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Cultural Dimensions: A Comparative Analysis of Aviation Students in China and the U.S.

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Cultural Dimensions: A Comparative Analysis of Aviation Students in China and the U.S.

Cover Page Footnote

We would like to acknowledge and thank the participating administrators, faculty, research assistants and students. As the globe becomes increasingly interconnected, the study of culture is worthwhile and enlightening.

During the past three decades, Hofstede (2010) conducted extensive research pertaining to cultural dimensions in the workplace. Hofstede's first large study included data from over 70 countries. At the beginning of Hofstede's research, there were four cultural dimensions: individualism vs collectivism, masculinity vs femininity, uncertainty avoidance, and power distance. Hofstede's follow up studies included long term orientation vs short term normative orientation and indulgence vs restraint (Hofstede, 2010).

Though Hofstede was not the only researcher to investigate cultural dimensions within organizations, his research succeeded in putting cultural analyses into disciplines such as international business, psychology and aviation. Hofstede's work has been cited over 85,000 times showing its popularity and impact (Tung & Verbeke 2010). The purpose of research pertinent to cultural dimensions within organizations, is the assertion that members of different groups or cultures need to understand and cooperate with each other.

The world has become more interconnected and globalized. Aviation education and training is no exception. Students are increasingly choosing to travel abroad to receive their education. Furthermore, it is common practice for aviation organizations to send pilots to train outside their home countries. According to the Institute of International Education (2015), the number of international students in the U.S. has doubled since 2005. Currently, there are over 886,000 international students attending colleges and universities in the United States. China leads the number of international students in the U.S. with approximately 274,400 enrollments. Though there is not specific data on how many international/Chinese students are enrolled in aviation programs, there are opportunities to explore cultural dimensions within collegiate aviation. There is a large body of research that indicates cultural differences influence learning styles, acclimation and integration into classroom environments (Joy & Kolb, 2009).

This study sought to compare four cultural dimensions between Chinese and U.S. collegiate aviation students. The purpose was to provide a clearer understanding of differences and similarities. Broader implications of this study may provide aviation educators and trainers a stronger foundation for recruitment, retention, fostering a conducive learning environment, student integration and inclusivity.

The scope of the study was limited to the comparison of cultural dimensions among aviation students at two collegiate aviation programs. One in China and the other in the U.S. This study investigated four of the six cultural dimensions. The four "original" cultural dimensions were the most studied because the other two,

long-term orientation and indulgence vs restraint were added later. Additionally, the study of four cultural dimensions made the research survey more manageable. Researchers sought to investigate collegiate aviation students as a whole instead of separate units such as pilots, maintenance or management. The review of literature explores the concepts of cultural dimensions, validation of methods, studies which investigated university populations and aviation professionals.

Literature Review

According to Helmreich and Merritt (2001), culture may be found at the individual, professional, organizational and national level. Hofstede (2001) asserts national culture is a cooperative influencing of the mind; it has a large effect on the daily life of a society and is displayed in a society's values and rituals. National culture has been measured using four dimensions: power distance, uncertainty avoidance, masculinity vs. femininity, and individualism vs. collectivism (Hofstede, 2001).

Power Distance

According to Hofstede (2001), power distance is a measure of the interpersonal power or influence between a superior and subordinate. The most prominent issue related to power distance is the disparity between equality, which may occur in such areas as social status, respect, prosperity, power, physical and mental characteristics. Powerful individuals typically look to increase their power distance, while less powerful people tend to decrease the power distance between themselves and more powerful person (Hofstede, 2001).

Power distance does not always have to be examined from a disparaging viewpoint. For example, an unequal distribution of power over members in a work environment can be the essence of a successful organization. Inequality may be essential for maintaining control and mitigating disorder. Power distance can be viewed as a continuum with low power on one end and high power on the other (Hofstede, 2001).

Uncertainty Avoidance

A common fear shared among humans is uncertainty about the future. Extreme uncertainty creates anxiousness. Over time, societies have established ways to manage the uncertainty of living (Cyert and March, 1963). All societies cope with uncertainty through the realms of technology, law, and religion. However, each society has their own unique way of using each of the domains. The

ways of coping with uncertainty belong to the cultural heritages of societies. These ways of thinking and living are transferred from generation to generation. Hofstede (2001) stated, “in the same way human societies at large use technology, law, and religion to cope with uncertainty, organizations use technology, rules, and rituals” (p. 147).

Masculinity vs. Femininity

According to Hofstede (1998) the main issue that arises from the masculinity vs. femininity debate, is how genders influence social roles. Hofstede asserted gender roles were at the core of cultural norms. In all societies, the major biological differences between males and females not related to the topic of procreation are statistical and not absolute. For example, men are usually taller and stronger than females; however this is not always the case. Hofstede inferred that differences between males and females such as physical characteristics may contribute to a society’s views on the roles that each gender is expected to hold in daily life. Differences between what is perceived as masculine and feminine are based on societal decisions that are a result of norms, values, and traditions (Hofstede, 1998).

Individualism vs. Collectivism

The last dimension for review is individualism vs. collectivism. Some societies promote individualism and reward it, while some societies feel it should be avoided. This dimension examines the importance or lack of importance of the individual in a society. Research has indicated an individual’s decisions, feelings, and levels of motivation may differ depending upon which orientation a person’s society chooses to accept (Brewer & Venaik, 2011).

Individualism is when people generally favor independence whereas collectivism favors the well-being of the group. The United States is categorized as an individualistic country. This is reflected by the choice of capitalism. In the East, nations believed individualism was a negative attribute. According to Hofstede (2001), “Mao Zedong believed individualism was evil and believed that individualism and liberalism promoted selfishness and aversion to discipline” (p. 211). Therefore, the promotion of collective behaviors was adopted.

Examining Cultural Dimensions at Universities

Naumov and Puffer (2000) investigated Hofstede’s cultural dimensions based on responses by 250 Russian university students. A twenty-nine item

questionnaire was used to measure uncertainty avoidance, individualism-collectivism, power distance and masculinity-femininity. Each question had a five-point response scale and the responses were averaged for each cultural dimension. The responses were then converted to the 100-point scale used by Hofstede.

Results suggested Russian university students demonstrated a moderate level of individualism, masculinity and power distance. However, results indicated a high level of uncertainty avoidance. The results showed both similarities and differences when compared to earlier small scale studies. Researchers indicated age might have influenced the differences. The younger generation indicated higher levels of masculinity. Researchers attributed this difference to political climate. The younger generation had not lived through the collectivist ideology of the former communist regime. The younger generation showed results that converged toward those of developed western nations (Naumov & Puffer, 2000).

Wu (2006) conducted research regarding the differences in cultural dimensions between employees at universities in Taiwan and the United States. This research used a pilot study to ensure the scales were reliable. The formal instrument used in the study consisted of a self-administered quantitative survey. In this study, 156 surveys were collected from Taiwan and 147 surveys were collected from the United States. Findings suggested that culture in Taiwan reflected a medium/high power distance, whereas the United States reflected a medium/low power distance culture. Both groups showed high uncertainty avoidance scores. Hofstede's original study showed both countries as low/medium in regards to uncertainty avoidance. Wu noted the masculinity-femininity scores in his study contradicted Hofstede's result that Taiwan was a medium/low and United States scored a medium/high. In Wu's study, Taiwan scored a medium score while the United States scored very low. Results indicated Taiwan still had a high collectivism score but the United States score increased from Hofstede's original work.

Identifying Cultural Dimensions in Aerospace/Aviation Professionals

According to Sandal and Manzey (2009), the European Space Agency (ESA) sought to examine cultural dimensions among employees that represented fifteen nations. The purpose of the study was to increase collaboration efforts. A research questionnaire was distributed and collected. Seven hundred and thirty-six valid surveys were collected. Findings indicated power distance was low for all participating nationalities except for the French. This result led to recommendations for training employees on how to mitigate the challenges of multi-cultural space operations.

According to Vermeulen, Schaap, Mitchell and Kristovics (2009), several researchers have documented various stereotypes and prejudgments regarding female aviators' abilities. The researchers created an instrument using cultural dimensions. The purpose of the study was to validate cultural dimension measures. A total of 1800 questionnaires were distributed to South African and Australian pilots. One thousand six hundred and eighty valid questionnaires were returned. A statistical analysis was performed and results indicated a non-culturally biased measurement. The results of the gender perceptions were not reported.

Identifying Cultural Dimensions in Aviation Students

Few empirical research reports were found regarding Hofstede's cultural dimensions with collegiate aviation students. The purpose of this research project was to identify and compare cultural dimensions of aviation students in China and U.S. One aviation program was selected in each country. Four cultural dimensions were investigated, power distance, masculinity vs. femininity, uncertainty and individualism vs. collectivism. In order to compare the cultural dimensions of Chinese and U.S. collegiate aviation students, the following research question was addressed: How do the four cultural dimensions compare between Chinese and American aviation students?

Method

Research Instrument

The research instrument used in this study consisted of a mixed methods questionnaire. Twenty Likert scale items based on Hofstede's cultural dimensions model were used. Each dimension had five items. Research items were derived from a cultural dimensions study conducted by Wu (2006). Analysis of the survey indicated a Cronbach's alpha of .6 or higher for each section.

Respondents were given the option to rate items: 1="Strongly disagree", 2="Disagree", 3="Neutral", 4="Agree" 5="Strongly Agree". Two open-ended questions were placed at the end of the survey to further investigate uncertainty avoidance and masculinity vs. femininity. Researchers of this study chose the additional open ended questions for the mentioned dimensions because of the cyclical nature of aviation and unequal distribution of genders in some sectors. For example, commercial aviation is intricately connected to the economy. Therefore, it is susceptible to expanding and contracting during economic cycles. In regards to gender roles, the Federal Aviation Administration (2015), estimates six percent of active pilots in the U.S are female. This imbalance is typical in China and other

sectors of aviation. Additionally, the questionnaire asked participants for demographic information: age, gender, nationality, major/position and education level.

The surveys were created in English then translated into Mandarin by a native-speaking Mandarin source. A Mandarin speaking professor confirmed the translation. Once the translation process was completed, Institutional Review Board approval was obtained from the university in the U.S. Permission was granted to conduct research by an administrator at the Chinese aviation program.

A convenience sampling method was employed. Participants were recruited by email or notified during class. Participants from each country were functionally similar. The participants were aviation students with majors in Air Traffic Control, Aviation Maintenance, Professional Flight, Aeronautical Engineering Technology and other aviation related areas. Questionnaires were distributed at the U.S. aviation program electronically using a survey program. Paper questionnaires were distributed at the Chinese aviation university. They were then collected and entered into the survey software by a research assistant. Data collection was conducted at both locations between May 2013 and June 2013.

Statistical software indicated a total sample size of 52 participants would be needed to detect an estimated large effect ($d = .80$) with 95% confidence using an independent t test at $p = .05$ with power $(1 - \beta) = .80$. A total sample size of 128 would be needed to detect an estimated medium effect ($d = .50$) with $p = .05$ with power $(1 - \beta) = .80$. Cohen (1992) defines large and medium effects as .80 and .50 respectively.

Results

Quantitative Results

Sixty-one valid surveys were collected from participants in the U.S. and used for analysis ($n = 61$). One hundred and twenty-seven participants from the university in China completed all of the survey questions ($n = 127$). Table 1 shows the survey completion numerical values.

Fifty (81%) participants from the U.S were undergraduate students while 11 (19%) were graduate students. All of the participants in China were undergrads. Forty-eight (78%) of the participants from the U.S. were male while 13 (21%) were female. Seventy-three (57%) of the participants from the university in China were male while 54 (42%) were female.

Table 1
Survey Completion Rate

| | Chinese Students | U.S. Students |
|-------------------|------------------|---------------|
| Surveys Started | 155 | 73 |
| Surveys Completed | 127 | 61 |
| Percent Completed | 82% | 83.6% |

Note. Percentages are approximate.

Thirty-three (54%) of the participants in the U.S. were in the age range of 18-21 years old while 94 (74%) of the participants in China were in the same age range. Twenty-one (34%) of the U.S. participants were in the age range of 22-25 while 33 (26%) were from China. Two (3%) of respondents from the U.S. were between the ages of 26-29 years. There were no responses from China in this age range. Five (8%) participants from the U.S. were 30 or older. There were no participants from the Chinese university 30 or older

Responses were collected from a variety of aviation related majors. Majors from the U.S. included: 16 (26%) from Professional Flight Technology, 15 (25%) from Aeronautical Engineering Technology, three (4%) from Air Traffic Control, 25 (42%) from Aviation Management, and two 3% from other. Responses from the Chinese university included: 27 (21%) from Professional Flight Technology, 18 (14%) from Aeronautical Engineering Technology, 11 (9%) from Air Traffic Control, 34 (27%) from Aviation Management, and 37 29% from other. Demographic information is shown in table 2.

Each cultural dimension section had five questions. The means were calculated for each section. To determine if a significant difference exists between the mean scores of the two groups an independent *t* test was conducted. An independent *t* test has three assumptions: independence, normality and homogeneity of variance. The assumption of independence was confirmed during the research design phase. Participant responses did not influence each other therefore independence was assumed. According to Roberts and Russo (1999), the central limit theorem states a sample is most likely to be similar to a normal distribution. As a general rule of thumb the sample size should be at least thirty.

A Levene's test of homogeneity of variances revealed that not all of the measured dimensions indicated homogenous variance. The independent *t*-test accounts for unequal samples sizes and *p*-values were selected accordingly.

Table 2
Demographic Numerical Values.

| | | Chinese Students n=127 | U.S. Students n=61 |
|-------------------|-------------------------------------|---------------------------|-----------------------|
| Gender | Male | 73 (57%) | 48 (78%) |
| | Female | 54 (42%) | 13 (21%) |
| Educational Level | Undergraduate | 127 (100%) | 50 (81%) |
| | Graduate | 0 (0%) | 11(19%) |
| Age Group | 18-21 | 94 (74%) | 33 (54%) |
| | 22-25 | 33 (26%) | 21 (34%) |
| | 26-29 | 0 (0%) | 2 (3%) |
| | >30 | 0 (0%) | 5 (8%) |
| Major | Professional Flight | 27 (21%) | 16 (26%) |
| | Aeronautical Engineering Technology | 18 (14%) | 15 (25%) |
| | Air Traffic Control | 11(9%) | 3 (4%) |
| | Aviation Management | 34 (27%) | 25 (41%) |
| | Other | 37 (29%) | 2 (3%) |

Note. Percentages are approximate values.

Researchers conducted a Post hoc power analysis for each independent t test. The achieved power ($1 - \beta$ error probability) for the dimension power distance was calculated to be .68. The achieved power for masculinity vs femininity was .70. Uncertainty avoidance had a power of .24. Individualism vs collectivism had a power of .71. The alpha level used for all of the post hoc power analyses was $\alpha = .05$. Limitations of *post hoc* power analysis include a larger standard error when results are significant, especially with small sample sizes (Levine & Ensom, 2001). Table 3 lists the group statistics for U.S. students and Chinese students. These statistics include: sample size, mean, standard deviation and standard error mean. Power is also included.

Figure 1 provides the means in a bar graph to indicate which groups scored higher or lower. In regards to the independent t test, researchers used an alpha level of $p < .05$ for all tests. Table 4 indicates significant differences for power distance, masculinity vs. femininity, and individualism vs. collectivism. Uncertainty avoidance did not indicate a significant difference.

Table 3
Group Statistics

| | Sample Population | <i>n</i> | Mean | Std. Deviation | Std. Error Mean | Power (1- err prob) |
|-----|-------------------|----------|-------|----------------|-----------------|---------------------|
| PD | U.S. Students | 61 | 3.239 | .3792 | .0485 | .68 |
| | Chinese Students | 127 | 3.101 | .3417 | .0303 | |
| MAS | U.S. Students | 61 | 2.561 | .8747 | .1120 | .70 |
| | Chinese Students | 127 | 2.865 | .6784 | .0602 | |
| UA | U.S. Students | 61 | 3.525 | .6079 | .0778 | .24 |
| | Chinese Students | 127 | 3.641 | .5476 | .0486 | |
| IDV | U.S. Students | 61 | 3.157 | .5957 | .0763 | .71 |
| | Chinese Students | 127 | 3.367 | .4651 | .0413 | |

Note. PD=power distance, MAS=masculinity/femininity, UA=uncertainty avoidance, IDV=individualism/collectivism. For power calculation $\alpha = .05$,

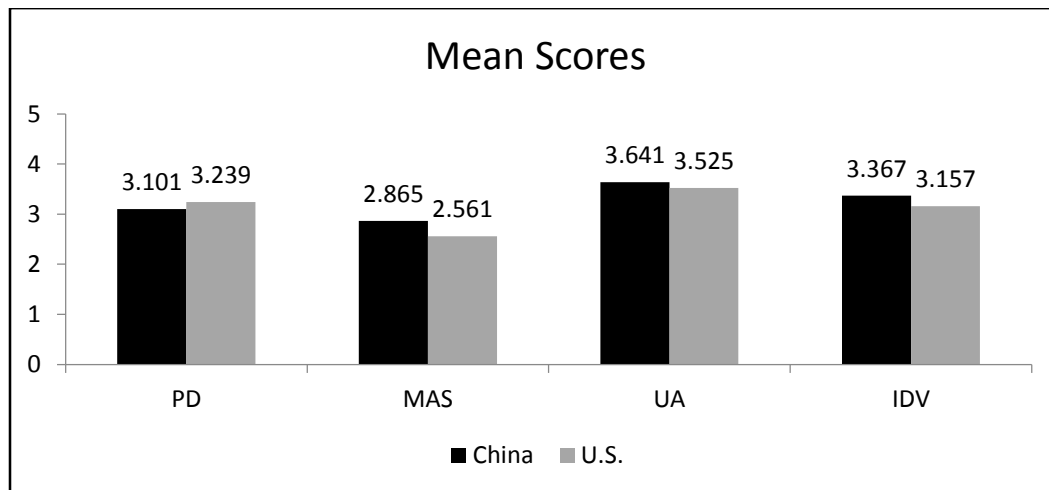


Figure 1. Comparison of cultural dimensions means from Chinese and U.S aviation students.

Table 4
Levene's Test for Equality of Variances and t-test for Equality of Means

| | | <i>F</i> | <i>Sig.</i> | <i>t</i> | <i>Df</i> | <i>Sig.</i> (2-tailed) | 95% <i>CI</i> | |
|-----|------|----------|-------------|----------|-----------|------------------------|---------------|--------|
| | | | | | | | Lower | Upper |
| PD | EVA | .562 | .454 | 2.511 | 186 | .013* | .0297 | .2474 |
| | EVNA | | | 2.421 | 108.104 | .017 | .0251 | .2520 |
| MAS | EVA | 5.950 | .016 | 2.610 | 186 | .010 | -.5336 | -.0742 |
| | EVNA | | | -2.390 | 95.870 | .019* | -.5563 | -.0515 |
| UA | EVA | 1.211 | .272 | -1.316 | 186 | .190 | -.2908 | .0581 |
| | EVNA | | | -1.268 | 108.071 | .208 | -.2982 | .0655 |
| IDV | EVA | 7.885 | .006 | -2.633 | 186 | .009 | -.3666 | -.0525 |
| | EVNA | | | -2.416 | 96.357 | .018* | -.3817 | -.0374 |

Note. *F*=*f*-test, *Sig*=significance, *df*=degrees of freedom, *CI*=confidence interval, *PD*=power distance, *MAS*=masculinity/femininity, *UA*=uncertainty avoidance, *IDV*=individualism/collectivism, *EVA*=equal variances assumed, *EVNA*=equal variance not assumed. *=significant at $p < .05$.

Qualitative Analysis from U.S. Participants

Two open-ended questions were included in the survey to further examine uncertainty and masculinity vs. femininity. Limiting the open-ended questions to these two dimensions was based on keeping the size of the survey manageable. Researchers coded the data separately then a subsequent analysis was conducted to reach a collective consensus. The first question was, "do you consider job stability when making career decisions?" Forty-five participants responded to this question with an associated reason. Forty-one (91%) responded with "yes" while 4 (8%) responded "no". All of the participants who indicated "no" had the same reason. They all would rather be happy with what they were doing. For example, one respondent who indicated "no" stated, "I am only interested in finding something I enjoy doing, even if it is something unstable." These individuals put happiness and satisfaction above stability.

In regards to the respondents who said "yes", two major emerging themes became apparent. These themes were; using an effective career decision-making process to increase quality of life and a desire to reduce worry. Using an effective career decision-making process to increase chances of success garnered the most attention. These participants thought it was important to make a sound decision

because it could be advantageous for the future of their career. A stable job could bring promotion and opportunity. A participant simply stated, “stability helps plan out the future.” Another participant stated, “I don’t want to be stuck with a company that has no future.” Some respondents connected a stable job with an improved financial situation and planning. For example, a participant stated, “I prefer to know when and where my paycheck is coming from so I can prepare for life’s changes.” It is important to note, several participants indicated they had control over their future based on the decisions they made.

A desire to reduce stress was commonly identified throughout the analysis. Participants gave an indication that an unstable career leads to stress and worry. For example, a participant stated, “without job stability I would always have a fear in the back of my mind that things might change for the worse.” Another participant stated, “moving around to multiple locations can lead to discouragement and stress.” Several participants found work stability to enhance not only themselves but commitment to family. A participant stated, “As I grow older and have a family, stability will be the largest consideration.”

For the second open-ended question, “Should gender be considered a factor when selecting aviation professionals? Why or why not?” was intended to understand masculinity vs. femininity. Fifty participants responded with an explanation. Forty-six (92%) indicated gender should not be a factor when selecting aviation professionals while four (8%) indicated gender should be a factor. The four participants who thought gender should not be factor had two reasons for such. First, women are not as strong leaders. Secondly, women and men are better at different roles. Respondents expressed these views in the following ways; “women are more weak than men” and “record stands that majority of successes in the aerospace industry has been achieved by men.” These views indicate a large gap between masculinity and femininity.

The reason for those who indicated gender should not be made a factor was almost monolithically, equality. These respondents felt men and women should be judged equally when being selected for a position within the aviation industry. There was also an emphasis on merit. These views were expressed in the following ways; “women are capable as men”, “we are equal”, “everybody should be given a fair chance based on qualifications and accomplishments.” These responses indicated a smaller gap in regards to the masculinity vs. femininity dimension.

Qualitative Results from Chinese Participants

Regarding the survey question “do you consider job stability when making career decisions”, there were 120 aviation students from China who answered this question. One hundred and one respondents (~84%) provided a positive answer, while 13 (~10%) survey participants believed that career stability should not be considered when they select a job. Six (5%) were undecided about this question.

The most frequent response to why job stability is an important factor was that career stability could guarantee a stable income and this is a necessity of life. Participants thought they could support their family and themselves by having a regular income. Another reason commented by some respondents was that career stability lays a solid foundation for a long-term career development. Respondents believed job stability would provide them the opportunity to improve their work skills and capabilities.

Comments from respondents who do not consider job stability believed a bright career prospect was more important than a stable job. A participant expressed their view by stating “what can be learned from the job and whether the vocational goal can be achieved” [translated]. In addition, several respondents viewed career interests as the most important factor when making career choices. They thought a person should find a job she or he has passion for.

One hundred and twenty responses were received from Chinese aviation students for the question “Should gender be considered as a factor when selecting aviation professionals? Why or why not?” Fifty-five (~45%) people disagreed with that gender should be viewed as a factor when selecting aviation professionals. Sixty (~50%) respondents provided a positive answer, and five (~4%) undecided responses were received.

According to responses, there are two main reasons why gender should not be considered as a factor when selecting aviation professionals: first, the work capability should be the most important factor that decides whether a person should be hired. As long as one’s work capability can fit position needs, he or she should be equally considered; second, some respondents believed in the equality between females and males. A respondent stated, “whatever a man can achieve, a woman is equally able to achieve the same thing” [translated].

For the reasons why gender should be a consideration of aviation employee hiring, most respondents believed that in terms of physical strength, men and women are different. Men could be better fit to high-intensity and high-labor work.

For example, some respondents pointed out that compared to females, males are more suitable to be an aviation maintenance mechanics that usually performs high-labor maintenance tasks in a dirty, cold, hot, and other severe work environment.

Discussion

This research project reviewed literature based on Hofstede's cultural dimensions; power distance, individualism-collectivism, masculinity vs. femininity and uncertainty. A comparison of Chinese and United States collegiate aviation students was conducted to ascertain similarities and differences in the selected cultural dimensions. This section will discuss the similarities and differences. Furthermore, results from existent research was used to identify changes in trends and provide plausible reasons to why cultural dimensions may change.

Power Distance

The independent *t*-test revealed a significant difference between the power distance mean scores. This is surprising because the results indicated Chinese aviation students had a lower power distance mean score than the U.S. aviation students, while previous research indicated Chinese national culture had a much higher power distance than the United States. According to Hofstede (2010), the Chinese power distance score was twice as high as the United States. This suggests relationships between superiors and subordinates are more unequal. Wu (2006) argues, that societal changes including economics can shift national culture. It is also possible the relatively young age of participants may influence the comparison of previous studies.

Masculinity vs. Femininity

Results of the masculinity vs. femininity independent *t*-test indicated a significant difference. Chinese aviation students indicated a larger gap between the equality of men and women. This result is consistent with previous research (Hofstede, 1984; Hofstede, 2006; Wu, 2006). According to Hofstede (2010), dominant traits such as competition, leadership and drive are exhibited by members of these countries. These values are thought to be ingrained in children and promoted throughout adulthood.

When analyzing the qualitative data regarding the consideration of gender when selecting aviation professionals 92% of U.S. students indicated gender should not be a factor. Respondents overwhelmingly indicated that people should be

judged on merit and performance. Chinese respondents were more willing to factor physical attributes as reason men and women should be evaluated differently.

Uncertainty Avoidance

The independent *t*-test did not indicate a significant difference between means scores of this dimension. Previous research has indicated both countries are similar (Hofstede, 2010; Wu, 2006). Qualitative data indicated similar themes. Both indicated unstable careers can lead to stress and worry. However, U.S. aviation students were more likely to express a need to sacrifice passion for stability. They were more willing to sacrifice stability and “chase” a career dream to find happiness. Fernandez, Carlson, Stepina, Nicholson (1997), suggest uncertainty is shifting in the U.S. due to political, social and economic changes over the past decade.

Individualism vs. Collectivism

The mean score for individualism vs. collectivism was significantly different. Chinese aviation student responses indicated more collective traits. In collective societies individuals generally tend to look after the group in trade for loyalty. These traits manifest themselves in hiring, promotions and favored treatment. While in individualistic societies such as the U.S., people are more concerned for themselves and their family. Individuals are expected to be self-reliant and have strong self-initiative to complete their goals. Chinese individuals indicating more collective traits are consistent with previous research (Hofstede, 1984; Hofstede, 2001; Hofstede, 2010).

Conclusion

This reasearch provides a comparison of cultural dimensions among relatively young aviation students from the United States and China. Results indicated significant differences in the dimensions: power distance, masculinity vs femininity, and individualism vs. collectivism. The uncertainty dimension did not indicate a statistical difference. These results were quite consistent with other research studies. However, results of this study indicated an inverse result in power distance when compared to other research. U.S. students indicated higher power distance than Chinese students. It is possible the age of respondents, shift in societal values, politics, and economics may influence national culture.

The qualitative results indicated the perceptions of participants were quite similar in regards to job stability. Young aspiring aviation professionals attending

these universities desire stability. Participants overwhelmingly believe job stability provides a better quality life. The ability to gain employment can satisfy the need to plan for a family and improve the quality of life. During the last decade, U.S. airlines have restructured and cut capacity. However, it seems passion for aviation may quell uncertainty with entering the industry's workforce. In China, aviation is has seen significant growth as the economy expands. This may motivate students to pursue aviation careers.

Societal influences may shape beliefs, traditions, behaviors and gender roles. The responses from China were interesting because previous research indicated Chinese tend to have a larger gap between masculinity and femininity than the U.S. The younger generation may be adopting more progressive beliefs. Research has indicated this may be caused by changing governments and economies.

Due to constrained resources, limitations of this study included a small sample size taken at two aviation programs. Majority of all responses were aged 25 or younger. It would be inappropriate to generalize the results to larger populations. Additionally, researchers employed convenient sampling. It also assumed that participants were truthful when responding to survey items. Falsifying responses could have been a possibility.

As the transfer of students globally continues to increase, study of culture among aviation students may provide deeper insight into similarities and differences. Broader implications may provide aviation educators and trainers a stronger foundation for recruitment, retention and fostering a conducive learning environment. This paper was intended to bring awareness to culture in the aviation learning environment. Further research can include a larger sample size, probability sampling and expansion to more collegiate aviation programs around the globe. Additionally, a cross sectional analysis of majors could be conducted. Furthermore, research can be conducted to explore assimilation, integration and inclusivity of international collegiate aviation students.

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