Evaluating the Long-Term Impact of a Taiwanese Study Abroad Program on Participants’ Career Choice and Professional Development in Healthcare: A Convergent Mixed Methods Study

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Abstract

A convergent, mixed methods study was used to explore the long-term impact on career choice and professional development in healthcare among Taiwan Study Abroad (TWSA) program participants between 2011 and 2015. Data were analyzed by prior study abroad and travel to Asia experience. We conducted an online survey in 2017 (n=38). Overall, 77-87% of the participants reported high impact on both career choice and professional development. Chi-square analysis showed that those who had not studied abroad before or traveled to Asia prior...
to the TWSA experience were significantly more likely to report the program had a more direct impact on their career choice. Qualitative data strongly supports the significant impact on both outcomes among all participants.

**Abstract in Chinese**

這個收斂型混合方法設計研究探討 2011 年至 2015 年間台灣留學 (TWSA) 計劃參與者的醫療保健相關職業選擇和專業發展的長期影響。數據通過之前是否有到國外學習或亞洲旅行經歷進行分析。我們在 2017 年對所有參與者進行了一項參與後的網路問卷調查 (n=38)。總體而言，77-87% 的參與者表示 (本台灣留學計劃) 對職業選擇和職業發展都有顯著性影響。卡方分析表明，那些在參與本台灣留學計劃體驗之前沒有出國留學或去過亞洲的人，有更高可能性報告該留學計劃體驗對他們的職業選擇有更直接的影響。定性 (質性) 資料分析結果也同時強烈支持本台灣留學計劃對參與者的職業選擇和專業發展都有重大影響。

**Keywords:**

Study abroad, Taiwan, Career choice, Professional development

**Introduction**

Between 2015 and 2016, over three hundred thousand students in the US alone engaged in study abroad programs across the globe (Institute of International Education [IIE], 2017), which is over six times the rate of thirty years prior (Dwyer, 2004). While some may argue that such programs are glorified vacations (Hadis, 2005), recent studies have uncovered potential longitudinal benefits these programs have on various dimensions of student’s lives, especially in career development. Literature explains that study abroad students have unique, marketable, and pragmatic skills such as cultural competency (Salisbury, Paulsen, & Pascarella, 2011), interpersonal skills, and problem-solving skills, which set them apart from candidates who do not study abroad (Anderson et al., 2015; Franklin, 2010; Hadis, 2005; Sharma et al., 2014; Tillman, 2011). Studies have found that the impact of these abroad experiences on personal and social growth have been reflected through tolerating ambiguity,
self-reflection, enhanced interest in travel, promoted empathy, independence, and self-confidence (Biraimah & Jotia, 2012; Dwyer, 2004; Hadis, 2005).

Franklin (2010) explains that there needs to be more research focused on the potential long-term benefits of study abroad programs. The problem is that most assessments of study abroad programs are conducted just after the students return home or shortly after graduation. Black and Duhon (2006) mention that efforts to properly evaluate study abroad programs have been modest and inconsistent. In addition, most of the literature on impact encompasses language enrichment, procured knowledge, and diversification of personal beliefs and attitudes (Franklin, 2010). Common themes in the literature include the tendency to work in an international capacity (Dwyer, 2004; Franklin, 2010); impact of experience on career choice (Franklin, 2010); job history, and subsequent trajectory (Paige, Fry, Stallman, Josic, & Jon (2009). These longitudinal studies are still in their early stages, and we need to look at the professional value of study abroad in a more temporal capacity.

The current study uses a convergent, mixed methods study design. The primary aim of this research is to evaluate the long-term impact of a Taiwanese study abroad experience of up to six years post program on career choice and professional development. We also aim to find out if prior study abroad and/or prior travel to Asia affects career choice and professional development. To accomplish these research objectives, we collected data from an online survey among students taken part in a Taiwan study abroad program from one large southeast public university in the US. The purpose of using a mixed methods design is largely influenced by Paige and scholars (2009), in that we find that merging the qualitative data with the quantitative data can help provide more comprehensive, detailed data on the long-term impact of the study abroad program.

**Literature Review**

Researchers have found that students are placing more of an emphasis on education abroad while planning their education trajectory (Dwyer, 2004). Today's students are more likely to have studied abroad prior to college. Even traveling internationally prior to college is positively associated with a student's desire to study abroad in the future (Pope, Sanchez, Lehnert, & Schmid, 2014). Pope et al. (2014) found that “Generation Y” college students’ influence for studying abroad was motivated by the desire for individual growth (Anderson,
Hubbard, & Lawton, 2015), prior international experience, and age. Students who study abroad are more likely to earn graduate degrees (Franklin, 2010; Paige et al., 2009) and the experience influences graduate study choice or the decision to work abroad (Dwyer, 2004; Tillman, 2011). Others propose that studying abroad will cultivate “global-mindedness” and “intercultural competencies”, which have implications for enhancing “international mobility” (Okken, Jansen, Hofman, & Coelen, 2019).

Study abroad programs have increased in popularity because of a variety of factors including improvement in the availability, accessibility, and cost associated with abroad learning (Dwyer, 2004). Instead of the year or semester long, island and foreign university focused programs, now, there are broader, shorter, and more affordable programs for students to engage in (Dwyer, 2004; Sharma et al., 2014). For instance, the Institute for the International Education of Students offers a variety of programs across many disciplines from pre-med to criminal justice (IES, 2018). Program durations vary from a semester to an entire year. Now, the cost of many programs is covered under student loans (Dwyer, 2004). Moorhead, Boetto, & Bell (2014) found that even in a two-week study abroad program to India facilitated professional growth and development for social work students.

Regardless of program duration, a small body of literature examines the potential substantial long-term benefits of study abroad (Okken et al., 2019). For example, Dwyer (2004) used the “IES Model Assessment Program (IES MAP)”, a set of guidelines for the development and assessment of study abroad programs, to identify the influence of study abroad experiences on specific behaviors, attitudes, and achievements. In 2002, a quantitative survey was given to 3,700 IES alumni who studied abroad between 1950 and 1999. Dwyer (2004) found that there were long-term influences of study abroad programs on career path, professional skills, and on the personal lives of respondents. Many participants reported getting internships, working for international, multinational organizations, overseas employment because of studying abroad. Dwyer’s (2004) study also showed that respondents continued the use of their foreign language and intercultural skills (Anderson et al., 2015; Franklin, 2010).

We also saw similar results in Paige et al.’s (2009) retrospective tracer sequential mixed methods study which included 6,391 alumni recruited from 22 U.S. universities (through two listservs, The Forum on Education Abroad and SECUSS-L) who had studied abroad between 1960 and 2005. Participants
completed an online, 56-item questionnaire, which inquired about global engagement, professional, and personal development. In order to get more detail about responses on the survey, the researchers randomly selected 63 participants (who agreed to be re-contacted) to take part in a telephone interview. Nearly 84% of participants stated that studying abroad was the most influential undergraduate experience. Over half of the participants agreed that studying abroad affected their career. Through emerging themes in the qualitative interviews, Paige also found that those who studied abroad had careers that were internationally oriented and that their experiences abroad shaped their educational choices (Paige et al., 2009).

Bomser, Gibson, & Zhang (2020) investigated the impact of three study abroad programs offered through the University of Florida to Australia, New Zealand, and Fiji between 2007 and 2019. The researchers focused on major changes and career choice through the use of a survey tool consisting of both fixed choice and open-ended questions. Results indicated that the experience had more of an impact on choice of career than a major change. However, those that associated a major change from studying abroad infer the possibility of pursuing a new career path.

Another longitudinal study of Dickinson College Alumni was conducted by Franklin (2010). Her study, like Paige et al. (2009) used mixed methods research by launching an email survey (quantitative) and conducting phone interviews (qualitative) and email follow-ups. Franklin had 52 participants complete the survey and six subjects took part in phone interviews. The researcher also conducted 15 email follow-ups to clarify discrepant information. The results were conducive to the existing literature in that almost half of respondents agreed that study abroad programs affected career choice (Dwyer, 2004, Franklin, 2010; Paige et al., 2009). Nearly 75% of respondents said they thought that they were more marketable in the workplace because of their experience (Franklin, 2010; Sharma et al., 2014; Tillman, 2011). Participants also reported being more satisfied with their jobs and more self-aware. Franklin (2010) suggested that study abroad experiences can have implications for economic returns, in that, those who study abroad earn better salaries than those who do not. Similar themes were found in Karakaş (2020) in that, a majority of the participants maintained high expectations for salary and position as a result of their study abroad experience. This study associated
greater personal capital with gained competence, skillsets, and cultivation of a “transnational identity”.

Okken et al., (2019), conducted a longitudinal study evaluating the impact of study abroad on teaching on 17 Dutch teachers. They found that studying abroad influenced professional growth and skills even twenty years after the experience. Three primary themes emerged: “study abroad and personal development”, “study abroad and professional development”, and “the application of study abroad outcomes” (Okken et al., 2019, p. 5). This study focused on the importance of reflection as a critical step of the learning process and catalyzes a deeper understanding of program outcomes.

Most recently, Oh & Nussli (2021) conducted a qualitative study of teacher candidates in the US evaluating their impact on teaching abroad in South Korea. Eight years after the experience, the four participants discussed the lasting impact the experience had on their cultural awareness and competence. This study highlights how transformative studying abroad can be by placing students into novel cultural environments.

The aims of this convergent mixed methods study will assess the impact of a study abroad program to Taiwan (up to six years post-experience) on career choice and professional development in the healthcare field. Through using this study design, largely influenced by Creswell and Clark (2018), quantitative and qualitative data were collected together through an online survey, analyzed individually, and then together. The qualitative data enhances the depth of the knowledge gained from the quantitative data and provides potential insight into any kind of discrepant information or offers additional information about the program’s long-term impact on students. A mixed methods design offers a richer source of data than what would otherwise be cultivated using either qualitative or quantitative alone. Much research on study abroad programs focus on short-term impact (Okken et al., 2019). Less studies have been conducted on the longitudinal impact of study abroad because meanings and outcomes take longer to surface, especially studies that relate to professional development. Our research aims to add to the limited literature available about the longitudinal impact studying abroad has on professional development and career choice, specifically in healthcare.
Theoretical Framework

Research suggests that study abroad programs are dense with possibilities for meaningful and transformative learning (Okken et al., 2019; Passarelli & Kolb, 2011; Tillman, 2011). Through the experience of living, studying, and even working in a novel place, students are tasked with making sense of the sometimes ambiguous environment and culture. Students adopt creative ways of thinking, acting, and subsequently relating to the world. Experiential learning theory offers our study a theoretical framework for its comprehensive perspective on the relationship between translating experience into knowledge to progress human adaptation in his or her environment. Experiential learning theory suggests that learning is not simply the result of cognition, but involves multiple dimensions of thoughts, feelings, perceptions, and behavior in someone, which guides problem solving, decision making, and creativity (Passarelli & Kolb, 2011). Experiential learning principles and concepts have provided an appropriate theoretical platform to researching education abroad.

The current study may attract attention from international educators (Paige et al., 2009), future employers (Franklin, 2010), US colleges and universities, professors involved with study abroad program development and implementation, and students and families. Policy makers could also benefit from learning more about the impact of study abroad programs because now, many programs are supported under financial aid (Dwyer, 2004).

Specifically, this study aimed to answer the following four research questions:

1. How does prior study abroad experience affect career choice and professional development?
2. How does prior travel to Asia impact career choice and professional development?
3. How does the long-term impact of the Taiwanese Study Abroad program influence student’s career choice and professional development?
4. To what extent do the quantitative results on career choice and professional development agree with the qualitative findings for Taiwanese Study Abroad students, with attention to prior experience of study abroad or travel to Asia.
Methods

Data Collection

This study used a convergent mixed methods research design. We collected both quantitative and qualitative data during the same time of the study from an online survey in 2017 (Hou, 2017). The survey was sent to 48 students who took part in the TWSA program between the years 2011 and 2015. The program director contacted alumni through both e-mail and Facebook to increase reach and response rate. We invited all students who engaged in the program to take part in the study. We collected data up to six years post-experience. Almost 80% of the program alumni responded to the survey (n=38). The survey included both close-ended questions which were primarily rated on a Likert type scale and open-ended questions which assessed students’ perceptions about the study abroad experience.

Two independent variables used in this study included (1) whether the TWSA program was participants’ first time abroad and (2) if they had previously traveled to Asia. Dependent variables included career choice, career in aging, career change, and personal and professional development. Career choice was assessed by the effect of the study abroad program on students’ career and personal choices. Students were specifically asked if they would be interested in a career in aging. Finally, participants were asked whether the TWSA program changed their academic objectives or career interests. Measurement of program impact on students’ professional development were addressed across the following dimensions: independence, self-confidence, language learning, perception of the world, and adaptability.

For the qualitative data, questions related to career choice explained to what extent the TWSA experience affected career choices. Personal and professional development was assessed by asking participants to “explain a scenario in which it required them to show resourcefulness, problem-solving skills, or people skills. What lifelong lessons were learned? (Examples may include getting lost, flights delayed, communicating in a foreign language, etc.)”

Data Analysis

Quantitative and qualitative data were analyzed separately. STATA was used to analyze our data with descriptive statistics, and we conducted statistical
significance tests. The qualitative data were coded using emerging themes and then analyzed. Data were then integrated and analyzed together.

Chi-square tests were run for bivariate analyses for the quantitative data. Qualitative data was analyzed by emerging themes. The research team coded and organized data using open coding first. The researchers independently jotted down notes next to each answer, identifying and categorizing significant statements and trends. We discussed codes to resolve any discrepancies before further analysis. Primary themes were identified, and axial coding was applied in order to understand how these themes were related to one another and associated with the research questions, producing subthemes. The primary themes and subthemes were quantified by counting how many times they were mentioned in the responses.

Four items were used to measure “professional development” (see Table 1). We ran a factor analysis across these items to check their factor loadings and Cronbach alpha scores. The factor loading was above .6 for these items and considered acceptable, and the Cronbach alpha was .79, indicative of satisfactory reliability.

Results

Demographics

Among TWSA participants who responded to the survey, over 76% (n=29) of the sample was female. About 34% attended the program in 2011, 8% took part in the program in 2012, 24% attended the program in 2014, and another 34% in 2015. The average age of respondents when they took part in the program was 21 (SD=1.96) years. Half of the survey respondents identified as Asian or Pacific Islander, while 18.4% were Black, 18.4% White, 5.3% were Hispanic, and 7.9% were Multi-Racial or Other. This sample represented mostly minority groups. A majority of the respondents (45%) reported that they studied public health, science (26%), pharmacy (16%), social science (8%), and other (5%).

Nearly 90% of the participants stated that the program had a moderate (32%) to high influence (55%) on their career choice (See Table 1). Approximately 77% of the participants reported that the TWSA program influenced their professional development. About 45% of the participants reported that the TWSA was their first study abroad experience. Also, 45% of the participants stated this was their first time in Asia. Approximately 13% of
participants reported that while they had studied abroad before, the TWSA experience was their first time in Asia. Eleven percent of respondents had not studied abroad before but had been to Asia.

### Table 1. Impact of TWSA Program on Participants.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Career Choice</strong>¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To what extent did the TWSA experience affect career/personal choices?</td>
<td>3.70</td>
<td>1.30</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Career in Aging</strong>¹</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I would be interested in pursuing my career in the aging fields</td>
<td>3.35</td>
<td>1.11</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td><strong>Career Change</strong>²</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>My TWSA experience changed my academic objectives/career interests</td>
<td>3.41</td>
<td>0.90</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

**Personal and Professional Development**

As a result of the TW studying abroad, I gained...

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>Min</th>
<th>Max</th>
</tr>
</thead>
<tbody>
<tr>
<td>A greater sense of independence &amp; self-confidence</td>
<td>4.19</td>
<td>0.70</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Increased interests in language learning</td>
<td>4.05</td>
<td>1.00</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>More receptive to different ideas &amp; ways of seeing the world</td>
<td>4.62</td>
<td>0.55</td>
<td>3</td>
<td>5</td>
</tr>
<tr>
<td>Increased ability to adapt to new situations &amp; surroundings</td>
<td>4.54</td>
<td>1.00</td>
<td>2</td>
<td>5</td>
</tr>
</tbody>
</table>

Note: ¹ Career Choice rated 1- "Very Low", 2- "Low", 3- "Medium", 4- "High", 5-"Very High"
² Career Impact and Personal and Professional Development rated: 1-"Strongly Disagree", 2-"Disagree", 3-"Neutral", 4- "Agree", 5-"Strongly Agree"

### Inferential Analysis

First, the study team conducted a bivariate analysis. A chi-square test was utilized to examine the relationship between the independent variables (first time abroad and first time in Asia) and the dependent variables (career choice, career in aging, career change, and influence on professional development). There was a significant relationship between the direct impact
on career choice and the first study abroad: $X^2(1)= 6.89, p<.01$ and first trip to Asia: $X^2(1)=8.40, p<.01$. We found no statistically significant differences for changes in career interests or interests in the aging field. In addition, impact on professional development was not different between those who had previously studied abroad nor for those who had been to Asia before.

**Qualitative Data Analysis**

Three open-ended questions which were related to career choice and professional development were coded and analyzed. We also asked participants to describe the most significant impact the TWSA experience had on their life perspective or professional/career goals. Career choice was organized by themes and subthemes. Data was analyzed by prior study abroad and travel to Asia. Quotes were cited to show any differences in response among the categories (See Table 2).

**Table 2. Major Themes. Impact on Career Choice.**

<table>
<thead>
<tr>
<th>Major Theme</th>
<th>Subthemes</th>
<th>Quotes</th>
<th>First Study Abroad (Yes/No)</th>
<th>First Asia (Yes/No)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Impact on Career Choice</td>
<td>Direct Guided Career Trajectory</td>
<td>“The program focused a lot on the health care field, and it reinforced my desire to enter the health care field. Ultimately, the geriatrics course and traditional medicine course made me more interested in the Physical Therapy field which I am currently studying in.” (Participant #5)</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“I ended up working in Asia as an ESL instructor and am currently applying for PhD programs in anthropology...” (Participant #4)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
</tbody>
</table>
### Indirect Cultural Competency; Individual/Professional Development

<table>
<thead>
<tr>
<th>Statement</th>
<th>Change</th>
<th>No Change in Choice</th>
<th>Reaffirmed Decisions</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;The TWSA experience greatly strengthened my passion for integrating public health into medicine as my future career path.&quot; (Participant #17)</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>&quot;Gave me insight on the conflicts between traditional Asian medicine and western medicine.&quot; (Participant #1)</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>&quot;I had a great experience during my study abroad in Taiwan and learned a lot of Taiwan's culture through the courses. It was my first time to travel to a country so far from home, so I was able to learn to become more independent through the experience. It has also made me want to learn more about other cultures and travel more often!&quot; (Participant #32)</td>
<td>Yes</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>&quot;Did not affect choices.&quot; (Participant #19)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>&quot;Was already on pre-med track, so had little influence there; that being said, certainly reaffirmed my interest in health as an overall career field.&quot; (Participant #8)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>&quot;... reaffirmed my interest in culture and health.&quot; (Participant #4)</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>Major Theme: Most Significant Impact</td>
<td>Subthemes</td>
<td>Quotes</td>
<td>First Study Abroad (Yes/No)</td>
</tr>
<tr>
<td>-------------------------------------</td>
<td>-----------</td>
<td>------------------------------------------------------------------------</td>
<td>-----------------------------</td>
</tr>
<tr>
<td>Education &amp; Career Choice</td>
<td>Guided Professional &amp; Educational Trajectory</td>
<td>“Touring the different facilities for the aging population is what made me decide to change my career goal to physical therapy. Getting that first-hand experience was so valuable to me. I learned more than I ever did in a classroom in the States.” (Participant #5)</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“… transformed view on public health,” (Participant #37)</td>
<td>Yes</td>
</tr>
<tr>
<td>Cultural Competency</td>
<td>Eastern v. Western Medicine</td>
<td>“It made me determined to bridge the gap between traditional eastern and western medicine.” (Participant #1)</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“… in a public health field, cultural competence is a very important skill to have and study abroad through a public health study abroad program has given me just that.” (Participant #6)</td>
<td>Yes</td>
</tr>
<tr>
<td>Individual &amp; Professional Growth</td>
<td>Enhanced Worldview</td>
<td>“… the US is just one small part of the larger picture…” (Participant #18)</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td></td>
<td>“After going to Taiwan, I fell in love with going to new places. I’ve been living and working in Korea since 2013 and traveling all over the world”</td>
<td>Yes</td>
</tr>
</tbody>
</table>
place. I’m still very interested in culture, and I’ll be applying for PhD programs in Anthropology later this year.” (Participant #4)

**Discussion**

The narratives from the qualitative data strongly support how the TWSA program influenced career choice in healthcare, enhanced problem-solving capacity, and generally, left a significant impact on participants’ lives. Several participants mentioned that it inspired them to get internships, work abroad, or that the experience reinforced their decision to practice or study in their chosen healthcare field. Axial coding revealed the subtheme of “Guided Career Trajectory” was the most commonly described impact on career choice. Many students also reported an indirect influence on career choice. For example, respondents (#23 and #1) reported that the TWSA program gave them perspective on the difference between Eastern and Western medicine. Several of the participants (#4, #6, #7, and #16) mentioned that the TWSA program enriched their knowledge of the Asian culture and how culture influences patients in the healthcare setting. Respondents also mentioned that the study abroad experience encouraged them to take coursework related to gerontology or generated a better understanding of the aging population (#10, #3, and #31). Two participants (#8 and #22) mentioned that the TWSA program did not affect their career choice because they had already chosen their professional path.

Of the 15 participants who reported that TWSA program was their first study abroad experience and completed the qualitative portion of the survey, 60% reported more of a direct influence of the study abroad program on their career choice (see Table 3). Meanwhile, only 10.5% of those who had studied abroad previously described a direct influence of the program on their career. Those who stated that the TWSA program was not their first study abroad experience reported more of an indirect impact (47.4%) on their careers compared to (33.3%) in the first study abroad group. Participants who had studied abroad before were more likely to report that the TWSA program did not influence their career choice (10.5%) when compared to those respondents who had never studied abroad (0%).
Nearly half of the participants who completed the qualitative portion of the survey reported that the TWSA experience was not their first time in Asia (see Table 3). These participants were more likely to report an indirect impact (38.9%) of the program on their careers. Respondents mentioned repeatedly that the TWSA experience cultivated an increase in cultural competence, professional development, and had an educational influence on them. Over 16% of individuals who had traveled to Asia before reported that the experience had a direct influence on their career. Nearly 30% stated the experience reinforced their current career interest. Those who reported that this was their first time in Asia, reported more of a direct impact (50%) on career choice. In addition, of those in the first time in Asia group, 43.8% reported the TWSA experience had an indirect impact on their career through developing cultural competency.

**TABLE 4. CAREER CHOICE INFLUENCE ACROSS DEPENDENT VARIABLES**

<table>
<thead>
<tr>
<th>Major theme: Direct</th>
<th>First S/A (No)</th>
<th>First S/A (Yes)</th>
<th>First Asia (No)</th>
<th>First Asia (Yes)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Guided Career Trajectory</td>
<td>10.5%</td>
<td>60%</td>
<td>16.7%</td>
<td>50%</td>
</tr>
<tr>
<td>Education</td>
<td>5.3%</td>
<td>6.7%</td>
<td>0%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Major Theme: Indirect</td>
<td>47.4%</td>
<td>33.3%</td>
<td>38.9%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Cultural Competency</td>
<td>36.8%</td>
<td>26.7%</td>
<td>27.8%</td>
<td>43.8%</td>
</tr>
<tr>
<td>Individual/Professional Development</td>
<td>31.6%</td>
<td>13.3%</td>
<td>27.8%</td>
<td>12.5%</td>
</tr>
<tr>
<td>Major Theme: No Impact</td>
<td>10.5%</td>
<td>0%</td>
<td>11.1%</td>
<td>0%</td>
</tr>
<tr>
<td>No Change in Choice</td>
<td>10.5%</td>
<td>0%</td>
<td>11.1%</td>
<td>0%</td>
</tr>
<tr>
<td>Reinforced Decision</td>
<td>26.3%</td>
<td>6.7%</td>
<td>27.8%</td>
<td>6.2%</td>
</tr>
</tbody>
</table>

Note: Columns do not add up to 100% because it could represent over one theme in a response. Percentages show frequency the theme emerged in each group in the transcripts.

Communication and language barriers in problem solving were mentioned the most across all four groups, 100% for the prior study abroad and prior travel to Asia groups, first study abroad (76.9%) and first travel to Asia (73.3%) groups (see Table 4). Many participants noted that communicating with the locals to get around town left a lasting impression on them. Respondents
reported using nonverbal tools like online translators, pointing at menus to order food, and using gestures to facilitate communication. Several of the participants who had not studied abroad before (15.4%) reported that cultural barriers posed another significant challenge to them compared to the group who had studied abroad before (1.7%). Understanding the culture was initially difficult for some respondents. However, communicating with the local students and those in the community helped the participants feel more at ease. Similarly, navigating the culture in Taiwan was reported more frequently by those who said this was their first trip to Asia (33.3%) compared to (20%) who had been to Asia before.

**TABLE 5. PROBLEM SOLVING ACROSS DEPENDENT VARIABLES**

<table>
<thead>
<tr>
<th></th>
<th>First S/A (No)</th>
<th>First S/A (Yes)</th>
<th>First Asia (No)</th>
<th>First Asia (Yes)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>n</strong></td>
<td>n=12</td>
<td>n=13</td>
<td>n=10</td>
<td>n=15</td>
</tr>
<tr>
<td><strong>Major Theme:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Communication &amp;</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Barriers</td>
<td>100%</td>
<td>76.9%</td>
<td>100%</td>
<td>73.3%</td>
</tr>
<tr>
<td><strong>Subthemes:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Use of Verbal Skills</td>
<td>41.7%</td>
<td>38.5%</td>
<td>70%</td>
<td>26.7%</td>
</tr>
<tr>
<td>Use of Nonverbal Skills</td>
<td>33.3%</td>
<td>23.1%</td>
<td>30%</td>
<td>26.7%</td>
</tr>
<tr>
<td><strong>Major Theme:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cultural Barriers</td>
<td>1.7%</td>
<td>15.4%</td>
<td>20%</td>
<td>46.7%</td>
</tr>
<tr>
<td><strong>Subtheme:</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Navigating Cultural Norms</td>
<td>1.7%</td>
<td>15.4%</td>
<td>20%</td>
<td>33.3%</td>
</tr>
</tbody>
</table>

Note: Columns do not add up to 100% because it could represent over one theme in a response. Percentages show the frequency of the theme emerged in each group in the transcripts.

The most common themes in the qualitative data for most significant impact of the TWSA study abroad experience focused on education/career choice, cultural competency, and professional growth respectively (see Table 5). For example, respondents mentioned how the experience facilitated or solidified their reason for choosing a career. As mentioned earlier, some respondents discussed how the TWSA experience helped them bridge the gap between Eastern and Western Medicine and they felt they could show cultural competency in their profession (participants #15 & #24).
Respondents who had never studied abroad before reported more impact on cultural competency (50%) than educational/career choice (42.9%), and professional growth (7.1%) (see Table 5). Conversely, those who had studied abroad previously, mentioned equally high on educational/career choice (41.7%) and cultural competency (41.7%) than professional growth (8.3%).

As of those who had been in Asia for the first time, 56.3% reported the most significant impact on education/career influence, followed by cultural competency (43.8%), and professional growth (31.3%) (see Table 5). Those who had never traveled to Asia before reported more of a significant impact on cultural competency (66.7%), then career (33.3%), followed by professional growth (11.1%).

When integrating the two types of data, we found that the results converge. Considering participants' responses to the open-ended questions, the most common theme that emerged was impact on career choice or impact, whether it be direct or indirect, which coincides with the quantitative data. A majority of respondents also claimed the TWSA program influenced their professional development in both the quantitative and qualitative responses. Although no quantitative analyses showed significant relationships, these could be because of a small sample size. While 38 participants appeared enough to
extract meaningful results with qualitative analysis, it may not have been for
the quantitative analyses. However, the quantitative data supported a
significant relationship between being in the Asia for the first time and first
study abroad and overall impact on career.

We also found from the qualitative data that those who reported that the
TWSA program was their first time in Asia were 1) more likely to answer the
open-ended questions, 2) reflected that the program had more of a direct impact
on career choice, and 3) the program had more of an impact on their
professional growth. The impact of TWSA on career choice for the “first time in
Asia” group in the qualitative data converges with what we found in the
quantitative analysis.

**Limitations and Future Recommendations**

Although data were collected from multiple cohorts of students, this was
still a relatively small sample size which can be difficult to show statistical
significance. This study was a long-term follow-up, which could influence recall
bias. On the other hand, we can also view lessons learned as a sustaining long-
term impact that the Taiwan study abroad program had on participants. In
addition, not all participants answered the open-ended questions on the survey.
More research needs to be done to further explore the long-term impact of study
abroad programs on students, as the future of these programs depend on these
inquiries. For example, will studies in non-English speaking countries influence
participants’ cultural competency, problem-solving capabilities, and personal
growth differently than those who study in English-speaking countries?

Our findings support a long-term influence of the Taiwanese study
abroad program on career choice, especially in healthcare. In review of the
literature, there are very few studies that examine long-term impact of study
abroad, especially in Asian countries. Thus, this study adds to the growing
literature to support study abroad programs. Parallel to the findings of other
study abroad programs in the literature, the results in this study support a
powerful influence of the TWSA program on participants’ career choice,
problem-solving capabilities, and overall impact on their lives. Cultural
competency and enhanced professional growth were also common themes that
emerged from our analysis. This study is unique because it used a mixed-
methods approach and more in-depth examining two key factors, prior study
abroad and travel to Asia in our mixed-data analyses and findings integration.
For those who had never traveled to Asia prior to the study abroad experience
reported more of a significant impact on education and career choices in healthcare. On the other hand, those who had traveled to Asia before tended to report greater gains in cultural competency than an impact on educational and career choices in healthcare. In turn, prior study abroad and travel to Asia influenced the depth of how much impact they reported on career choice, problem-solving skills, and significant impact on life, which has not been well explored in previous studies.

References


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