Opportunities & Challenges: Learning Experience from International Architectural Students in the United States

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INTRODUCTION

Universities and colleges in the United States are the destinations of the most international students' choices for their higher education. During 2009-2010, there are 690,923 international students studying in the US (Institute of International Education, 2011A). As a consequence of globalization, the number of international students studying in the US has nearly doubled in the period from 1990 to 2010. Typically, graduate programs in the US higher education rely more on international students. However, recent undergraduate enrollment in the US colleges and universities grow stronger -- in 2009, the number of international undergraduate students increased 16% comparing with 2% of graduate student increase (Fischer, 2009). The growth of international undergraduate students is largely dependent on enrollment of students from China, where more than 18% of entire international students come from. With the rise of Asian economy, students from Asian countries comprise the majority (about 62%) of international student population and students from China, India and South Korea comprise nearly half (44%) of all international student enrollments (Institute of International Education, 2011B).

Traditionally, most international students study in business (21%), engineering (19%), physics and math (18%). Only around 5% of international students study in fine and applied arts, including architecture and landscape architecture (Institute of International Education, 2011C). Among all 27,852 students enrolled in NAAB-accredited programs, there are 2,992 students (7%) defined by NAAB as "non-resident alien" (NAAB, 2010). During 2009-2010 academic year, there are 681 international students, 8% of all 8,653 newly enrolled architectural students (NAAB, 2010). Recently, many schools see significant increase of Asian students studying architecture. This trend may reflect the soaring demands of trained professional designers and the booming architectural job market in Asia. The benefits of the integration of international students into American architectural education are highly esteemed by universities, professional organizations, and individual faculty and students. Increasing numbers of international students improve the cultural diversity of American architectural education.

While being exposed to a different culture provides students with great opportunities to explore their education and future career, it also present challenges to students and faculty members, particularly international students' acclimatization to the contexts of American architectural education. Born and raised in their native countries, international students normally have already established their learning styles before coming to the US, which are significantly different from their Anglo students. In addition, in the US, all NAAB accredited programs place particular emphases on studio trainings with the application of history, building technology, structures, design theory, and other technical and academic topics deemed necessary for an understanding of architecture and its role in society. However, most international students, who come from developing countries with high school diplomas or college degrees, are normally trained in a top-down teacher-centered model promoting introspective learning, which is different from the bottom-up student-centered model of knowledge

transmission promoting extroverted learning used in American schools.

In addition, the different social-cultural settings and language barrier add more difficulties for international students' acclimatization process. In fact, there are wide disparities in the expectations in different nations with regard to what their architectural students are supposed to accomplish. These disparities include different curricular objectives, assessment criteria, and student behavior of conductions. When arriving at schools in the US, international students are often thrust into studios where they are expected to complete academic tasks that they may be completely unaware of. This can be very difficult for international students, especially if their confidence with the use of the English language in academic communication is still not strong. Problems with international students' learning process in studios can wreak havoc on their academic performance, even if they actually have insightful ideas to express.

International students have distinct and diverse cultural values and preferences. Some literatures have suggested that student learning styles are predetermined by their cultural orientations. Although individuals or subgroups within a culture may indicate some levels of variations, there are abundant evidences demonstrating a significant relationship between one's cultural background and his/her learning styles (Burns, 1991; Jones et al., 1999; Leask, 1999; McInnes, 2001; Ryan, 2000). De Vita (2001) stressed that learning styles differ from cultures. For example, previous researches (Cox and Ramirez 1981, Vasquez 1991) concluded that Hispanic students regard family and personal relationships as important and are comfortable with cognitive generalities and patterns. As a result, they often seek a personal relationship with a teacher and are more comfortable with broad concepts than component facts and specifics. Chan (1999) found that Western educators lack the understanding of Chinese students who are generally less spontaneous and more likely to conform to their teachers. Biggs (1996) also argued that Asian students, particularly from eastern Asia, perceived more authoritative roles from instructors and showed more respect.

An individual's preferred way for receiving information in any learning environment is the learning style of this individual. Fox & Bartholomae (1999) de-

scribed learning styles as a biological and developmental set of personal characteristics that is defined by the way individual process information in his/her daily life. Researches (Hayes & Allinson, 1996; Ash, 1986; Honey & Mumford, 1986) suggests that students would have better learning performances when teaching style and teaching contents match students' learning styles and preferences. If there is conflict between learning style and teaching style, then students' learning process would be impaired. As international students become an integral part of American architectural education, however, relatively little research has focused on understanding the relationship between international students' learning styles and their cultural preferences.

The accommodation of international students is an important goal in American architectural education that is committed to provide quality education and teaching expertise. In order to develop a systematic approach to more diverse student population today, it is critical for architectural educators to recognize the diverse learning styles caused by diverse cultures. It is necessary to enhance cultural understanding that would influence the development of pedagogy and teaching practice in order to satisfy diverse needs from the growing population of international students..

The project discussed in this paper is a pilot study which is aimed to understand how international architectural students' cultural origins and preferences influence their learning styles. The research question asked in this project is: are there any significant differences in learning performance, academic satisfaction and interpersonal relationship in studio caused by cultural differences?

METHODOLOGY

Using convenience sampling, 22 international architectural students from University of Idaho, Washington State University, and University of Nebraska-Lincoln agree to participate in this study. Among them, 13 are graduate students and 9 are undergraduates from a range countries in the world, as shown in Table 1. the investigator interview each student for two hours with semi-structured questionnaires.

Of the investigation focus is the learning experience of the first year upon international students' arrival

as the primary transition between different learning contexts occurs during this period. Also, it can be safely argued that the longer international students study in the US, the better they adopt the American learning context. As a result, international students' length of residence in the US is an independent variable to examine their learning experience. Table 2 shows the participants' length of stay. The questions center on students' encounter with American architectural curricula, learning experience on class assignments and instruction delivery, interpersonal relationship with instructors and peer students, and perception of course assessment.

Country	Undergraduate	graduate	total
China	3	6	9
India	2	3	5
South Korea	1	0	1
Vietnam	1	1	2
Spain	0	1	1
Taiwan	0	1	1
Brazil	1	0	1
Ghana	0	1	1
Algeria	1	0	1
Total	9	13	22

Table 1. Participants' country of origin and level of class.

Length of Residence in the US	Numbers of Participants
Less than 1 year	6
More than 1 yr but less than 2 yrs	7
More than 2yrs but less than 3 yrs	4
More than 3 yrs but less than 4yrs	2
4yrs or above	3

Table 2. Participants' length of residence in the US.

FINDINGS & DISCUSSION

3-1. Overall Learning Satisfaction
Among the 22 students, 15 (68.2%) report their overall learning experience is satisfactory. Table 3 shows the distribution of the 15 students in terms of their length of residence in the US. It is clear to see that students' learning satisfaction grows as their length of residence in the US increases. But their satisfaction starts to drop when they stay in the US for 4 years or more. This prove that international students gain more confidences in their acclimatization to the American architecture education contexts if they have more educational experience in the US. However, once their stays are long enough, their acclimatization brings them capabilities to re-evaluate the American architectural education model and dissatisfaction starts to increase. One student with more than 4 years residence in the US expresses his unhappiness towards the lack of consideration on practical knowledge in studio -- " I want to learn how to control design budget when doing studio projects...This is a critical field of architecture. But all you hear is 'concept', 'concept.' I feel that is the only thing important here."

It is interesting to see that all the 7 students who report dissatisfactory on their learning experience are from east Asia, including 4 Chinese students, 1 South Korea student, 1 Taiwanese student, and 1 Vietnamese student. It should be noted that all those areas are historically influenced by Confucianism. Researches (Reid, 1998; Egri & Ralston 2004; Rao 2001; etc.) demonstrate that the long influence of Confucianism in east Asia has led to a unique cultural cluster in Asian countries and resulted in a particular learning style for students from that area. Hence, the conflict between Confucian learning style and American educational contexts among students from east Asia contributes to the dissatisfaction. This paper will discuss this in details later.

Length of Residence in the US	Numbers of Participants Feel Satisfactory about their learning experience
Less than 1 year	3 (50%)
More than 1 yr but less than 2 yrs	5 (71%)
More than 2yrs but less than 3 yrs	4 (100%)
More than 3 yrs but less than 4yrs	2 (100%)
4yrs or above	1 (30%)

Table 3. The distribution of students who feel satisfactory about their learning.

3-2 Major Learning Challenge during The First Year of Arrival

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