlight printmaking as a multidimensional educational practice that supports holistic development in early childhood education. Across the reviewed literature, printmaking consistently emerges as more than an art-making activity; it functions as an integrative pedagogical approach that links artistic expression, cognitive–sensory learning, and cultural understanding within early learning environments.

A key insight concerns the role of printmaking in supporting fine motor and cognitive development. The physical manipulation of materials, controlled movements, and repeated experimentation inherent in printmaking activities contribute directly to children's motor coordination, attentional control, and task engagement. These outcomes reflect principles of embodied learning, where interaction with the physical environment shapes cognitive processing and behavioural responses in young learners.

Creativity and problem-solving also feature prominently in the educational value of printmaking. Its iterative and exploratory nature encourages planning, trial-and-error, and reflection, fostering creative resilience and adaptive thinking. Unlike outcome-driven art activities, printmaking accommodates uncertainty and variation, enabling children to construct meaning through active exploration and sustained engagement with materials and processes.

From a cultural perspective, the findings indicate that printmaking functions as an effective medium for culturally responsive pedagogy, particularly within Chinese kindergarten contexts. The incorporation of traditional motifs, narratives, and symbolic imagery supports early cultural identity formation while maintaining accessibility for young learners. Exposure to diverse print traditions further promotes intercultural understanding and early global literacy, reinforcing positive behavioural dispositions such as openness and respect for diversity.

Importantly, the literature suggests that the educational value of printmaking is maximised when it is intentionally integrated into the curriculum through scaffolded instruction and culturally meaningful themes. Teachers play a crucial role in structuring supportive learning environments that balance technical guidance with open-ended exploration. Overall, these findings reinforce printmaking's capacity to function as a holistic pedagogical strategy that connects environment, behaviour, and learning in early childhood art education.

6.0 Conclusions

This thematic review confirms that printmaking functions as a multidimensional pedagogical practice that shapes children's artistic, cognitive, motor, and cultural development within early childhood learning environments. Through sustained interaction with materials, tools, and processes, printmaking supports fine motor coordination, sensory integration, creative thinking, and problem-solving, reinforcing the relationship between physical environment, learning behaviour, and developmental outcomes. Its process-oriented and experiential nature aligns with constructivist learning principles, positioning printmaking as an effective environment–behaviour intervention in early education settings.

Within Chinese kindergarten contexts, printmaking operates as a culturally responsive learning medium, enabling children to engage with traditional visual symbols while developing early global literacy. The integration of artistic exploration with culturally meaningful themes supports identity formation and positive behavioural engagement in classroom environments.

Despite these benefits, culturally specific and longitudinal empirical research remains limited. Future studies should examine pedagogical strategies, behavioural learning outcomes, and sustained developmental impacts in real classroom environments. For educators and policymakers, embedding printmaking as a core curricular component can strengthen holistic learning environments that foster creativity, cultural literacy, and positive learning behaviours.

Acknowledgements

First of all, I would like to thank my supervisor, from the Faculty of Art & Design, UiTM Shah Alam, Selangor, Malaysia, for her encouragement and hospitality, and for completing this paper under her guidance. Secondly, I would like to thank the conference organiser for giving me this opportunity.

Paper Contribution to the Related Field of Study

This paper contributes to the field of early childhood art education by highlighting the multifaceted value of printmaking in fostering children's cognitive, creative, motor, and cultural development. It also offers culturally relevant insights for integrating printmaking into Chinese kindergarten curricula, bridging global literacy and localised pedagogical practice.

References

Anderson, J. A. (2024). Nurturing minds and hearts: The positive impacts of visual art education (Doctoral dissertation, Bethel University). https://spark.bethel.edu/etd/1114

Chen, J. (2023). Research on the integration of traditional Chinese culture into kindergarten curriculum in ethnic regions. Journal of Education and Culture Studies, 7(3), 75–88.

Die, H., & Li, G. (2023). Fostering creative expression: Integrating the artistic form and cultural influence of Yichun print in art education. Arts Educa, 36. https://orcid.org/0009-0009-9669-0328

Edwards, S., & Cutter-Mackenzie-Knowles, A. (2023). Children's creative thinking in arts-based early childhood pedagogies. Thinking Skills and Creativity, 49, 101336. https://doi.org/10.1016/j.tsc.2023.101336

Fleer, M. (2023). Play, imagination and creativity in early childhood education. Contemporary Issues in Early Childhood, 24(3), 305–317. https://doi.org/10.1177/14639491221143945

Frikha, M., & Alharbi, R. S. (2023). Optimizing fine motor coordination, selective attention, and reaction time in children: Effect of combined accuracy exercises and visual art activities. Children, 10(5), 786. https://doi.org/10.3390/children10050786

Hatzigianni, M., Stevenson, M., Falloon, G., Bower, M., & Forbes, A. (2021). Young children's design thinking skills in makerspaces. International Journal of Child-Computer Interaction, 27, 100216. https://doi.org/10.1016/j.ijcci.2020.100216

He, J., Wang, L., & Liu, Y. (2024). Integrating traditional culture into kindergarten art education in China: Pedagogical practices and cultural implications. Frontiers in Education, 9, 1298743. https://doi.org/10.3389/feduc.2024.1298743

Klippen, M. I. F., Moser, T., Reikerås, E., & Guldbrandsen, A. (2024). A Review of Trends in Scandinavian Early Childhood Education and Care Research from 2006 to 2021. Education Sciences, 14(5), 478. https://doi.org/10.3390/educsci14050478

Li, X., & Dan, L. (2020). Comparative research on the traditional teaching method and the situational teaching method of children's printmaking. In Proceedings of the 5th International Conference on Humanities Science and Society Development (ICHSSD 2020).

Pendergast, D., Garvis, S., & Keogh, J. (2023). Arts-based learning and children's engagement in early childhood education. Early Years, 43(4), 589–604. https://doi.org/10.1080/09575146.2022.2156954

Pendergast, D., Garvis, S., & Keogh, J. (2023). Arts-based learning and children's engagement in early childhood education. Early Years, 43(4), 589–604. https://doi.org/10.1080/09575146.2022.2156954

Siraj, I., Kingston, D., & Melhuish, E. (2024). Curriculum quality, engagement, and learning behaviours in early childhood education. Early Childhood Research Quarterly, 66, 1–13. https://doi.org/10.1016/j.ecresq.2023.09.001

Vasilaki, V. (2024). Pre-school teachers' views on the impact of visual arts education on early childhood education. International Journal of Online Education, 12(4), 1–9. https://doi.org/10.22159/ijoe.2024v12i4.51710

Vojvodić, M., & Sredanović, J. (2020). Methodological aspects of the implementation of printmaking in pre-school, primary and secondary education. Arte, Individuo y Sociedad, 32(2), 451–466. https://doi.org/10.5209/aris.64206

Zhang, L. (2025). Research on the integration of local culture and kindergarten aesthetic education. International Journal of Academic Research in Progressive Education and Development, 14(3), 1309–1324.

Zhao, Y., & Huang, R. (2024). Arts-based pedagogies and culturally responsive teaching in Chinese early childhood education. Asia-Pacific Journal of Research in Early Childhood Education, 18(1), 1–17.