

CROSS CULTURAL EDUCATION IN ARCHITECTURE: FINDINGS FROM TEACHING INTERNATIONAL STUDENTS TRADITIONAL JAPANESE ARCHITECTURE AND GARDENS

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Background

Internationalization and increasing students' mobility are requiring architectural educators to contemplate how to teach students with different background [1]. Especially when we discuss vernacular architecture or traditional design, how much contextual understanding can or should we provide? In practice, traditional Japanese architecture and gardens remain popular in the international market, while both domestic clients and successors are rapidly decreasing in Japan. Therefore, it is becoming common to receive clients and trainees from overseas [2]. Cross-cultural communication is significant in international practice [1], but it does not always seem successful, and 'wrong' Japanese architecture and gardens are often created. It also seems a worldwide trend to be universal, and young generations are no longer familiar to his or her own culture [3]. They may also be considered 'foreigners' when it comes to traditional design or lifestyle. Architectural education system in each country is changing toward a global standard [4]. Thus, cross-cultural education is being required in more and more occasions.

Globalization of architectural education systems in Japan has been debated ever more enthusiastically since 1996 when UNESCO-UIA Charter of Architectural Education [5] was adopted. Countless scholars and practitioners have been discussing the importance of practical training as well, however what is 'practical' is still in question [4]. When we think about traditional Japanese architecture, however, we have to consider a particular kind of 'practical training', which is outside the scope of modern architectural education.

Traditional Japanese architecture/gardening practice is based on design-build system, in which understanding of materials, building methods and construction management is imperative. In traditional arts and industry, trainees are supposed to learn on the job by watching experienced practitioners. Traditional construction sites depend on natural materials, which vary piece-by-piece or time-to-time. Therefore, it is difficult and inefficient to produce design drawings first and try to follow them as we do in modern construction. Many experienced traditional Japanese carpenters and gardeners agree that publishing a theory textbook or 'manual' would be difficult, or sometimes dangerous [2]. In such practice, empirical education is more effective even for future planners and designers, who do not aim to put their hands on the actual work as professional artisans do. However, many students from other countries, especially those who are from modernized western culture, wish to have theory-based lectures and reading materials first. To make them understand the different system of practice and importance of on-site training, showing the actual works, including successful and unsuccessful examples, should be most effective [6].

Research Methods

This research is based on both qualitative observation and quantitative surveys. The author has been exploring this topic in four different circumstances from 2000 to 2011; 1.upper level landscape architecture field and studio course at a university in the United States (2000-2002), 2.open-enrollment field study course in Kyoto, Japan, for American students (2001-2005)[6][7], 3.urban environment field and studio course at a Japanese university with Chinese students filling approximately 50% of the class (2002-present), and 4. Japanese architecture and garden lecture course with 50% Japanese students and 50% international students from various countries mostly from Europe and Asia (2008-2011). With all of these courses, different teaching methods were experimented, and students' feedback was given in written format. For the lecture course for mixed students, quantitative surveys were conducted in 2010 and 2011.

Effectiveness of Field Study

In the 4-week intensive summer workshop in Kyoto for American students to learn Japanese landscape design, we emphasized the meaning of design rather than discussing historical facts or design theories [6][7]. In the program, students visited historical gardens representing each style period in a chronological order, discussing social and natural context of the time when the garden had been created. This approach was proven effective for students' understanding by comparison to other methods in the past years. We also included many field trips to understand local practice, society and people (Fig.1). We always rode public transportation and walked to the site to experience the climate and people's lifestyle, which helped students to understand why certain architecture and garden designs had become necessary in this particular place. By hiking in countryside, students could see the source of natural materials and the design motives that had to from them. For the cultural side, we participated in religious activities such as Zen meditation and cultural activities such as tea ceremony, discussing the purpose and consideration of every forms and actions.

After those fieldworks, students understood the concept of Japanese gardens much better, the result of which was clearly observed in their term papers, projects and course evaluation. After the course, many students also testified in their reports that they got inspired to reconsider their lifestyle, not just they have learned the architectural design.



Fig. 1 Fieldwork snapshots from UC Davis Summer Japanese Garden Workshop, 2004-2005

Teaching Mixed Group of Students

In the recent campus internationalization in Japan [8], it is becoming common to teach a class of students with totally different educational or cultural background. By written and drawn surveys conducted in 2010 and 2011 with 185 students of various majors, scholastic years and nationalities, we learned that we could not expect domestic students to have better prior knowledge about traditional culture than foreigners (Fig. 2). It was more dependent on a student's interest, educational background and personal experience. The result of quizzes and exams showed that students from different culture did not have much disadvantage to study the subject. Only in the beginning there was a huge difference between design majors' drawing skills and that of non-design majors. (Fig. 3) However, the ability to understand Japanese design varied regardless of their major. The knowledge level in Japanese culture of those who studied Japanese history by choice was significantly higher than others regardless of their nationality. However, lectures and advices could close these technical gaps by the time they tackled the final research/design project.

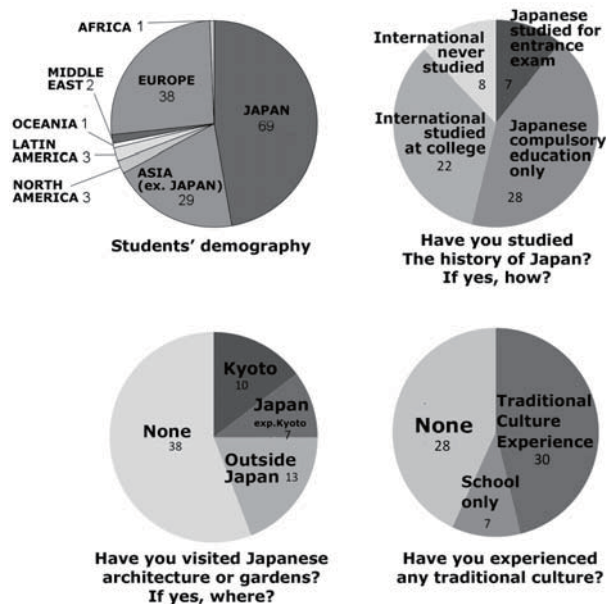


Fig. 2 Exerts from the survey result

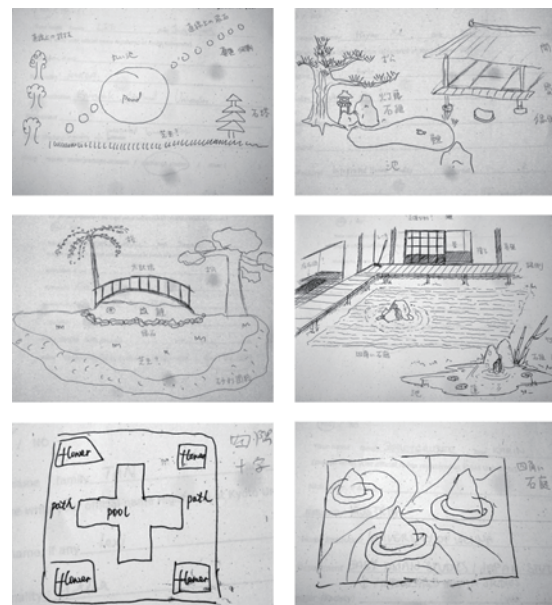


Fig. 3 Examples of students' first drawings of what they think is a 'Japanese garden'

One significant difference caused by different backgrounds was how they perceive Japanese architectural space. Here is an example from the pre-study survey. Those who have experienced traditional activity or have visited traditional architecture tended to pay more attention to conceptual elements such as 'connection between inside and outside', whereas those who having less experience in traditional culture tended to pay more attention to tangible elements such as rocks and plants. In contrast, nationality did not make much difference in their perception of Japanese architecture and gardens. (Fig. 4)

In conclusion, there is little disadvantage of being non-native to learn cultural design, and cross-cultural education is possible only if we teach them elaborately and if the student has a certain amount of interest and an open mind to accept a 'different' concept.

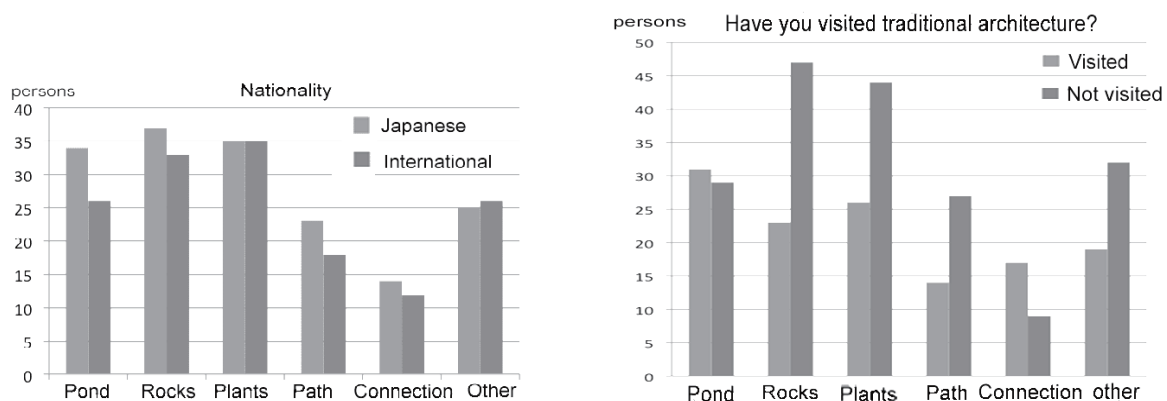


Fig. 4 Comparison of cross analysis to a question: 'What do you think the most important element in Japanese garden?'

'International' and 'Intercultural' issues

The majority of international students in Japan are Chinese (63%) and Korean (12%) [8]. These East-Asian countries and Japan have sensitive issues derived from the past, and we need to be careful when we discuss history. However, the close relationship among those countries for over 1400 years could also be an effective tool to inspire students to study further into the cultural context of each design. Traditional Japanese city planning and architectural design received direct influence from China by way of Korea, and they show formal similarities, which often confuse audience from other cultures. In such similarities, however, the subtle differences of details clarify different natural and social contexts of each region, and they teach us the essence of vernacular design. As a side product, studying those 'relative' architecture styles often dismantled the barrier between domestic and international students. In a broader vision, we sometimes find similar details in traditional Asian and European designs, even though there is no evidence of trades or communication at the time of production. This fact may be telling us what is universally rational and scientific. Such study of 'the meaning of design' helped understanding other cultures as well.

Discussion: The Future of Traditional Architecture Practice and Education

How far these traditional methods can be sustained in the face of growing dominance of high-tech building industry even in small-scale buildings? Unfortunately, there are so many social and economic obstacles that it is difficult to give a positive answer.

What destroyed the industry of traditional Japanese gardening was the inheritance tax, which started in Japan in 1905. Because the rate is relatively high and inheritors have to pay tax in cash, many property owners choose to sell their land, which might have been a valuable historical garden, or to build something more profitable like rental apartments or parking lots on it. Thus, gardeners have fewer and fewer new projects domestically, and there are less and less clients even for maintenance only. To survive, long-established traditional gardeners have started to expand their business into modern or public projects or to go abroad to look for new clients. In this situation, there is a very small job market for gardeners, and even if there is any offer, compensation and work condition have to stay sub-standard. Thus, the Japanese garden industry is maintained by limited number of enthusiasts. The culture, which everybody else in the world admires, would disappear soon if we do not take an action now.

The biggest obstacle to stop traditional Japanese architecture is the new building code that became effective in 2007. The law has almost prohibited traditional construction methods. Modern society requires the guarantee of safety by calculations and signed paperwork, and metal-fasteners are easier to calculate than solid wood with individual and irregular behaviors. Although experienced artisans can make the best of such irregularities of natural materials and build most effectively with them, they just cannot show a numerical proof. We should remember that so-called high-tech construction building methods such as seismic isolation and vibration damping were commonly used since centuries ago in traditional construction.

Another problem may be the population and lifestyle changes of the society. An example is the traditional thatched roof. In rural communities, people used to help each other to re-thatch roofs for no compensation. Such roofing was made of the fast growing grass in the neighborhood, so the material was readily available at no cost. And such roofs were providing good insulation to save energy, emitting no waste and revitalizing the ecological system. Nowadays, however, there is not enough labor force in those villages, and now they have to import grass from overseas and hire expensive professionals to do the work for them. Thus, having a thatched roof became a luxury, and they disappeared quickly. This mutual-helping system including re-thatching roofs is called '*yui*' and it only remains in Shirakawa Village in Gifu Prefecture. It is so rare nowadays that the village was designated as a UNESCO cultural heritage.

Modernized education and people's changed mind together may be a fundamental cause of the reduction of traditional architecture. Ever since westernization came after Meiji restoration, Japanese people tend to forget the rationality and sustainability of the traditional building system. Architecture schools have been teaching traditional architecture as 'history'. Few people talks about that old wisdom, and people's lack of knowledge in traditional construction is spreading misunderstandings such that it is weak against earthquakes. Recently, folklore houses like '*minka*' and '*machi-ya*' are receiving more and more attention because of their energy-saving and zero-emission system. Especially after the Tohoku Earthquake, Fukushima nuclear power plant accident and following energy problem, we should consider going back to the traditional lifestyle. Many people, however, just do not know how to deal with it.

Conclusion: The Expectation for Globalization to Save The Local Craft

It is very difficult for traditional building industry to make ends meet in the current society in Japan. There are, however, many potential clients overseas, and they are mostly enthusiastic. To maintain the valuable skills and methods, the practitioners may want to consider going overseas to find better job opportunities. Language and cultural barrier can be tackled by appropriate education for both practitioners and clients. To start, the wall between higher education and traditional industry ought to be dismantled. College educators and students should learn more about traditional industry so that they can discuss it correctly. Practitioners should also expand their territories by gaining systematic knowledge in foreign languages, structural engineering, and other useful subjects. They establish the equal status with modern practitioners and academics.

During our research, the author often observed that international students and tourists showed better understanding of historical residences, whereas Japanese tourists tend to pay respect to temples, shrines and castles only [9]. European and Americans have a custom to value old houses even though they are not famous or historically significant. They like to maintain old houses instead of resorting to scrap and build. The governments in Europe are generous in helping historical houses, and Americans make contribution individually. Social environs may be different as they are, we can still learn their attitude of fostering traditions. We already substantially depend on foreign apprentices for preservation of our local craft (Fig. 1). We should start revisiting our own culture before we completely lose it.

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