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# A Gap Analysis of Satisfaction Among International Students Studying in the United States

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## Abstract

International students brought a broad range of benefits to the United States before the COVID-19 pandemic, from billions of dollars of tuition and fees directly paid to host universities to economic impacts on the country's inbound tourism made by the students' families. Nevertheless, the choice to study in the United States presented many challenges and problems for them. A survey of the existing literature showed that expectations of and perceptions toward their academic studies and professional development of these students, particularly those from mainland China, has been less explored. This paper was thus designed to fill this void by collecting empirical data among Chinese students in eight large public universities located in the Midwestern US. Statistical analyses revealed many gaps between mainland Chinese students' expectations and their perceptions as well as identified interesting factors that significantly influenced their overall satisfaction. The findings provided higher education administrators, educators, leaders, marketers, and policy makers with insights on how to interact effectively with the Chinese market in the future if they still want to capitalize on this market in the post-pandemic era.

**Keywords:** Chinese students, international education, international marketing, expectation, perception, satisfaction

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## Introduction

Mainland China had provided the largest share of foreign students to universities in the United States since the start of the 21st century, as reported by The Wall Street Journal (Barta et al., 2019) before the COVID-19 pandemic. Chinese students were an important financial commodity for colleges and universities in US. According to the Association of International Educators, as reported by South China Morning Post (Magnier & Bases, 2019), Chinese students contributed nearly US\$13 billion annually to the US economy. The New York Times reported (Fuller, 2017) that their contributions included tuition fees, school supplies, housing, other personal expenses, the country's inbound tourism receipts, and even an influence on the real estate market surrounding many universities.

In addition to generating much-needed revenue to schools and their communities, international students were widely recognized for enriching American communities and campuses with their diverse heritage and traditions, thus serving to have increased cultural awareness and appreciation (Bevis, 2002; Harrison, 2002). Some authors emphasized that these students had brought with

them a wide range of knowledge and skills across many disciplines, thereby contributing to the intellectual capital of their host country and adding to the workforce (Smith and Khawaja, 2011).

In recognition of the size and financial power of the Chinese student market, American universities had adopted a variety of marketing and service strategies designed to attract and retain Chinese students. Some noticeable examples include building pathway programs to court non-English speakers, e.g., the INTO program at Oregon State University (Oregonstate.edu, 2021) and establishing branch campuses in mainland China, e.g., Arizona State University's partnership with Hai-nan University (haic.hainanu.edu.cn, 2021) and Florida International University's partnership with Tianjin University of Commerce (fiu.edu, 2021).

From this marketing perspective, seeking effective ways to convert Chinese students into satisfied "customers" is naturally vital for sustaining the profitability and prosperity of this market. However, a review of the relevant literature showed that many publications concerning Chinese international students took an "academic" approach and looked into academic challenges, barriers, and problems that these students faced while studying in a different country. Few studies investigated the international student satisfaction (ISS); studies pertinent to Chinese international students' satisfaction in the US context in particular was extremely limited, if not non-existent. This is surprising since it contradicts many anecdotes that this "American gain" comes with a lot of "Chinese pain:" many Chinese international students not only deal with academic but also personal struggles.

Although interrupted by the COVID-19 pandemic, the booming Chinese International student market is predicted to resume soon due to two facts as reported by top news media such as Forbes and Reuters. First, earning an American degree is still a dream for many Chinese students (Krislov, 2021); secondly, the new US governmental administration is restoring at least some level of normalcy after the disruption by the pandemic and the immigration policies of the former administration (Shepardson, 2021). This positive and promising anticipation of the market recovery, coupled with the very scant research on Chinese international students' satisfaction, makes it a meaningful as well as an urgent task for key stakeholders of international students to reflect on their previous and current practices. This would help them develop an in-depth understanding of Chinese students and seek new ways and opportunities to connect with them in a sustainable manner.

This study thus aimed to address this research gap through investigating Chinese students' overall satisfaction with US host universities and communities. To achieve this goal, empirical data was collected among Chinese students studying in the United States. Applying the known business model, customer disconfirmation paradigm, this study conducted a gap analysis on Chinese students' expectations of and perceptions toward their studies in the US and identified significant factors that might influence their satisfaction through hypothesis testing. The findings provided higher education stakeholders with insights that could lead to more understanding of the motives, experiences, and overall satisfaction of the increasing number of Chinese students on American campuses.

## Literature Review

Research on international students has a long history and is well discussed, particularly in such disciplines as education and higher education counseling. Early publications in this area are found to cover a wide range of concepts and topics, such as learning styles, culture shock and adjustment, language barrier, social support, teaching quality, and mental well-being health issues such as homesickness and anxiety, to name a few. Comparatively, research discussion on “student satisfaction” is relatively recent but limited; and seems to have coupled with the increasing marketization of higher education while colleges and universities started to call students “customers” and ISS became important as a recruitment tool, enrollment booster, and income generator for many institutions.

### *Shifted Higher Education Paradigm*

This change of ideological perspective in education in many countries can be traced back to the 1980s (Newman & Jahdi, 2009). As McIlroy and Spencer (1988, 86) contended, traditionally, education opportunities were for a minority group of a society’s citizens, i.e. the ruling elites; however, with economic development, these opportunities were opened up to those with the resources. Entering the 21st century, many educational institutions, particularly in the major English-speaking countries such as the US, UK, Canada and Australia, discovered that they could apply marketing theories and concepts which had been used effectively in the business world to gain a competitive edge in the global education market (Hemsley-Brown & Oplatka, 2006; Newman & Jahdi, 2009). This marketing perspective implies a shift from a “production orientation” to a “customer-centered” approach to education (Smith, 1989, 1997 in Newman & Jahdi, 2009).

As some authors (e.g., Palihawadana and Holmes, 1999) observed, some of the ways in which higher education has become more focused on marketing include: giving marketing a higher profile in the management of institutions; viewing students as consumers of educational services; gaining a clearer perspective on what these “consumers” need and want; and introducing ways of measuring their satisfaction or dissatisfaction. Newman & Jahdi (2009, p.3) contended, the application of marketing tactics to education involved every member of staff (faculty); delivery of education is not determined by the teaching competencies of staff (faculty), but by the competency of the staff (faculty) in satisfying the needs of the consumer (the student).

A “customer-centered” marketing concept refers to putting the customer of a firm in the center of the business. The process starts from understanding the customer’s needs and wants, then developing the right products to satisfy these needs and wants, and ultimately the firm makes profits through customer satisfaction (Kotler et al., 2014). In the context of higher education, treating students as customers means that academic programs and other service activities in an institution must be designed to satisfy students’ needs and wants. Although arguments, debates, concerns, and criticism of this new education paradigm have never ceased since its birth, nowadays it is not unusual to see the slogan, “we are a student-centered university” in many American institutions’ websites, brochures, and faculty email signatures. Research on this area has increased over the years.

## ***Student Satisfaction***

The study of satisfaction in the marketing context gained popularity with the emergence of the customer-centric marketing philosophy in the business world and following a seminal study by Oliver (1980). In the past 30 years, a variety of models, methods and paradigms concerning its definition, determinants, and consequences have emerged within the research field (Santini et al., 2017). For instance, Oliver & DeSarbo (1988) argued that customer satisfaction is understood as a psychological state resulting from a consumer experience, a cognitive process or an affective state (Mano & Oliver, 1993). In their widely-known service quality gap model, Parasuraman et al. (1985) illustrated that customer satisfaction is the comparison between his or her expectations of and perceptions toward a service experience.

These and other authors further contended that in the service business world, an evaluation of a service encounter between a seller and buyer can result in one of two outcomes, in degrees: satisfaction or dissatisfaction (e.g., Parasuraman et al., 1985; Brown and Swartz, 1989; Saleh and Ryan, 1991; Thompson and Yarnold, 1995). Satisfaction and dissatisfaction are often viewed as opposite ends of a continuum, with disposition being determined as a result of a comparison between expectations and perceptions. Satisfaction occurs when a customer's perceptions meet his or her expectations, which is referred to as confirmation. The greatest satisfaction occurs when the customer's perceptions exceed his or her expectations; this is referred to as positive disconfirmation. Dissatisfaction occurs when a negative discrepancy is present between the customer's perceptions and expectations; this is referred to as negative disconfirmation. According to this disconfirmation paradigm in business, customer satisfaction is determined by the magnitude and direction of the gap between customer expectations of and perceptions toward product or seller performance.

As defined in Merriam-Webster dictionary, "perception" is "a result of one's observation, a mental image, awareness of the elements of environment through physical sensation; physical sensation interpreted in the light of experience; quick, acute, and intuitive cognition; or a capacity for comprehension." In the marketing context, consumer perception is the consumer's judgement or evaluation about a firm or its offerings and results from his or her actual or direct experience with the firms or offerings. For instance, as Zeithaml et al. (1988) stated, consumer-perceived quality is the consumer's judgement about the superiority or excellence of a product and different from manager-perceived quality, objective quality, and researcher-perceived quality.

These authors also contended that customer expectations, an anticipated consumption experience, consist of three levels: their desired service, which reflects what they want; adequate service, the standard that customers are willing to accept; and their predicted service, which is the level of service customers expect likely to occur. The main sources for the formation of customer expectations, as Zeithalm et al. identified, included a customer's past experiences, both direct and indirect; personal characteristics (e.g., consumption philosophy, personal needs, etc.); external company communications (e.g., advertising, media releases, etc.); and word-of-mouth (e.g., friends, consumer reports, consultants, etc.).

In the educational context, the satisfaction of the "customer" student has thus generated much literature with the shifted higher education paradigm. A search with the keyword "student satisfaction" on scholar.google.com results in thousands of relevant studies. A review of those



published in the past two decades shows distinct patterns. Generally, a group of researchers focused their discussion on satisfaction of college students in a general sense while the other group targeted international students. Since the focus of this study is international student satisfaction (ISS), the following text further discusses research patterns concerning this area.

Publications in ISS can be first categorized into three schools: the first school addressed characteristics and issues regarding all international students; the second school investigated ISS in specific countries such as Japan, Australia, UK, and USA; and the last school examined a specific international student market and its impact on a specific host country. In terms of content, these studies identified ISS determinants, components, outcomes, general study frameworks, and comparative studies between international and local students. The main research methods in these studies could be observed as adapted from the service quality research in marketing. Such models as SERVQUAL and expectancy-disconfirmation or importance-performance model are most frequently used.

A close look of these studies revealed several apparent voids. First, a majority of these studies discussed SS as pertinent to academic studies and on-campus life. Second, most of the empirical studies measured SS by using close-ended statements that reflected students' perceptions or experiences with different academic services, but ignored students' "expectations," i.e., what they wanted. Third, in the copious SS literature, publications on ISS are limited; publications concerning Chinese international students are rare. This study thus aimed to extend the current literature in ISS by filling some voids concerning Chinese international students through applying the disconfirmation paradigm. Specifically, this study focused on understanding the overall satisfaction of the Chinese international students through measuring the gap between their expectations and perceptions.

### ***Hypotheses***

To achieve this goal, this study tried to achieve a set of research objectives. First, it investigated the "expectations" of Chinese students that were interested in going to college in the United States. Second, it measured the "gaps" between the expectations and perceptions of Chinese international students who were attending colleges in the United States. Third, it identified factors that significantly influenced the overall satisfaction of these students. Based on the known expectancy-disconfirmation model (Anderson, 1973; Parasuraman et al., 1985), the following hypotheses were made and tested via empirical data:

- H1: The overall satisfaction of Chinese international students with their host college and university is significantly influenced by the discrepancy or gap between their expectations and perceptions.
- H2: The overall satisfaction of Chinese international students with their host university is significantly influenced by their personal characteristics: age, gender, and length of time spent living in the US.

### **Methods**

The data used for this study came from the same data set collected by Chen (2020, p. 110-111). Briefly, Chen's questionnaire was designed to survey Chinese students who were attending a large

public university located in the Midwestern US. It included four parts with a total of seventeen questions. The first part consisted of four questions asking for the respondent's major, academic status, initial time of arriving in the US, and planned graduation date. The second part included 20 expectation themes and their correspondent perception statements. All of these were placed on a 7-point Likert scale; and respondents were asked to rate their level of agreement on each expectation statement, then on each corresponding perception statement. The third part consisted of five questions seeking information on how students cope with difficulties, career plans after graduation, and travel behavior. The last part contained demographic questions on gender, age, hometown in China, as well as two statements to evaluate students' overall satisfaction level with their academic experience at their host university and their overall experience of living in the US.

Chen's (2020) study only reported a very small portion of the survey results, including demographic information of the participants as well as principal factor analysis of their expectations of studying and living in the United States. Built on what was accomplished by Chen, this study mined the data to reveal the satisfaction level of Chinese students studying in this university; to identify significant factors that influence their satisfaction through testing the hypotheses; and to understand the challenges Chinese international students encounter, their career plans after graduation, and their travel behavior.

### **Data Analysis and Findings**

The data set was screened for errors, missing values, and outliers. A missing value analysis was performed on all expectation, perception, and overall satisfaction measures. The hypothesis of Missing at Random (MAR) was rejected, and missing values in these measures were thus replaced with mean scores.

Descriptive statistics were performed on the basic information of all the respondents, including academic major, academic status, age, leisure travel frequency, education funding source, gender, length of time spent living and studying in the United States, and plan to return home on completion of studies. The principal factor analysis performed in the previous study (Chen, 2020) identified two underlying dimensions of students' expectations of studying in the United States: Factor 1 Intellectual Growth (alpha value = 0.971 and Factor 2 American Lifestyle (alpha value = 0.862). Based on this result, sum scores were calculated for these two dimensions as well as their corresponding perception measures. This was followed by a gap analysis on these factors and all factor items. To test the hypotheses, the study then conducted stepwise regression analysis.

### ***Characteristics of Respondents***

As reported by Chen (2020, 111), an online survey was administered to more than 200 Chinese students who were studying at a large public university in the Midwestern US between the end of February and the first week of March in 2016. The sampling was based on convenience: students whose contact information was recorded in a database by the university's Chinese Student Association were invited to take the survey. At the survey time, the university had more than 23,000 enrollments, which included around 2,000 international students who represented 118 countries. Among these international students, 500 came from mainland China. More than 80 Chinese students filled out the survey, but only 76 complete responses were usable, resulting in a response rate of 38% (Chen, 2020, p. 111).

These students, including undergraduate students, graduate students, ESL learners, and exchange students, represented 34 majors. The average age of the respondents was 24.61. Most of the students were fully or partially funded by their families, with the rest funded by different sources including scholarships and self. There were more female than male respondents. All the respondents had been in the United States at least 6 months; the average duration of study in the country was 40 months; the maximum was 106 months, indicating that some of the respondents might have completed their high school education in the United States. More than 57% of them expressed “not sure” if they would return to China after completing their studies. Most of the respondents came from large cities in China, such as Beijing (the capital city of China), Shenzhen (an economic special district in southern China), Guangzhou (the capital city of Guangdong province), Wuhan (the capital city of Hubei province), and Jinan (the capital city of Shandong province).

This study analyzed the difficulties that the respondents identified while studying in the US and their coping strategies. More than 66% of them identified “language barrier” as a challenge, 48% identified “cultural barrier,” more than 42% identified “academic difficulty,” and approximately 41% identified “high living cost.” When asking for coping strategies, as many as 70% of the respondents said they would turn to their Chinese friends studying at the same university; 40% would ask their Chinese friends studying at other universities in the United States for help; about 32% would go to their academic professors; and 30% mentioned getting assistance from their American friends. Only about 35% of the respondents had used different kinds of assistance provided by the host university’s Student Services Office, while more than 9% said they did not ask for help at all. The overall satisfaction level with the host university was 4.74 on a 7-point Likert scale, where “7” refers to “very satisfied,” and “1” refers to “not satisfied at all.” Table 1 displays the details.

**Table 1. Challenges, Coping Strategies, and Overall Satisfaction (n = 75)**

<u>Challenges</u>	<u>Frequency</u>	<u>Valid Percent</u>
Language barrier	50	66.76
Cultural barrier	36	48.00
Academic difficulty	32	42.67
High living cost	31	41.33
Time management	19	25.33
Discrimination	13	17.33
Safety	8	10.67
Sexual harassment	3	4.00
<b><u>Coping Strategies</u></b>		
My Chinese friend(s) studying at the same university	53	70.67
My Chinese friend(s) studying at other universities	30	40.00
Academic professor(s)	24	32.00
My American friends	23	30.67
Academic adviser(s) in Student Services	19	25.33
Do not ask for help	7	9.33
Psychologists provided by Student Services	5	6.67
Counselors provided by Student Services	2	2.67
<b><u>Satisfaction with the Host University</u></b>	4.74 (on a 7-point Likert scale, as “7” refers to “very satisfied” and “1” refers to “not satisfied at all.”)	

### ***GAP Analysis***

Built on the PFA results performed by Chen (2020, p. 111), this study then identified the discrepancy, or gap, between the respondents' expectations and perceptions, the mean score of each measure and the sum score of each factor was calculated. The difference (i.e., gap) between each factor's expectation rating and its correspondent perception rating was calculated by simply subtracting the expectation score from the perception score. Finally, paired samples t-test was conducted on each pair of measures (perception-expectation) to identify the significant mean difference. The results were shown in Table 2. Seven out of eight gaps in Factor 1 Intellectual Growth and the factor gap were significant. In Factor 2 American Lifestyle, none of the gaps was significant.

**Table 2.** Gaps between Perceptions and Expectations (n = 76)

Factor/Measure	Expectation	Perception	Gap*	t	Sig.**
<b><i>Factor 1 Intellectual Growth</i></b>					
<b><i>(Factor summative score)</i></b>	<b>5.78</b>	<b>5.35</b>	<b>- 0.43<sup>1</sup></b>	<b>3.82</b>	<b>0.00</b>
1. to broaden my mind and horizon	5.80	5.41	- 0.39	2.24	0.02
2. to learn about different cultures and customs	5.93	5.41	- 0.52	2.19	0.03
3. to enrich life experience	5.92	5.51	- 0.41	2.07	0.00
4. to challenge and develop myself	5.85	5.57	- 0.28		0.00
5. to prepare myself for the competitive future job market	5.77	4.95	- 0.82	5.08	0.00
6. to learn advanced knowledge and technology	5.71	5.28	- 0.32	2.69	0.00
7. to fulfill my curiosity about different lifestyles	5.70	5.38	- 0.32	1.80	0.00
8. to learn English	5.81	5.47	- 0.34	1.89	0.63
<b><i>Factor 2 American Lifestyle</i></b>					
<b><i>(Factor summative score)</i></b>	<b>5.04</b>	<b>4.96</b>	<b>- 0.08<sup>2</sup></b>	<b>0.50</b>	<b>0.56</b>
9. to meet handsome guys/beautiful girls	4.92	4.74	- 0.18	0.78	0.56
10. to have freedom	5.26	5.43	0.17	- 1.12	0.26
11. to have the possibility of living permanently in the USA	5.01	4.73	- 0.28	1.70	0.25

**Note:** \*Perception mean score – expectation mean score; \*\*two-tailed testing.

### ***Regression Analysis***

To test the hypotheses, a regression analysis and MANOVA were performed between the respondents' overall satisfaction (i.e., dependent variable) and its possible influencers (i.e., independent variables). However, during the checkup for possible assumption violation, collinearity was revealed between Gap 1 and Gap 2. The correlation test confirmed this observation. As shown in Figure 1, Gap 1 Intellectual Growth significantly correlated with Gap 2 American Lifestyle with a standardized coefficient value of 0.64 ( $p < 0.000$ ). To fix this issue, simple linear regression analysis was performed between satisfaction (i.e., dependent variable) and each gap (i.e., independent variable). This process revealed that Gap 1 was neither significantly nor directly correlated with satisfaction, and thus was not included in the following statistical analyses.

**Figure 1.** Correlation Between Gap 1 Intellectual Growth and Gap 2 American Lifestyle

$$Y = 0.64X$$

Where:

Y = Gap 2: difference between perceived and expected American Lifestyle.

X = Gap 1: Intellectual Growth ( $F = 49$ ,  $df = 1$ ,  $p = 0.000$ ,  $R\text{-square} = 0.40$ )

A multiple regression analysis was then performed between satisfaction and Gap 2, age, and length of living. The stepwise method was used to enter all the independent variables. The model summary showed a significant F value with 95% confidence ( $F = 4.61$ ,  $df = 73$ ,  $p = 0.03$ ,  $R\text{-square} = 0.14$ ). During the analytical process, age was excluded by the system. Both Gap 2 American Lifestyle and length of living were found to be significantly related to the dependent variable with 95% confidence. Figure 2 summarizes these relationships as expressed by standardized coefficients betas.

**Figure 2.** Significant Influencers of Overall Satisfaction

$$Y = 0.28X_1 - 0.23X_2$$

Where:

Y = Overall satisfaction with the host university

$X_1$  = Gap 2 American Lifestyle ( $p = 0.013$ )

$X_2$  = Length of living in the United States before the survey ( $p = 0.035$ )

To identify other possible influencers of the respondents' satisfaction, basic variables, as shown in Table 1, were examined. All these variables were recoded into nominal data. Specifically, "gender" was coded as male ("1") and female ("2"); "academic status" was regrouped into 2 groups: undergraduate students ("1") and graduate students ("2"); "funding sources" were grouped into 2 groups: fully funded by my family ("1") and others ("2"); and "return plan" was categorized into "have a certain plan ("1")" and "uncertain about what to do ("2"). Then, MANOVA statistics were conducted between these independent variables and two dependent variables: satisfaction and Gap 2. No significant relationship was identified by the process.

## Conclusions

### *Implications*

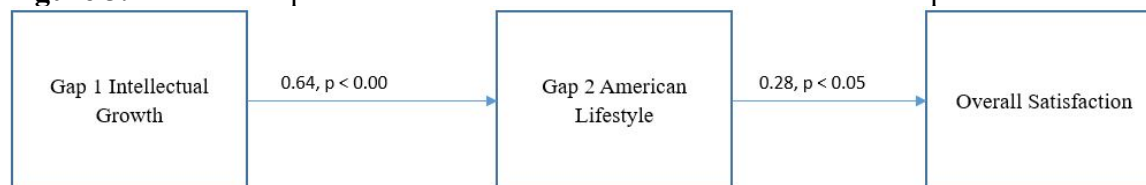
The gap analysis revealed many negative gaps between the students' perceptions and expectations. Gap 1 Intellectual Growth and Gap 2 American Lifestyle are significantly related, but Gap 1 is not significantly correlated to satisfaction. The regression analysis partially supported both hypotheses, i.e., Gap 2 and length of living significantly influence satisfaction. Participating students' basic information, i.e., age, gender, academic level, funding source, and future plan, is not found to significantly influence their satisfaction. The following text discusses the implications of these key findings, this study's contributions, limitations, and future studies.

As shown in Table 4, 10 out of 11 gaps were negative, with a mean difference ranging from 0.81 to -0.04. Based on the disconfirmation paradigm, these negative signs indicated that the respondents' expectations of their host university were not met by their actual experiences in these areas. The paired samples t-test further revealed that 7 of the 11 gaps were significant with a confidence level of 95%. All these significant measures fell into Factor Gap 1 Intellectual Growth, the summated scales of which were also significantly and negatively different. These indicated that the respondents were not satisfied with the host university because their intellectual growth experience fell short of what they expected. The other dimension, or Factor Gap 2, was found to be insignificant, meaning that the respondents were not very dissatisfied with the host university in terms of living an American lifestyle. These test results looked consistent with the mean score of the respondents' overall satisfaction with their host university, which was 4.74 on a 7-point Likert scale, with "5" being "somewhat satisfied."

This implies that the host university needs to work on improving Chinese students' intellectual growth experience, which includes areas such as new knowledge, different cultures and customs, campus life, career opportunities, new technology, and innovative activities. Although the Chinese students' perceived American lifestyle fell short of their expectations, they seemed to be relatively content with these issues, including meeting good-looking people, having freedom, and the possibility to live permanently in the host country.

The hypothesis testing identified a positive and significant relationship between the respondents' overall satisfaction and Gap 2 American Lifestyle. This seems to imply that the more the Chinese students adapted to the American lifestyle, the more satisfied they could be with the host university. Gap 1 Intellectual Growth does not have a significant and direct relationship with overall satisfaction. However, the study revealed that Gap 1 Intellectual Growth had a significant and positive relationship with Gap 2 American Lifestyle. This seemed to indicate a mediating effect of Gap 2 between overall satisfaction and Gap 1, as shown in Figure 3.

**Figure 3.** Relationships Between Students' Overall Satisfaction and Gaps



This could be interpreted as: the more intellectual growth the Chinese students obtained, the more they felt adapted to the American lifestyle and the more satisfied they were with the host university. This makes sense since the Intellectual Growth scale included a student's language ability, intercultural competence, personal growth, and knowledge advancement, which were prerequisites for the student to better enjoy the American lifestyle.

The hypothesis testing found a negative but significant relationship between the respondents' overall satisfaction and their length of time spent living in the United States. This seemed to indicate that the longer a student lived and studied in the host country, the less satisfied they were with their host university. This finding looked like a puzzle since it was against common sense: the longer a person lives in a different culture, the better the person adapts to the culture, and it is more likely the person will get used to or might enjoy the host country's lifestyle. Since the correlation between lifestyle and length was low and insignificant, this seemed to imply that other factors might moderate the relationship between a student's length of stay in the host country and their overall satisfaction with the host university. Relating this to the political and social environment in the United States, it makes sense: the frequent mass gun shootings across the country, the racial discrimination, and the surging reports on anti-Asian hate and violence might provide explain this finding.

The survey showed that the top three most frequently cited challenges for Chinese students were language barrier, cultural barrier, and high living cost. Interestingly but somewhat predictably, the first person that a Chinese student would turn to when encountering difficulties was a Chinese friend. These challenges and coping strategies seemed to explain one another. The assistance resources provided by the host university were only used by approximately one-third of the Chinese students on campus. This seemed to be a natural phenomenon: when students could not communicate well in English and lacked intercultural competence, they tended to use resources they felt comfortable with. Maybe the host university could staff offices such as Student Affairs with bilingual employees or volunteers who could master both Chinese and English languages and cultures, to encourage Chinese students to use these university services.

To help Chinese students overcome intercultural issues, the host university could conduct events that promote networking between international and domestic students. For instance, community service activities were great opportunities for Chinese students to understand and interact with local residents. Incentives could be used to encourage domestic students to help their peer students from other countries. Workshops that focus on American customs and cultures could be offered to international students on a regular basis. The study showed that Chinese students frequently traveled away from their host university during the semester. The host university could help design and organize out-of-town sightseeing or vacations for international students with the purpose of enhancing their intercultural competence and English-speaking skills.

### ***Contributions***

These findings revealed the academic and personal growth needs of Chinese students studying in the United States and have implications for both student service and marketing practices of higher education institutions. First, they imply that the surveyed host universities have much work to do in terms of serving their international students from the Chinese market. Apparently, Chinese students did not just want to learn knowledge, but also sought personal growth and development. They wanted to improve their English, intercultural competence, and life experience while learning

new knowledge and technology. A host university should re-examine its ways of engaging and interacting with Chinese students on US campuses and in the communities. This is critical for higher education institutions that want to continue pursuing the Chinese market as they emerge from the pandemic in a period of policy change in international higher education.

Second, this study's findings provide significant insights on international education marketing. Many current promotion and recruitment messages geared toward international students tend to emphasize the academic environment of an American university. In fact, this study revealed that "the American lifestyle" significantly and directly influenced Chinese students' overall satisfaction level with their host university. Education marketers could design their promotional messages to highlight how Chinese students can enjoy their "American lifestyle" on an American campus.

In addition, this study extends the literature of marketization of higher education. The expectation-perception scale in this survey of this offers an alternative theoretical framework in understanding international student satisfaction. Besides, the "expectation" side of the scale gives a valuable first insight into the desired outcomes of Chinese students who want to seek an American college degree. Although this scale was developed out of and designed for the Chinese market, it could be used and adapted as a global framework to understand other international student markets.

### ***Limitations and Future Studies***

Nevertheless, this study is exploratory in nature and therefore has several limitations that are worthy of readers' attention. The expectation instrument, developed by Chen (2020), was obtained through interviewing a group of high school students who were not the participants of the study survey and it was subject to validity testing. The sampling frame for the empirical data collection was incomplete directories of Chinese students provided by the Chinese student association in each surveyed university, which contained only students who chose to be part of this student organization. Due to a low response rate, the sample size for the data analysis was quite small, which limited the use of multivariate statistical analysis. Another limitation is the age of the data, which were collected in 2016. These call for a larger-scale study in the immediate future to include Chinese students from other universities so that the expectation-perception scale's validity and generalizability can be tested; the mediating effect of Gap 2 American Lifestyle on students' overall satisfaction and Gap 1 Intellectual Growth can be verified; multivariate data analyses can be performed to reveal more meaningful relationships such as a comparison of student satisfaction among all surveyed universities; and a comparison can be made to see if Chinese international students' expectations, perceptions, and overall satisfactions have changed over the years, particularly in the aftermath of COVID-19. Studies that investigate "other factors" that could influence Chinese students' overall satisfaction would also be worthwhile.

The future large-scale study should include not only Chinese international students, but other significantly large international student populations as well. However, at this point, a key question for international higher education is whether they will return to business as usual, or if the COVID-19 pandemic provides opportunities to re-examine ways of engaging international students on US campuses, which ultimately impact student experience and future marketing strategies undertaken by these institutions.



## References

- Anderson, R.E. (1973). Consumer dissatisfaction: the effect of disconfirmed expectancy on perceived product performance. *Journal of Marketing Research*, 10(February). 38-44.
- Barta, P., Chen, T., Jon, D., McEnancy, C., & Fuller, A. (2019). How international students are changing U.S. colleges. *The Wall Street Journal*. Retrieved from <http://graphics.wsj.com/international-students/>
- Bevis, T. B. (2002). At a glance: international students in the United States. *International Educator*, 11(3).12-17.
- Brown, S. W., & Swartz, T. A. (1989). A gap analysis of professional service quality. *Journal of Marketing*, 53(2). 92-98.
- Chen, S. (2020). Understanding the evolving roles of education tourism in China. *Athens Journal of Tourism*, 7(2). 100-116.
- Glaser, B., and Strauss, A. (1967). *The Discovery of Grounded Theory*. Chicago: Aldine.
- Hemsley-Brown, J., and I. Oplatka. 2006. Universities in a competitive global marketplace: A systematic review of the literature on higher education marketing. *International Journal of Public Sector Management*, 19 (4). 316–38.
- Fuller, E. (2017). China is now the world's largest source of outbound hotel investment. *Forbes*, Mar 27 (Business).
- Harrison, P. (2002). Educational exchange for international understanding. *International Educator*, 11(4). 2-4.
- Huang, Y. (2012). Transitioning challenges faced by Chinese graduate students. *Adult Learning*, 23(3). 138-147.
- Kotler, P.T., Bowen, J. T., & Makens, J. (2014). *Marketing for Hospitality and Tourism*, 6th Edition. Pearson. ISBN-13: 9780132784023.
- Krislov, M. (2021). International students are coming back to the US and we can't wait to welcome them back. *Forbes*, March 24. Retrieve from <https://www.forbes.com/sites/marvinkrislov/2021/03/24/international-students-are-coming-back-to-the-us-and-we-cant-wait-to-welcome-them-back/?sh=66dff2c97f6c>
- Liu, L.; Vogel, L. R., & MacLeod, J. (2016). Mitigating transitional challenges of Chinese students in U.S. higher education. *Higher Education Studies*, 6(3). 100-113.
- Magnier, M., & Bases, D. (2019). US universities brace for decline in Chinese students after Beijing warning. *South China Morning Post*. June 04. 2019. Retrieved from <https://www.scmp.com/news/china/diplomacy/article/3012997/us-universities-brace-decline-chinese-students-after-beijing>
- Mano, H., & Oliver, R.L. (1993). Assessing the dimensionality and structure of the consumption experience: Evaluation, feeling, and satisfaction. *Journal of Consumer Research*, 20(3), 451–466.
- McIllroy, J., & B. Spencer. 1988. University adult education in crisis. Leeds: Leeds Studies in Adult and Continuing Education. Cited in P. Smith (1989/1997), *Marketing adult education: An ideological dilemma?* Retrieved from <http://www.leeds.ac.uk/educol/documents/0000278998.htm>.
- Newman, S., & Jahdib, K. (2009). Marketisation of education: marketing, rhetoric and reality. *Journal of Further and Higher Education*, 33(1). 1–11.
- Oliver, R.L. (1980). A cognitive model of the antecedents and consequences of satisfaction decisions. *Journal of Marketing Research*, 17 (November). 460-69.
- Oliver, R. L., & DeSarbo, W. S. (1988). Response determinants in satisfaction judgments. *Journal of Consumer Research*, 14(4), 495–507.
- Paliawadana, D., and G. Holmes. 1999. Modelling module evaluation in marketing education. *Quality Assurance in Education* 7 (1). 41–46.
- Parasuraman, A., Zeithaml, V. A., and Berry, L.L. (1985). A conceptual model of service quality and its implications for future research. *Journal of Marketing*, 49 (Fall). 41-50.
- Saleh, F., & Ryan, C. (1991). Analyzing service quality in the hospitality industry using the SERVQUAL model. *The Service Industries Journal*, 11(3). 324-343.
- Santania, F. d. O., Ladeirab W. J., Sampaio, C. H., & Costab, G. d. S. (2017). Student satisfaction in higher education: a meta-analytic study. *Journal of Marketing for Higher Education*, 27(1). 1–18.
- Shepardson, D. (2021). U.S. eases COVID-19 restrictions on Chinese students. *Reuters*, April 27, 2021. Retrieved from <https://www.reuters.com/world/china/exclusive-us-ease-travel-restrictions-chinese-students-sources-2021-04-27/>
- Shuo, Z. (2018). US still top choice for Chinese students. *China Daily*, May 18. Retrieved from [www.chinadaily.com.cn/a/201805/18/WS5afe28b8a3103f6866ee92a4.html](http://www.chinadaily.com.cn/a/201805/18/WS5afe28b8a3103f6866ee92a4.html)
- Smith, P. (1989/1997). *Marketing adult education: An ideological dilemma?* Retrieved from <http://www.leeds.ac.uk/educol/documents/0000278998.htm>

- Smith, R. A., & Khawaja, N. G. (2011). A review of the acculturation experiences of international students. *International Journal of Intercultural Relations*, 35(6), 699-713.
- Strauss, A. and Corbin, L (1990). *Basics of Grounded Theory Methods*. Beverly Hills, CA.: Sage.
- Thompson, D. A., & Yarnold, P. R. (1995). Relating patient satisfaction to waiting time perceptions and expectations: The disconfirmation paradigm. *Academic Emergency Medicine*, 2, 1057- 1062.
- Yan, K. and Berliner, D. C., (2011). Chinese international students in the United States: demographic trends, motivations, acculturation features and adjustment challenges. *Asia Pacific Education Review*, 12, 173–184.
- Zeithaml, V. A., Berry, L.L. and Parasuraman, A. (1988). Communication and control processes in the delivery of service quality. *Journal of Marketing*, 52(2), 35-48.