MODERN APPRENTICESHIP OF JAPANESE TRADITIONAL CARPENTRY

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Abstract - This study proposes the descriptive development of traditional apprenticeship in traditional Japanese carpentry to analyze its nature and critical element(s) for transmitting traditional knowledge in a modern setting. A qualitative research method was employed for data collection. In-depth interviews with master carpenters and governmental officers and fieldwork on construction sites were conducted along with documentary research. The finding suggests that traditional apprenticeships were adapted to survive the social changes and became more flexible; for instance, new forms of education in the company and private school. However, the most crucial study process, observation-imitation, is still the core of the study in any institution.

Keywords - traditional Japanese carpentry, apprenticeship, traditional knowledge, knowledge transmission

I. INTRODUCTION

Despite the rise of modern construction, traditional Japanese buildings are well-preserved with a governmental system to repair and restore cultural heritage. The Japanese system has fascinated various scholars and practitioners internationally; seminars and training regarding traditional carpentry conservation are held occasionally. Moreover, while other craft knowledge died with its master, traditional carpentry was continuously passed on to the next generation for over 1,000 years. Therefore, grasping the development of the Japanese carpentry education system would help set the standard and guide toward the direction of effective knowledge transmission for other traditional knowledge as well. There are several studies about Japanese carpentry, but most of them focus only on one area or one period of time[i]. For instance, carpentry in the Edo period was characterized by the carpenters' lifestyle, the unique techniques of famous groups, their tools, and the differences and similarities of carpenters from various areas. [ii] . *Miyadaiku-to-kankei-shiryoushuu* (data collection regarding master carpenter) collected various documents related to *Miyadaiku*, which aids this study because it shows whether any documents supported the transmission of knowledge and who benefitted from those documents. Recent research on approaches to fostering a new generation of carpenters, *daiku-gijutsusha-ikusei-ni-muketa-teigen* (proposal for fostering carpenters), grasped the overall current situation of the carpentry industry by focusing on the labour shortage problem.[iii]. Carpentry has also been studied in the context of multi-generation family businesses in order to examine their success, with a particular focus on the family-owned construction firm Kongogumi[iv]. Cultural and traditional aspects such as symbolic meanings, rituals, social systems, and ways of life have attracted some attention, primarily concerning rebuilding the tradition of the Ise Shrine. For instance, Ise: Prototype of Japanese Architecture[v] and Ise Shrine and a Modernist Construction of Japanese Tradition[vi]. Although these works focused on various aspects of Japanese carpentry, including architecture, culture, and rituals, they hardly mentioned carpenters or knowledge survival. The studies mentioned above illuminate many aspects of Japanese carpentry. However, none investigates the mechanisms of knowledge transmission or provides a structural perspective for analyzing and comprehending the carpenter's entire social space or the critical role of the master carpenter in knowledge transmission. Therefore, the present study aims to fill in the gap by focusing on the development of knowledge transmission.

The research data in this study are drawn from two primary sources: in-depth interviews with master carpenters and governmental officers and documentary research. The participants were carefully picked from their expertise; they have more than 20 years of experience and have been working on repairing or restoring world heritage or national cultural heritage such as Horyuji temple, Ninnaji temple and Nijo castle. The fieldwork was conducted on the construction site of the cultural heritage projects and the modern school for carpenters. Data for this study were collected between March 2015 and March 2022. The study aims to clarify How traditional Japanese apprenticeships in carpentry have developed or adapted to the modern setting. The findings should illuminate the heart of the study that remains unchanged despite the industrial development and unveil the creativity in adapting educational attainment that fits the current generation who may possess different personality traits from the previous generation. This insight could also be utilized for proposing an idea for conserving other traditional knowledge.

II. FROM TRADITIONAL APPRENTICESHIP TO IN-HOUSE TRAINING AND PAID-INTERNSHIP

Apprenticeship is an educational process focusing on learning by doing and on-the-job training to train a new practitioner of a profession. It has long been the primary mode of education for traditional Japanese carpentry. According to the interviews with master carpenters, an apprentice usually takes around ten years to become a professional. In general, the apprentice would stay at the master's house (*sumikomi*) and start the training by observing the master and their seniors while doing domestic chores such as cleaning the woodworking studio to get familiar with the space and tools for food and accommodation.[vii]

There is a hierarchical state of study; they have to perfect the basic skills such as how to use each tool and wood-cutting before receiving an opportunity to work on site. The work onsite starts with simple chores as well(such as cleaning up the full-scale drawing room, preparing tea and snacks for the master carpenter's meeting, and bringing tools to seniors) as it would encourage the apprentice to get used to the construction site, tools and other materials' location and safety measure[viii]. The apprentice is responsible for learning from the master and seniors by observing and memorizing while doing those chores. As the apprentice perfect each technique and move forward with training, they would get to learn more complicated techniques, for instance, *Zousaku* (assembling after finishing the framework), *Sumitsuke* (drawing the line with ink) and *Kikujitsu* (drafting, dimension and measurement). However, the master will demonstrate the more complicated techniques; he will do it once and let the apprentices classroom lectures and onsite study with the seniors. Some schools partner with construction companies and send the students to work on construction sites. The learning process on site is similar to traditional apprenticeship; it starts with basic chores such as cleaning then the senior carpenters would assign more complicated work according to the students' performances. However, as the schools' curriculum ranges from 3-5 years, the students who graduate from these schools do not always work in traditional buildings after graduation. Most of them would possess an essential skill set for woodworking, but to work on cultural heritage or build a traditional wooden house, they still have to accumulate more experience on the actual site with the master. In total, the length of the training in becoming a traditional carpenter between the traditional apprenticeship and the adapted one is pretty similar, approximately ten years and more. However, the school system is more accessible than traditional apprenticeship, a closed community among inner circles where one needs a recommendation. Moreover, the basic training practice by themself until they can perfect it. Mitsuo, the renowned master, said that Nishioka did the same when teaching Kanna.

As a result of the Labor Standards Act[ix]Living with a master and doing domestic chores in exchange for participating in the training has changed to a paid internship. The relationship between the master and the apprentice became more similar to employer-employee. All apprentices would get a minimum allowance, and only a few still live with a master. However, some renowned master carpenters encourage sumikomi as it helps grow passion and determination that cannot be taught. Therefore, this tradition still lives on at the construction companies founded by master carpenters who received traditional training.

The onsite study is still crucial for educational attainment and relies on observation and imitation. However, verbal communication plays a more significant role as the younger generation has less devotion than the seniors. Documents also became another important factor for education as there are various books and documents about traditional Japanese carpentry, such as a biography of master carpenters, technical books, and construction reports available, which were hard to find in the past[x].

III. EDUCATIONAL INSTITUTE

Apprenticeship is not the only option to be a part of traditional carpentry anymore. Several schools offer this course; construction companies founded some to recruit promising students, and some are private vocational and government-funded schools. The curriculum and learning process vary depending on each school's policy; usually, there would be became more convenient as the school provided textbooks, lectures and demonstrations with modern tools such as video and calculators. The lessened hardship of the study helps motivate the younger generation to continue the training, which requires a long-term commitment.

IV. CONCLUSION

The format of the traditional apprenticeship was mildly adapted to fit the social and cultural change; the essential learning became more accessible as the student did not have to observe and try to imitate themself, but the educational institute prepared the lectures and demonstrations in the classroom conducted by an experienced carpenter. However, the central part of the study still heavily requires hands-on experience. After studying in the school, the student has to learn by doing onsite where they have to observe and mimic their seniors like traditional education. In general, the hardship of the learning process was eased by new technologies, but learning

by doing remains the most crucial key to the success of the training.

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