

Perceptions of Mainland Chinese Students Toward Obtaining Higher Education in the United States

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ABSTRACT

Since 1978, when the first group of 50 mainland Chinese students came to the United States for education, increasing numbers of mainland Chinese students have come to the United States to get a degree (Lampton, Madancy & Williams, 1986). In 2009, China surpassed India, becoming the largest source country of international students in the United States, and since then, China has the most international students seeking education in the United States (Open Doors Data, 2015). The purpose of this Q methodology study is to explore personal perspectives of mainland Chinese students on the value of getting a degree in the United States. Data analysis grouped similar viewpoints. Based on data from ten mainland Chinese students, we categorized three different groups of mainland Chinese students: job and education group, education group, and migration group.

Keywords: Q methodology, international students, higher education, mainland Chinese students, viewpoints

In 1854, during the Chinese Qing Empire, Yung Wing, the first mainland Chinese student, received his degree from Yale University. The Chinese Qing Empire funded and sent the first group of 120 mainland Chinese students to the U.S. study in 1972 (Leibovitz & Miller, 2011). Since the establishment of the modern Chinese higher education system and China

becoming a republic, the academic relationship between China and the U.S. has strengthened. Before 1950, approximately 30,000 Chinese students came to the United States for education (Lampton, Madancy & Williams, 1986). However, after 1949, when mainland China established a socialist government, China ended its academic relationship with the United States. During this period, Mainland Chinese students went to the former Soviet Union and Eastern Europe for higher education instead of the western world and Japan which were popular among mainland Chinese students before 1949 (Reed, 1988; Lampton, Madancy & Williams, 1986). The bad condition of the academic relationship between China and the U.S. continued until 1976 when China began to reform and restore its academic relationship with the U.S. In late 1978, the first group of 50 Chinese students and scholars came to the United States (Lampton, Madancy & Williams, 1986). By the 1984-1985 academic year, 14,000 Chinese students and scholars came to the U.S. for its education (Lampton, Madancy & Williams, 1986). Since then, more and more mainland Chinese students have come to the western countries, particularly the U.S., for higher education. According to the Institute of International Education (2014), China maintains the leading position for the international feeder nations of the United States.

Because the number of mainland Chinese students who seek higher education in the United States has grown, the need for higher education institutions to understand the mainland Chinese student's attitudes and beliefs toward the value of getting a degree in the United States has increased. Literature reveals a gap between the need to understand the mainland Chinese student's attitudes and beliefs toward the value of getting a degree in the United States, which mostly focus Chinese students from Hong Kong, Macao or Taiwan. For American higher education institutions that want to effectively recruit mainland Chinese international students and meet their expectations, closing the gap in knowledge and understanding the mainland Chinese student's perspectives on getting a degree in the United States is critical. Without this knowledge, American higher education institutions may not know why students are seeking their institutions for degrees.

The purpose of this study is to understand the viewpoints and why Mainland Chinese students get degrees in the United States. More specifically, this Q methodology study will describe the subjective perspectives of these students including the most important and unimportant

statements concerning the perspectives on the value of getting a degree in the United States for mainland Chinese students'. The population for this study is mainland Chinese students who are currently studying at a land grant university in a southern state in the United States. The specific research question that guided this study is: What are mainland Chinese students' viewpoints toward the beliefs and attitudes of the value of getting a degree in the United States?

THEORETICAL FRAMEWORK

The theory of planned behavior developed by Ajzen (1985) is the theoretical framework for this study. It was used to sort items by what is important to mainland Chinese students in terms of attitudes and beliefs of education in the United States. The theory of planned behavior is an extension of the theory of reasoned action (Ajzen, 1987; Madden, Ellen & Ajzen & Driver, 1992). Ajzen (1985) extended the theory of reasoned action by including perceptions of behavioral control as a third additional predictor of intentions and behavior.

According to Ajzen and Driver (1992), the theory of planned behavior can advance people's understanding of the factors that determine performance of activities, and the three beliefs (behavioral, normative, and control) in this theory can each contribute to the prediction of people's intentions and final behavior. Thus, this study applies the three beliefs of the theory of planned behavior to analyze the influencing factors for the mainland Chinese students' decision to study in the United States.

Factors about Behavioral Belief

Attitude toward the behavior is the first conceptual independent determinant of intention in both the theory of reasoned action and the theory of planned behavior, and it refers to the degree to which the person has a favorable or unfavorable evaluation of the behavior in question (Ajzen, 1987; Ajzen & Driver, 1992). In this study, the behavioral beliefs are the mainland Chinese students' positive or negative perceptions that for obtaining a degree in the U.S. Some researchers argue that educational systems and learning styles in mainland China and the United States belong to two contrary categories (Henze & Zhu, 2012). From 1979 to 2013, the number of mainland Chinese students who chose to study in the United States' educational system has grown from 52 to 274,439, and China has

been the largest source country of the international students in the U.S. since 2009 (Institute of International Education, 2014). The frequently increasing number of mainland Chinese students in the U.S. supports that there is an increasingly positive perception for obtaining a degree in the U.S. among mainland Chinese students' behavioral beliefs.

Factors about Normative Belief

Subjective norm is a social factor term that refers to the perceived social pressure to perform or not to perform the behavior (Ajzen, 1987; Ajzen & Driver, 1992). In this study, the normative beliefs represent the viewpoints and pressure that the mainland Chinese students get from their peers, families, co-workers, potential managers, and society as a whole. Education is not an independent element in society, and it is always involved with the economic development, political development, cultural development and some other areas of development (Henze & Zhu, 2012). The number of mainland Chinese students who choose to study abroad began to grow with the development of Chinese economy, culture, and society. The mainland Chinese students' final intention and behavior for earning a college degree in the U.S. can be influenced by the pressure and evaluation that they get from their peers, families, co-workers, potential managers, and society as a whole. Encouragement from the Chinese government is an example of an influence on the normative beliefs for mainland Chinese students' decision to study abroad. A report on the educational backgrounds of headmasters from 36 famous Chinese universities showed that 85.7% of these headmasters have study experience abroad (Cheng & Miao, 2010).

Factors about Control Beliefs

Perceived behavioral control refers to the perceived ease or difficulty of performing the behavior, and it is assumed to reflect experiences and anticipated impediments and obstacles; however, in many situations, perceived behavioral control is not particularly realistic (Ajzen, 1987; Ajzen & Driver, 1992; Beck & Ajzen, 1991). In this study, the control beliefs and perceived behavioral control present the mainland Chinese students' perceptions of their ability to get a degree in the U.S. efficiently. Behavioral intention is the individual's final intention to perform a behavior, and behavior is the individual's final action for the behavior. Factors related to mainland Chinese students' control beliefs to get a degree in the U.S. are

very important and can influence mainland Chinese students' final decision to go to college in the United or not. However, currently, there is no relative research on factors related to mainland Chinese students' control beliefs to study in the U.S.

RESEARCH METHOD

Q-methodology is an appropriate method for this research because Q-methodology aims to explore and measure the breadth and variety of the shared attitudes and subjective opinions that exist on the topic of interest across a population (Cross, 2004; Simons, 2013). In addition, Q-methodology is extremely useful for eliciting views on complex and/ or controversial subjects (Cross, 2004; Simons, 2013). The mainland Chinese students' attitudes and beliefs of the value of getting a degree in the U.S. are shared attitudes and opinions across mainland Chinese students on a complex and controversial subject, and the breadth and variety of these Chinese students' attitudes and beliefs could be explored by the Q-methodology. Q-methodology provides a framework for participants to rank a large number of statements to explore the relative significance (positive and negative) that the participants attach to the issues raised by a topic and how the participants feel about the issues (Brown, 1993). From the analysis of the sorted statements, viewpoints will emerge. To conduct this study, the researchers defined the concourse, developed a Q sample, selected the P set, selected the P sample, identified the Q-sort, and analyzed the data. For this study, the concourse was defined by four levels: (a) items from relevant literature about mainland Chinese students' experiences studying in the United States; (b) items from the researcher's personal experience and personal brainstorm; (c) items from the researcher's friends' experiences and suggestions; (d) items from the other online sources, e.g. newspaper.

Participants (P-Set)

P-set is the term used in Q methodology to describe the sample participants who are theoretically relevant to the problem under consideration in the study (Simons, 2013; Van Exel & de Graaf, 2005). In this study, the P-set is a sample of 10 mainland Chinese students who have studied in the United States at a land-grant university in the South for at least one year. The participants have completed at least one year of study experience in the United States, which guarantees that the sample of

students has had sufficient higher education experiences in the United States to be meaningful. Of the ten participants, 60 % (n=6) were female and 40% (n=4) were male. All 10 participants were between 20 and 31 years old and have been in the United States between 1-6 years. One participant was currently completing an undergraduate degree in the United States, 5 already had a bachelor's degree from China, and 4 students had a master's degree from China. One student was completing an undergraduate degree in the United States, 3 students were working toward a master's degree, and 6 students were working toward a doctorate.

Data concerning the participants' intent to apply for Optional Practical Training (OPT), H1B or green card could indicate their intent to work and/or live in the United States after they finish their current degree. OPT is a type of legal employment authorization for qualified students in F-1 status who wish to engage in off-campus employment in their field of study during and/or after their course of study. H-1B is a non-immigrant visa in the United States under the Immigration and Nationality Act that allows U.S. employers to hire foreign workers for up to 3 years. A green card is the United States Permanent Resident Card, and it allows the holder to live and work in the United States on a permanent basis. A majority (60%) of the participants (n = 6) wanted to take the OPT, and 30% of the participants (n = 3) were undecided. Only 10% of the participants (n = 1) did not want to take the OPT. A majority (60%) of the participants (n = 6) wanted to apply the H1B or Green Card to work and live in the United States. Just 30% of the participants (n = 3) did not want to apply the H1B or Green Card, and only 1 participant 10% (n = 1) was undecided about his/her decision for the H1B or Green Card at the time of data collection.

Data Collection

This study uses Q methodology to explore the mainland Chinese students' attitudes and beliefs to get a degree in the United States. The Q-set drawn upon items to create a 73-statement concourse. The statements were translated into Chinese since this was the participants' first and most familiar language. Data was collected during face-to-face Q-sort meetings with participants. During this meeting, the researcher obtained consent from the qualified participants to participate in this study, gave a short introduction about the study and how to complete the Q-sort. The participants' questions about the study were also answered by the researcher before the Q-sort. Participants were asked to do the Q-sort independently,

fill out the Q-sort interview protocol, and post the Q-sort questionnaire. All of the required data collected from the participants were coded and analyzed with SPSS (Statistical Package for the Social Science).

Data Analysis

Q-methodology was used to examine the research question: What are mainland Chinese students' attitudes and beliefs of the value of getting a degree in the United States and why. SPSS was used to analyze the demographics of the sampled population, conduct the factor analysis, explore the correlation between sorts, conduct a varimax factor rotation, create factor arrays, identify distinguishing statements, and identify consensus statements.

Factor Analysis and Factor Rotation

Factor analysis is useful to investigate variable relationships for complex concepts. Factor analysis is used to examine relationships between multiple observed variables to examine patterns of response. After the q-factor analysis, rotation was conducted to improve fit. In factor rotation, the researcher places factors on an axis and then transfers them mathematically (Abdi, 2003). For this study, the q-factor analysis and varimax rotation was used to describe the variability of the participants.

Principal Component Analysis (PCA) was done in SPSS with ten subjects, and factor loadings of subjects were examined. The total variance of these three groups was 59.40%. Of the participants, three were found to be cross loading and did not provide a unique perspective of the view point. To better analyze the reason why the mainland Chinese students come to the United States for a degree, the researcher removed the three cross loading participants and reproduced the PCA and Factor loadings output in SPSS. After removing the three cross loading participants, the total variance of the second PCA was 67.05%, which was higher than the 59.40% produced by SPSS that included the three cross loading subjects. Therefore, the researcher continued the study with the second PCA table and Factor Loadings of Subject Response table produced by SPSS. Viewpoint 1 contained 4 subjects, viewpoint 2 contained 2 subjects, and viewpoint 3 had 1 subject.

Factor Arrays

In this study, factor scores were calculated based by sorting the 73 concourse statements based on relevance from -6 (most unlikely impacted) to 6 (most likely impacted). Group 1 selected statement 8 (to get a better competitive position for the good job in China) as the most likely impacted statement, and statement 28 (to run away from the potential political persecution) was ranked as having most unlikely impacted their decision to obtain a degree in the United States. Group 2 selected statement 34 (Program of study was developed badly due to some reason in the mainland of China) as the statement that most likely impacted and statement 28 (to run away from the potential political persecution) as having most unlikely impacted their decision to obtain a degree in the United States. Group 3 selected statement 68 (Life conditions in United States are better) as the statement that most likely impacted and statement 11 (Distance education in United States develops much better than that in mainland China for the non-full-time students.) as having most unlikely impacted their decision to obtain a degree in the U.S.

Distinguishing Statements

Distinguishing statements in this study helped the researcher ascertain which statements from the concourse are distinctive to the three participant groups. After calculating the Z-scores for all 73 statements, the researcher recognized all the distinguishing statements in this study by comparing the z-scores. Group 1 had 5 distinguishing, Group 2 had 13 distinguishing statements, and Group 3 had 14 distinguishing statements. These distinguishing statements offer insight on how the statement selections defined a group. To better interpret the three groups, a crib sheet was created that provide a method to examine the statements ranked by the 6 highest rated statements and the 6 lowest rated statements for the three groups.

Factor Interpretation

The 73 statements in the concourse could be sorted to 12 different statement groups: career/benefits; quality of education; access; convenience, migration, access with government influence, family influence, self-improvement, social influence, education environment, adventure, and quality of life. After analyzing all the data in the 6 highest rated statement tables and the 6 lowest rated statement tables for the three participant groups

Table 1. Viewpoint 1, Job & Education Group with High & Low Ratings

High		Low	
8	To get a better competitive position for the good job in China	28	To run away from the potential political persecution.
16	To get access to the world-class programs which China does not have in my program of study.	30	To access education free from the political belief problem of higher education in China.
9	Will get benefits in the future.	27	Prepare for family migration
61	To experience different culture	32	Program of study was forbade in the mainland of China
58	To have international view via cross cultural education or among cross cultural peers	66	Get access to/ meet with the right man/women for marriage
59	To enjoy the multicultural flexible pure advanced education	26	Prepare for self-migration

Table 2. Viewpoint 2, Education Group with High & Low Ratings

High		Low	
15	To get access to the world-class faculty.	28	To run away from the potential political persecution.
34	Program of study was developed badly due to some reason in the mainland of China.	66	Get access to/ meet with the right man/women for marriage
12	Get a better higher education	65	To live or study with husband/wife or boyfriend/girlfriend.
13	American curriculum is better than Chinese curriculum.	68	Life conditions in United States are better
18	The development of internet helps mainland Chinese students get enough information they need about universities in the United States.	36	The parents' belief and dream for studying and get a degree in the United States are passed on to their children.
39	Currently Chinese parents and students believe a good education in the western world will guarantee a better future for the students.	6	Company requires degree in U.S. for job advancement (promotion or to be a manager)

Table 3. Viewpoint 3, Migration Group with High & Low Ratings

	High		Low
68	Life conditions in United States are better	11	Distance education in United States develops much better than that in mainland China for the non-full time students.
26	Prepare for self-migration	54	Climate in the classroom teacher to student
15	To get access to the world-class faculty.	60	Make new friends
7	The job opportunities are more equal in the United States than in the mainland China for the mainland Chinese students after their graduation.	20	Taking English required courses for all Chinese K-12 education and all programs in Chinese higher education makes it easier for the new generation mainland Chinese students to get accessible and adapted to the new ideas of education in the western world.
31	To access education free from the potential sensitive problems or topics that may be caused by the students' parents' work/job/position.	67	Shopping is cheaper in U.S.
30	To access education free from the political belief problem of higher education in China.	61	To experience different culture

along with all of the data in the statement group table, the researcher found that the participant groups care about different factors regarding their decision to obtain a degree in the United States. These statements suggest that the participants in Group 1 want a degree in the United States to improve their job prospects in China and to benefit their future, and they also wanted to enjoy the educational experiences in the United States and enrich their cross-culture experience. However, they were not concerned with running away from China and moving to live in the U.S. Therefore, Group 1 could be labeled as the Job & Education Group. Different from the participants in Group 1, Group 2 participant statements suggest that these participants care about the positive educational experiences in the U.S. and are not concerned with the factors regarding family, life condition, and job. Therefore, the purpose of the participants in Group 2 who come to the U.S.

for a degree is pure, and these participants only want to enjoy the positive educational experiences in the U.S. As a result, Group 2 could be labeled as the Education Group. The viewpoints of Group 3 were different from Group 1 or Group 2. These participants care most about migrating to the U.S. They also want to stay away from Chinese education, which may have negative associations caused by their parents and Chinese politics. Therefore, Group 3 was titled the Migration Group.

FINDINGS

The study explored the overarching research question: What are mainland Chinese students' attitudes and beliefs of the value of getting a degree in the United States? According to this study, though mainland Chinese students' attitudes and beliefs to get a degree in a U.S. university are complicated and sometimes controversial. The mainland Chinese students three viewpoints that emerged were they see the value of getting a degree in the United States for to get a better job & education, for the education, and for the purpose of migration.

Tables 1, 2, and 3, show the top six highest and lowest ranking statements for the three groups. The overarching answer to the research question of this study, "What are mainland Chinese students' attitudes and beliefs of the value of getting a degree in the United States?", is that mainland Chinese students from the three different groups (Job & Education, Education, and Migration) have different attitudes and beliefs toward earning a degree at a United States university. The mainland Chinese students who belonged to the Job & Education group highly value the United States education and want to get a degree in the United States to help their job or career prospects in China. These mainland Chinese students believe that American education is better than a Chinese education and could help them obtain a better job or perform better in their job in China, but these students did not want to leave from China and migrate to the United States. The mainland Chinese students from the Education group were mostly concerned with the positive educational experiences in the United States and were not concerned with the influence that a United States education could have on their job and life. Therefore, these mainland Chinese students were primarily concerned with the education and were not concerned with job, migration, life condition, etc. As opposed to the mainland Chinese students from the Job & Education group or Education

group, the mainland Chinese students from the Migration Group had a very clear migration attitude and desire to get a degree in a United States university. The mainland Chinese students from the Migration Group valued the United States education, life condition, and job more than those in China and wanted to leave China and migrate to the United States to enjoy these perceived benefits.

However, the mainland Chinese students from different groups had different attitudes and beliefs about earning a degree in a United States university. Sometimes their attitudes and beliefs showed controversial meaning in this study, and sometimes their behavior was controversial to their attitudes and beliefs. The mainland Chinese students' willingness to apply for the OPT, H1B or green card could indicate these participants' desire to live in the United States after their graduation, which is associated with the desire to migrate. Though most of the mainland Chinese students from the Education & Job group chose "No" to the "life in the United States after their graduation" item, there was still one mainland Chinese student from the Education & Job Group who wants to work and live in the United States after her graduation. Otherwise, all of the mainland Chinese students from the Education Group chose "Yes" to the "life in the United States after their graduation" item, which means that these mainland Chinese students from the Education Group may have a high potential migration desire. This is contrasted to their selection in the Q-sort.

Future Recommendations for Research and Practice

Many opportunities exist for future researchers, who are interested in this topic and care to move forward from the conclusion of this study on mainland Chinese students' beliefs about earning a degree in the United States. The conclusion of this study is only based on the data from ten mainland Chinese students who enrolled in the same land-grant university in South in the United States. Therefore, the conclusion of this study does not generalize to all mainland Chinese students. Future researchers could investigate a larger sample using quantitative methods. Since 1979, many complex and far-reaching reforms and changes have taken place in the mainland of China, and mainland Chinese people's beliefs on higher education have changed greatly (Bodycott, 2009; Bodycott & Lai, 2012; Henze & Zhu, 2012). Studies on mainland Chinese students from different generations and different backgrounds may elicit different conclusions. Therefore, future researchers could enrich the conclusion of this study by

conducting separate studies on mainland Chinese students with different backgrounds. In addition, there are thousands of universities in the U.S. Mainland Chinese students who attend different universities may have different beliefs about earning a degree in the U.S. Researchers could also enrich the conclusion of this study by conducting separate or complex studies on mainland Chinese students from different universities in the United States, (e.g., mainland Chinese students from the public universities in the United States and mainland Chinese students from the private universities in the United States). Finally, researchers could also build on this study by applying different research method to this topic. This study used the Q methodology to analyze the data from ten qualified mainland Chinese students. However, this topic could also have been developed for different studies that apply different research methods (e.g., R methodology, or mixed methodology). Different research methods could explore different parts of this topic and may elicit different conclusions.

Since the number of mainland Chinese students who study in the United States for higher education has grown tremendously, the need to understand mainland Chinese students' attitudes and beliefs toward the value of getting a degree in the United States has also grown for both American higher education institutions and Chinese higher education institutions. First, the understanding acquired through this study could help United States universities that want to accept the mainland Chinese students offer more effective and appropriate educational programs to help mainland Chinese students attain other educational objectives. More high-quality Chinese international students coming to and graduating from these American universities could also positively affect these American universities' economies and academics. Second, the understanding acquired through this study could also help Chinese universities understand why they are losing high-quality students and what their weaknesses are compared with American universities. Then, Chinese universities could improve their programs efficiently to retain high-quality students. Finally, the understanding acquired through this study could also help mainland Chinese students who are currently studying in the United States to better understand their educational objectives and life plans after graduation. This study could also help mainland Chinese students who plan to study in the United States in the future to better value their study abroad plan.

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