

Tracing the Cultural and Historical Evolution of Chinese Kitchens

Shuai Li^{1*}, S'harin Mokhtar¹, Shahrman Zainal Abidin¹, Shiyu Ren²

¹ College of Creative Arts, Universiti Teknologi MARA, 40450 Shah Alam, Selangor Darul Ehsan

² Shandong Jiaotong University, No.5001 Haitang Road, Changqing University Science Park, Jinan City, Shandong Province, China

summersdreams@126.com, sharin2066@uitm.edu.my, shahrman.z.a@uitm.edu.my, 834162930@qq.com
Tel.: +15662653272

Abstract

Chinese kitchen is now encountering difficulties. Traditional elements of the Chinese kitchen are dying out at an accelerated pace. The new-style kitchen cannot meet the needs of Chinese people. Before designing a kitchen, it is a need to study the evolution of the kitchen. Due to this, the objective of this paper is to study the historical and cultural context of Chinese kitchens through literature research. At the end of the research, the Chinese kitchen can be roughly divided into five stages: 1) birth, 2) development, 3) maturity, 4) decline, and 5) transformation.

Keywords: Chinese kitchen; evolution of kitchen; kitchen design; kitchen research

eISSN: 2398-4287 © 2024. The Authors. Published for AMER and cE-Bs by e-International Publishing House, Ltd., UK. This is an open-access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers) and cE-Bs (Centre for Environment-Behaviour Studies), College of Built Environment, Universiti Teknologi MARA, Malaysia.
DOI: <https://doi.org/10.21834/e-bpj.v9iS117.5444>

1.0 Introduction

The kitchen was called "Zao fang", instead of "chu fang", which is called nowadays, as "Zao fang" specifically refers to a kitchen where an adobe stove is located. The kitchen was often relatively bigger than what people are using now. For instance, the adobe stove always took up too much space. People lit the fire with firewood in the lower part while cooking the dishes with a big wok installed into the stove. Water was stored in a water vat which was also big and heavy as the technology is underdeveloped, and there was no tap installed in the kitchen. There were not enough closets to store cookware. Hence, small kitchenware, such as knives, scissors, soup spoons, and chopping boards, were often hung on the wall to put everything in order. The kitchen appliances were simple but diverse. The most popular ones were a wok, steamer, and small tools, such as a pottery jar and wooden bucket used to store foods and drinks. Due to the underdeveloped economy, people prefer to cook or make special dishes, which can only be bought in the supermarket nowadays, by themselves. Therefore, although simple and crude, those kitchen appliances could help people to make innovative and tasty dishes, which make their lives joyous. Design innovation normally can be associated with aesthetic, ergonomics and technical (see Zainal Abidin, Sigurjonsson, Liem, & Keitsch, 2008)

Chinese kitchens have a glorious history after thousands of years of development. Today, Chinese kitchens are encountering difficulties, and the cultural symbols of traditional Chinese kitchens have gradually disappeared. In addition, the new-style kitchens cannot meet the needs of consumers (Ling & Zhu, 2014). To explore the traditional aesthetic characteristics of Chinese kitchens, this study conducted a large number of literature surveys on the development of Chinese kitchens and divided the historical evolution of Chinese kitchens into five stages: birth, development, maturity, decline, and transformation, and introduced in detail the specific evolution characteristics and problems faced by Chinese kitchens in each stage (Zhang, 2018). The research objective is to summarize the

eISSN: 2398-4287 © 2024. The Authors. Published for AMER and cE-Bs by e-International Publishing House, Ltd., UK. This is an open-access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>). Peer-review under responsibility of AMER (Association of Malaysian Environment-Behaviour Researchers) and cE-Bs (Centre for Environment-Behaviour Studies), College of Built Environment, Universiti Teknologi MARA, Malaysia.
DOI: <https://doi.org/10.21834/e-bpj.v8iS117.5444>

historical and cultural context of Chinese kitchens and propose coping strategies for existing problems, to provide reference and guidance for the future design and development of Chinese kitchens.

2.0 Literature Review

At present, some scholars explore the evolution of Chinese kitchens from the perspective of design history and find out the reasons for the evolution. Their research excavates excellent design ideas from traditional kitchens in China, provides references for kitchen design, and puts forward new design ideas for modern kitchens (Na et al., 2018). There are also studies on the architectural design of Chinese-style kitchens and the architectural forms of traditional houses in China. Through the analysis of various elements that have an impact on the architectural design of a kitchen, we can deal with various problems faced by Chinese-style kitchens. They try to explore Chinese kitchen culture, find kitchen cabinet designs suitable for Chinese people, create a more comfortable kitchen life, and tap into the ideas and wisdom of traditional Chinese kitchens (Zhang et al., 2017). Scholars compared the development history of kitchens before the appearance of overall cabinets in China and the West. They proposed to design kitchens according to the functions of washing, preparing meals, cooking, and storage (Liu et al., 2017). Scholars studied the evolution of Chinese and Western kitchens and proposed that more attention should be paid to ergonomic design and diversified design (Bao et al., 2016). Most of the research on Chinese kitchens focuses on the change in production technology and lifestyle but less on the cultural symbols and cultural characteristics of conflicts.

Recent scholarship on the evolution of Chinese kitchens has increasingly emphasized the interplay between design, culture, history, and social dynamics. Researchers like Wang et al. (2021) have delved into the historical and social backgrounds of Chinese kitchen evolution, examining how major historical events and socio-economic changes have influenced kitchen design and usage. Li and Zhou (2022) have contributed significantly by exploring the identity of communities and their relationship with kitchen spaces. Further, studies by Chen et al. (2023) focus on the available resources and materials that have historically shaped kitchen designs. Their research emphasizes the impact of local materials and economic conditions on the architecture and functionality of kitchens, offering insights into how resource availability has historically dictated kitchen design and utility. In terms of current research directions, Zhao and Huang's (2022) work stands out. They identify a gap in the exploration of cultural symbols and conflicts within the evolution of Chinese kitchens. Moreover, recent literature, such as the work by Liu and Zhang (2023), emphasizes the importance of integrating modern ergonomic and sustainable design principles while preserving cultural heritage.

These diverse perspectives collectively enrich our understanding of the evolution of Chinese kitchens, highlighting the complex interplay between cultural heritage, community identity, economic conditions, and design innovation (see Toyong, Abidin, & Mokhtar, 2021; Abidin, Bjelland, & Øritsland, 2008).

3.0 Method

This study reviews the literature related to the historical evolution of Chinese kitchens. At the same time, this study summarizes the common problems and puts forward corresponding countermeasures. The literature survey and research are helpful in summarizing the existing theoretical achievements and making theoretical innovations. Finally, this study will provide a reference for the future development of Chinese kitchens (Fig. 1).

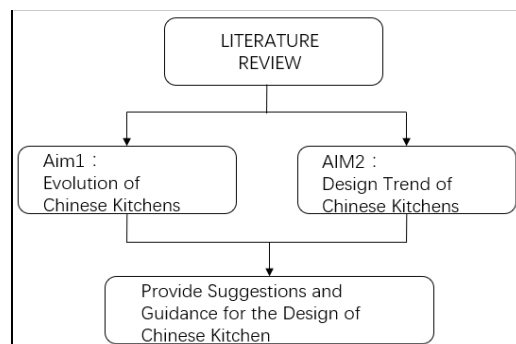


Fig. 1: Research process
(Source: Li Shuai)

3.1 Referred Resources

Academic Journals and Articles: Primary sources included peer-reviewed journals focusing on architecture, cultural studies, design history, and sociology. These journals provided in-depth analyses of kitchen design, cultural implications, and historical evolution.

Books and Monographs: Comprehensive texts covering Chinese cultural history, architectural evolution, and design theory were consulted to gain a broader understanding of the subject.

Online Databases: Extensive use of databases such as JSTOR, Google Scholar, and specific university libraries' databases ensured access to a wide range of academic resources.

3.2 Techniques for Information Gathering

Online Searches: Utilized advanced search techniques on academic databases and search engines, employing specific keywords and phrases relevant to Chinese kitchen evolution, cultural history, and architectural design.

Cross-referencing: Cross-checked references cited in relevant papers to discover additional sources.

4.0 Results and Discussion

The historical evolution of the Chinese kitchen can be roughly divided into five stages: birth, development, maturity, decline, and transformation. The birth of the Chinese kitchen is marked by the emergence of "Huo Tang (a kind of Chinese fireplace)"; The development of the Chinese kitchen is marked by the emergence of "Zao (a kind of Chinese oven)". The maturity of the Chinese kitchen is marked by the emergence and improvement of the "separate kitchen". The main reason for the decline is Chinese kitchen social unrest; The transformation of Chinese kitchen is marked by a lifestyle revolution. Chinese kitchens have experienced unprecedented changes in space and are in danger under the influence of western "overall cabinets".

4.1 The birth of the Chinese kitchen: "Huo Tang."

As early as the Stone Age, humans had learned how to make fire. At that time, a fire was mainly used to drive away wild animals, keep them warm, obtain light and burn food. During this period, it is difficult for people to keep the fire burning. People first tried to keep the fire in their rooms. But because of the flat terrain and poor ventilation, the fire is easy to extinguish. So, people dug a round pit - "Huo Tang", on flat ground. The "Huo Tang" enables the fire to be kept in the house, and it will not extinguish all year round for use at any time. The "Huo Tang" is in the centre of the residence and the activity centre of the family. "Huo Tang" is still used in some regions of China and can be considered a "living fossil". "Huo Tang" has also left a profound impact on Chinese culture. "Ling Qi Lu Zao (a Chinese idiom)" refers to the fact that when children grow up and marry, they will build another "Huo Tang" in the kitchen, which means that the new couple will break away from the original big family. "Huo Tang" is very important in the historical evolution of Chinese kitchen culture. It marks the beginning of cooking in the house and is the historical source of the Chinese kitchen. In this period, the kitchen is not only a place to enjoy food but also a "social platform" for a group of people and a family. The source of the Chinese kitchen represented by "Huo Tang" integrates the functions of cooking, heat preservation, moisture-proof, etc., completing the important evolution of the kitchen from outdoor to indoor.

4.2 The development of the Chinese kitchen: "Zao."

There are many hidden dangers in the kitchen with "Huo Tang". As the "Huo Tang" is not completely separated from the house, the smoke will still permeate the whole room. To solve this problem, the "Huo Tang" gradually moved from the middle of the house to the corner of the house.



Fig. 2: Han Dynasty Pottery Stove - Xuzhou Museum
(Source: Xuzhou Museum)

The appearance of a tripod increases the contact area between the cooker and the flame, which improves cooking efficiency. However, there are no sheltered facilities around the "Huo Tang" and tripod, so the fire is easily affected by the wind. Therefore, the pottery stove with three sides surrounded by the wall appeared. A pottery stove is the product of the combination of "Huo Tang" and a tripod. It has the advantage of being movable and directly supporting the cooker. This is the prototype of "range" (Wang, 2011).

With the increase in productivity, bronze stoves appeared in Shang and Zhou Dynasties, with higher heat conductivity than pottery stoves. During the Wei, Jin, Southern, and Northern Dynasties, ranges appeared. The ranges were easy to move and cooked quickly, which promoted the further development of kitchens. People in Han Dynasty thought that the range was the foundation of survival. From Shang and Zhou Dynasties to Qing Dynasty, the range was the most important cooking equipment in the kitchen and the centre of the

whole cooking process. At the same time, kitchen cooking utensils are also changing. Under the influence of diet changes, cookers have experienced the transition from pottery to bronze ware, bronze ware to iron, gold, and silverware.

4.3 The maturity of the Chinese kitchen: "separate kitchen."

In the Spring and Autumn Periods, separate kitchens appeared. During the Qin and Han Dynasties, the kitchen was separated from the living space. The fixed cooking stove, which appeared in the Shang and Zhou Dynasties, also developed into a high and large cooking stove, which was used in the Qin and Han Dynasties, promoting the formation of cooking space with stoves and wells as the main facilities. The kitchen in the residence of ordinary people in the Han Dynasty was set as one, and the location of the kitchen changed according to the different types of buildings. In the Han Dynasty, the pattern of the kitchen was finalized, with not only independent cooking space but also well-equipped facilities. Since the Han Dynasty, there has been no major change or adjustment in the kitchen pattern, people's living standards have been improving, and the kitchen has promoted the prosperity and development of food culture. In addition, the perfection of the stove has also promoted the development of Chinese kitchens (Zheng, 2014).



Fig. 3: Ming and Qing Dynasties kitchens
(Source: Wang Baozhou)

In the Ming and Qing Dynasties, the kitchen became mature. The space of the kitchen has become larger. At this time, a tall soil stove is commonly seen in kitchens that integrates the functions of burning firewood, cooking, heating dishes, and sacrificing. Under the influence of the theory of Fengshui, the kitchen space is gradually fixed. The formation of the basic kitchen pattern is inseparable from many factors, such as the development of food, the maturity of residential buildings, and people's ideas. In the Ming and Qing Dynasties, utensils, tools, grains, and fuels were stored in kitchens, which required a large storage area. At present, the Chinese kitchen still maintains this pattern, but the decoration style and functional equipment are different.

4.4 The decline of Chinese kitchen: the social unrest



Fig. 4: Chinese rural kitchen
(Source: Li Shuai)

During the Opium War, Western powers invaded China, and China's economic structure changed. The (semi-colonial) and semifeudal society took shape in China, which seriously hindered the development of Chinese kitchens. Capitalism began to sprout and develop in China, greatly changing the original social lifestyle, food culture, and living style. Many western-style houses have been introduced, and the original kitchen pattern, cooking methods, and kitchen equipment are also quietly changing.

At this time, some families even lived in the same room with livestock, and the sanitary conditions were appalling. People pay little attention to the kitchen. A corner of the courtyard is commonly used to build a "shed kitchen", and kitchen supplies and facilities are very simple. In this economic situation, the reform of the kitchen has been seriously hindered. The Western powers have also brought about life changes. However, overall, the area of the residence and kitchen is smaller than that of the Chinese kitchen in its heyday.

4.5 The transformation of the Chinese kitchen: overall kitchen

Under the influence of the planned economy, "welfare housing" became popular in China. People lived in poor and crowded conditions, and there were also safety hazards. During this period, the kitchen was mainly used for cooking and heating. After the reform and opening, the construction of residential buildings has also begun to receive attention, and a series of standards were established. The average kitchen area of each household has increased. This change has made it more convenient for residents to cook, and people's living standards have been improved.

Overall, a cabinet has many functions, such as food storage, cleaning, preparation, baking, etc. With the improvement in the living standard, traditional houses cannot meet people's needs. Therefore, living functions, dining functions, communication functions, and entertainment functions are added in modern kitchens. Modern kitchens are more humanistic (Ge, 2017).



Fig. 5: Chinese urban kitchen
(Source: Li Shuai)

The use of fire spurred the appearance of Chinese kitchens. The emergence of "Huo Tang" improved the efficiency of cooking and promoted the emergence of stoves. The stoves have undergone many improvements and changes. After the Opium War, people paid less attention to the kitchen. In the information age, international exchanges and cooperation have been strengthened, and China has become one of the most influential countries in the world. Chinatowns and Chinese restaurants all over the world have attracted many customers. Chinese food is supported by cuisines. Sichuan cuisine and Hunan cuisine are "hot", Huaiyang cuisine is "sweet", and Shandong cuisine is "salty" (Yu & Pan, 2009). Different cuisines and living habits also affect the layout of kitchens. Since ancient times, the kitchen has been small. At present, people put forward higher requirements for the kitchen. Some Chinese enterprises began to deeply study the manufacturing technology and design of western cabinets.

In the limited space, a large storage space is needed to store kitchen supplies, which is one of the most important problems faced by most Chinese families. In the face of various cooking habits and needs, the concept of "kitchen container" has been put forward, that is, to meet the storage needs of users through Omnidirectional three-dimensional storage systems such as floor cabinets, wall cabinets, corner cabinets, etc. (Jiang, 2010).

5.0 Conclusions

This study discusses the historical evolution of Chinese kitchens. It summarizes the development trend of Chinese kitchens, which can provide a valuable reference for Chinese designers to design kitchens that meet the user's needs. The innovative design of the Chinese kitchen can better integrate Chinese kitchen culture, Chinese food culture, and western designs. Nowadays, the problem of the "ageing population" in Chinese society is serious. The family structure is changing. In addition, the fast-paced life has spawned a fast-food culture. All these have promoted the further development of Chinese kitchens. Exploring the historical evolution of Chinese kitchens is conducive to creating a Chinese kitchen that can meet the needs of Chinese people.

5.1 Limitations

This study on the evolution of Chinese kitchens, while comprehensive in its approach, encounters several limitations. Firstly, its reliance predominantly on published academic literature may overlook nuanced, undocumented aspects of kitchen evolution, especially in rural or less-documented regions of China. Secondly, the focus on literature mainly from the last five years might miss crucial historical perspectives or long-term trends not captured in recent publications.

5.2 Recommendations

To overcome the limitations of this study on the evolution of Chinese kitchens, several strategies can be employed. Future research should consider incorporating primary data collection, such as interviews or surveys with residents across various regions of China, to capture diverse, regional kitchen practices and designs that may not be well-documented in academic literature. Expanding the scope of the literature review beyond recent publications could provide a more comprehensive historical perspective, revealing long-standing trends and changes over time.

Acknowledgment

The authors would like to express their gratitude to the College of Creative Arts, Universiti Teknologi MARA (UiTM) Shah Alam, Selangor Malaysia, for their assistance, as well as ReNeU UiTM for the MEE 2.0 incentive.

Paper Contribution to Related Field of Study

This work contributes significantly to the existing body of knowledge in industrial design and furniture design.

References

- Abidin, S.Z., Bjelland, H.V., & Øritsland, T.A. (2008). The embodied mind in relation to thinking about form development. In Proceedings of NordDesign 2008 Conference (pp. 265-274).
- Bao, H. P., Zhang, F., Gao, H., & Yang, S. Y. (2016). The applicability of overall cabinets in China. *Furniture & Interior Design*, (12), 20-22.
- Chen, F., Zhang, L., & Wang, Y. (2023). Materiality and Economy in Traditional Chinese Kitchens. *Journal of Cultural Heritage Management*, 17(4), 200-215.
- Ge, X. W. (2017). Research on the development history and current situation of kitchen cabinets in China. *Furniture*, 38(4), 39-41, 84.
- Jiang, H. B. (2010). Design ideas for future kitchens in China. *Decoration*, (11), 26-28.
- Li, M., & Zhou, W. (2022). Community Identity and Kitchen Spaces in Regional China. *Cultural Studies Review*, 28(1), 112-130.
- Ling, S. Y., & Zhu, X. (2014). Talking about kitchen design from the perspective of Chinese and western food cultures. *Anhui Literature*, (1), 140-141.
- Liu, G. Z., Pan, X. Z., Shi, Z. Y., & Tang, C. X. (2017). *Chinese-style kitchen in the eyes of masters*. Xiamen: Xiamen University Press.
- Liu, H., & Zhang, Q. (2023). Integrating Tradition and Modernity in Chinese Kitchen Design. *International Journal of Design and Innovation*, 11(2), 134-150.
- Na, C. A., Wu, Z. J., Xiao, W. B., Zhang, Y. Q., & Liu, M. (2018). Research on the evolution of traditional kitchen in China. *Hunan Packaging*, 33(4), 46-50.
- Nie, Z. N. (2021). *Research on the design of kitchen storage products based on data fusion* (Master's thesis, Zhejiang Sci-Tech University, China). Retrieved from <https://kns.cnki.net/kcms/detail/detail.aspx?dbname=CMFD202202&filename=1021822614.nh>
- Toyong N., Abidin S.Z., & Mokhtar S. (2021). A Case for Intuition-Driven Design Expertise. In: Chakrabarti A., Poovaiah R., Bokil P., Kant V. (eds) Design for Tomorrow—Volume 3. Smart Innovation, Systems and Technologies, vol 223. Springer, Singapore. https://doi.org/10.1007/978-981-16-0084-5_10
- Wang, Q. J. (2011). Research on traditional kitchens in China. *Southern Architecture*, (6), 18-23.
- Wang, X., Li, J., & Yu, H. (2021). Historical and Social Influences on Kitchen Design in China. *Journal of Architectural History*, 34(2), 45-60.
- Yu, Y., & Pan, R. (2009). Talking about the characteristics of Chinese food culture and its enlightenment to the kitchen design. *Art and Design*, (1), 160-162.
- Zainal Abidin, S., Sigurjonsson, J., Liem, A., & Keitsch, M. (2008). On the role of formgiving in design. *New Perspectives in Design Education*. In DS 46: Proceeding of the 10th International Conference on Engineering and Product Design Education. Universitat Politècnica de Catalunya: Barcelona, Spain 04.-05.09., 365–370.
- Zhang, Y. Q. (2018). *Research on the evolution of China's kitchen and its design enlightenment* (Master's thesis, Hunan University of Science and Technology, China). Retrieved from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD201901&filename=1018884914.nh>
- Zhang, Y. Q., Wu, Z. J., & Xin, L. L. (2017). Evolution of the traditional kitchen in China. *Furniture*, 38(6), 1-5, 21.
- Zhao, R. G. (2015). The original meaning of "kitchen" and "kitchen cabinet" culture. *Journal of Chuxiong Normal University*, 30(8), 1-6.

Zhao, Y., & Huang, L. (2022). Cultural Symbols and Conflicts in the Evolution of Chinese Kitchens. *Asian Cultural Studies*, 39(3), 89-104.

Zheng, M. M. (2014). *On the development and evolution of Chinese kitchen* (Master's thesis, Nanjing University of the Arts, China). Retrieved from <https://kns.cnki.net/KCMS/detail/detail.aspx?dbname=CMFD201501&filename=1014386338.nh>