

Looking in the mirror pre and post study abroad

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The researchers have developed a computerized self-assessment system, which is based on the Personal Attitude Construct (PAC) Analysis. PAC Analysis, first developed by Naito in 1993, is used in counseling to enhance and facilitate self-discovery. The researchers have used a variation of this with students from overseas studying at a Japanese university. Using this method at the start of their study abroad experience, students were forced to look at themselves and think about their preconceptions of being on a study abroad program in Japan. The same process was followed at the end of the program to help them reflect upon their experience. However, due to time constraints, only a few students could participate in this activity each year. Following further development, the Self-assessment System (SAS) is now able to be administered to all of the participants on the study abroad program.

本研究では、日本語集中プログラムへの短期留学生の自己理解促進の手法として、コンピュータを用いたシステム(SAS=Self-Assessment System)を構築した。これは、内藤が1993年に開発したPAC分析を応用したものである。これまでの研究で、来日直後と帰国直前のPAC分析により、前者では不安・期待の整理、後者では留学体験の評価・認知が促されることが明らかとなり、PAC分析は、短期留学生の留学体験の意味付け・自己理解の促進に有効であることがわかった。しかしながら、個別のPAC分析を受け入れ留学生全員に実施することは時間的に難しい。そこで、PAC分析の手順を応用し、時間的制約を受けない方法としてSASを構築するに至った。

THE JAPANESE Education Center at Chubu University has been accepting students into their short-term study abroad program since 1993. The students enrolled in this program come from universities with which Chubu University has developed a sister school relationship and over the years it has developed from a program which was only 3 months in length with students coming from only one university in the United States to students from various universities in the US, Australia, South Korea, China, Hong Kong, and Malaysia. Furthermore, the length of the program now varies depending on the wishes of the participant. Currently there are programs in place lasting 3 months, 6 months, and 11 months.

The universities sending students to our program prepare their students for study abroad in different ways. Some of these sister schools spend an entire term on preparing their students for life in Japan by requiring them to take a class in Japanese culture, while other institutions play no active role in preparation for life in another culture. Because of this, the program was



receiving students who had a good idea of what to expect from the program and their life in Japan and others who did not. However, even the students who had received the extensive culture training before arriving in Japan were still nervous about actually living and studying in a new culture. Being told something in class in your home country is a far cry from actually experiencing the culture in the host country. To help students to understand what exactly they were nervous about we decided to use the Personal Attitude Construct with them shortly after their arrival in Japan.

Prior research

The Personal Attitude Construct (PAC) analysis was developed as a counseling method to measure how a person's attitude is constructed and is most effective with small numbers of subjects when the researcher is seeking qualitative data (Naito, 1997). Therefore, even if you have only one subject you may discover data useful for your research. Additionally, the participants discover and clarify their inner thoughts and feelings through the PAC analysis process.

This process begins with a target phrase for the subject to think about. From this phrase the subject enters a process of free association, which produces a list of ideas. These ideas are then looked at more closely from different viewpoints. This begins with ranking the ideas in order of importance then comparing them to one another, dividing them into groups and then thinking about the reasons why each of the ideas has been placed into a group with other ideas. This process of continually looking at the ideas from various perspectives allows the subject to dig deeper into what they are actually thinking about. This entire process helps the subject to visualize the ideas they have about the target phrase and thus reconstruct their ideas about it (Naito, 1997).

Inoue (1997) used the PAC analysis as a counseling tool with international students studying in Japan. She claimed that the use of the PAC analysis not only helped to clarify the students' problems, but also helped them to open up about their problems with their counselor because they were able to discover and understand what they were worried about. Inoue also believed that the use of the dendrogram, which shows a visual representation of how the ideas generated during the free association are related to one another, based on the information they provided, helped the students to see their problems more objectively and helped them to grow as a person by finding out more about themselves.

At our university there are practicum classes for students enrolled in the Teaching Japanese as a Second Language course. During this practicum, the Japanese students teach Japanese language classes to international students. Most of these students were anxious about teaching these classes because they were not confident in their ability to communicate with the international students and their ability to teach effectively. Because some of their worries were about interacting with the international students, it was decided that in order to help them organize their thoughts, these practicum students would complete the PAC analysis. This approach proved to lower the anxiety the students were feeling. Although they were still worried, this activity helped them to realize what they were actually worried about which helped to alleviate some of the anxiety they were feeling (Ueda, Watanabe, & Ikuta, 2005).

Based on this success of incorporating the PAC analysis with the practicum students, it was decided to see if it would also be successful with the international students coming to Japan to study Japanese. In 2006, we started using the PAC analysis with students coming from the United States. Participants were administered the PAC analysis at the start of their study abroad experience soon after arriving in Japan and again at the end of

their program before returning to the United States. At the beginning of their study abroad experience the international students commented that by using the PAC analysis they were able to organize their thoughts and specify exactly what they were worried about and that it helped them to lower their anxiety. At the end of the program, students were able to see how much they had changed since the beginning of their stay in Japan. They were able to look back and see what they were worried about, discovered that some of what they were worried about did not warrant the amount of anxiety they were feeling, and deepened their self-understanding (Ueda, Watanabe, & King, 2008).

Procedures for conducting an interview session using the PAC analysis

The interview session using the PAC analysis is performed with an interviewer and one informant and takes approximately an hour to an hour and a half. The procedures for how we conducted our interview sessions are explained hereafter.

First, the informants are given 15 to 20 small cards. A target phrase is read to the informants and they are asked to write any thoughts or ideas they have on the cards provided. Our target phrase was “study abroad in Japan”. Only one thought or idea is written on each card. The informants can write as many cards as they like, but it is best to encourage them to write at least 10 cards. It is important not to put any preconceived ideas into their heads. If they ask any questions just simply tell them that they are to write about anything that comes to mind when they hear the target phrase. This entire process is for the subject to organize their thoughts and assist them in self-discovery.

During the second step, the informant is asked to look at the words and sentences that he or she has written and arrange them in a list of importance. The interviewer reads the cards to the subject again. This is done so that the subject hears what

they have written which helps them to think about what they have actually written. The subject then writes the number one on the card that has the idea that is most important to them. The subject continues numbering the cards until all of the cards have been ranked by importance.

The third step in the process is for the subject to compare the cards. Each of the cards now has a number for its importance written on it. The interviewer reads card number one and two and asks the subject to decide how closely the ideas on those two cards are related to each other using the following scale:

- Very close 1
- Quite close 2
- Somewhat close 3
- Neither close nor far 4
- Somewhat far 5
- Quite far 6
- Very far 7

The interviewer records the number on a piece of paper and reads card one and card three and the process is repeated until every card has been compared to one another. The interviewer reads the two cards each time so the subject is not simply reading the ideas written on the card, but also hearing what is written upon them.

Once all of the cards have been compared to one another the numbers are entered into the SPSS program by another researcher. This is step four. The SPSS program will produce a dendrogram, which is a visual representation of how closely each card is related to one another.

While the data is being input into the computer, step five is performed. The interviewer again reads each of the cards to the subject and asks if the idea on the card has a negative image, a positive image or a neutral image. The subject is asked to write

either a plus sign, a minus sign, or a zero depending on the image held about the idea.

The dendrogram, which was produced in step four, is used in step six. The subject is shown the dendrogram and it is explained to them. The subject is asked to look at the dendrogram and see how the ideas have been divided based on how closely they said each card was related to the others. The subject can use the dendrogram as a guide and the researcher can guide them and show them where the computer has divided the groups. Again, each of the cards is read. The interviewer asks the subject if he agrees with the grouping that is shown in the dendrogram and which cards he believes belong in the same group. The subject physically moves the cards and puts them into groups. There can be as many groups as the subject likes. The interviewer records which cards are in which group.

In step seven, the subject is asked to think about the groups more carefully by developing an image for the group. It is important for the interviewer to not lead the subject by suggesting reasons certain cards have been placed in the same group or by making unnecessary comments. The interviewer reads each of the cards from the group to the subject and then asks questions about the group. Two questions that might be asked are "What is the key to this group?" and "What is the reason these have been put in the same group?" Once all questions by the interviewer have been answered, the subject is asked to give the group a name. The process is repeated for each of the groups.

During step eight the groups are looked at again. The interviewer again reads each card in the group, then the answers to the questions from step seven and finally the name for the group. Then the subject is asked if they have any feelings that they can relate to each group and are asked to assign the group a color. Reasons for why a certain color has been chosen should be explored. Before moving on to the next group the subject is given a chance to make any further comments about the group.

Comparisons are performed between groups during step nine. There is no need to make a dendrogram for this comparison. Using the same scale that was used in step three, the subject compares each group to the other groups. Before the subject decides how close each group is related, the interviewer reads each of the cards from the group and all of the notes taken from the previous steps about each group including the name of the group, the color assigned to the group, any comments made by the subject about a group and so on. The interviewer also has the subject discuss any similarities and differences between the groups.

Step ten is the final step. This is a time for the subject to talk about any final thoughts they might have. When doing this at the end of the study abroad experience it is helpful to show the subject the cards from the beginning of the program and discuss the comments made at that time. This will help the subjects realize how much they have changed since the beginning of their stay in the host country. It should be noted that this entire process takes between 60 and 90 minutes. We did not see any instances of fatigue from the subjects because they are constantly being engaged by the interviewer and kept on task as well as performing in English, which was the native language of all the students that participated.

Even though the amount of time it takes to do the PAC analysis is substantial, the subjects had positive comments about the experience and stated that it helped them to think through why they were feeling the anxiety that they had. Despite the positive feedback we received with the utilization of the PAC analysis with international students, we were unable to administer it in this face to face interview format to all of the students on the program. Due to time constraints we were only able to conduct this activity with two to three students per semester. Therefore, we needed to devise a way to reach all of the students participating in our study abroad programs.

The Self-Assessment System (SAS)

To be able to reach all of the students studying Japanese as a second language in our program we developed the Self-Assessment System (SAS). The SAS is a computer program that is based on the PAC analysis, but is not as in-depth. The SAS was developed to assist students in self-awareness and to help them to record and organize their thoughts. There are a few points we wanted to consider when developing this system. The SAS had to:

- be user-friendly
- follow a step-by-step process similar to the PAC analysis
- create a report for the researchers to use during a follow-up interview
- have the possibility to be administered over the Internet

Steps of the SAS

We wanted the subjects to write at least 10 thoughts or ideas, so the program is designed to accept a minimum of 10 and maximum of 15 responses in step one. This is basically the same as step one of the PAC analysis. We used the same key phrase, “study abroad in Japan” for our international students coming from overseas to Japan. Figure 1 shows what the participants see at the beginning of the SAS process.

Step two (Figure 2) asks the participants to look at what they have written and put them in order of importance. This is done by simply clicking and dragging the entry to the desired place within the list. The numbers on the left indicate the number of importance and automatically change when an entry is placed in another position. In other words, the system is set up to constantly have the most important entry, number one, at the top, the second most important entry in the number two position and so on. Once the participant is satisfied with the order in which they have placed all of the entries they click the “Next” button at the bottom

of the page and the number of importance is now assigned to the entry that was located in the corresponding position.



Figure 1. Step one of the SAS



Figure 2. Step two from our informant's post-study abroad SAS

In step three, the subject is asked to compare each of the ideas to one another. The student should compare the idea on the left with the idea on the right. This is done until each idea has been compared to every other idea using the following scale:

- Very close 1
- Quite close 2
- Somewhat close 3
- Neither close nor far 4
- Somewhat far 5
- Quite far 6
- Very far 7

As you can see in Figure 3, we had a problem in the wording of the directions. Although this might be confusing to a non-native speaker of English, the vast majority of students we are dealing with are from English speaking countries. Those that are not have a high level of English ability. Therefore it did not seem to confuse our participants at all. This mistake has been fixed in the updated version of the SAS.

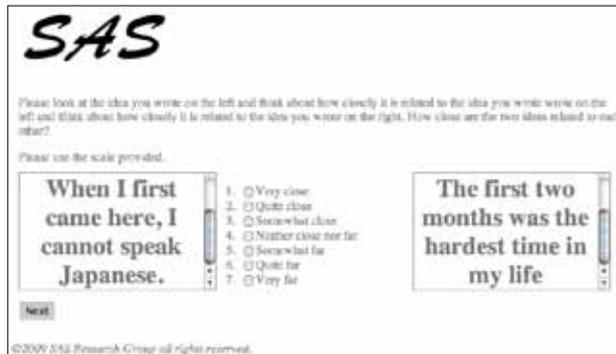


Figure 3. Step three from our informant's post-study abroad SAS

Step four of the SAS is basically the same as step five of the PAC analysis. Step four of the PAC analysis is having the results of step three sent out and entered into the SPSS to produce the dendrogram, but that step is now unnecessary as it is performed automatically by the SAS. Step four of the SAS asks the participant to look at each of the entries again and decide if that entry is something positive, negative, or neutral (Figure 4). They are to click the appropriate radio button next to each idea and move on to the next step.



Figure 4. Step four from our informant's post-study abroad SAS

Step five is when the participant is shown the dendrogram, which was produced from the information entered in step three. The dendrogram is a visual representation of how closely each of the ideas is to one another. There are natural divisions that occur and we would like for the participant to group their entries using those natural divisions as a guide. As shown in Figure 5b that does not always happen. However, the participant has a reason for choosing which entries go into which group and that is what is most important.

Figure 5a shows the first screen of step five. The participants are to choose which entries they would like to put in the first group. This is done by clicking the boxes to the left of each of the entries. Once all of the entries for the first group are chosen, the participant clicks the “Next” button. When the next page appears, all of the entries that were selected in the previous step have been assigned the same group number. This process is continued until all of the entries have been assigned to a group. The numbers to the left of the entries in Figure 5b are the group numbers that have been assigned.

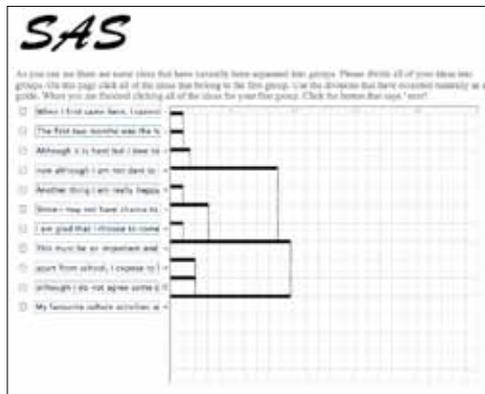


Figure 5a. The beginning of step five from our informant's post-study abroad SAS

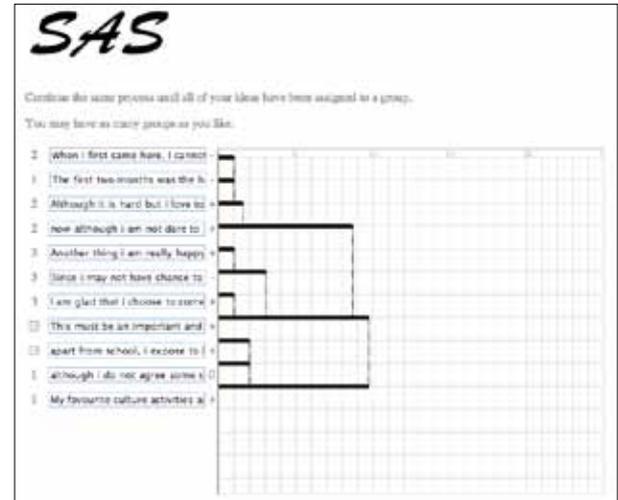


Figure 5b. The middle of step five from our informant's post-study abroad SAS

In step six the participants take a deeper look at the groups they made in the previous step. This step is a combination of steps seven and eight of the PAC analysis. As outlined in Figure 6, they are shown the entries for one of the groups. They are asked to provide the reason why these entries have been placed within the same group. Furthermore, they are asked to assign the group a color and a name for the group. The reason for the color choice is discussed during the follow-up interview after completing the SAS. There are only a few colors for the participants to choose from. This seems to be a limitation because when doing the PAC analysis participants often named very specific colors such as forest green and navy blue. In the future we would like to incorporate a color wheel with a wider spectrum of colors.

SAS

These were put in the same group. Please answer the questions below.

The first two months was the hardest

although i do not agree some of the

My favourite culture activities are sea

What is the reason these have been put in the same group?

If you had to assign this group a color, what color would you choose?

Please think of a name for this group.

Figure 6. Step six from our informant's post-study abroad SAS

The informant is asked to compare two groups in step seven (Figure 7). The name for each group is provided along with the ideas that belong to each group and the color that was assigned to each group. They are asked to describe how the groups are both similar and different. Once each group has been compared to the other groups the informant moves on to the next step.

SAS

Please take a look at Group 1 and Group 2.

Before and after

The first two months was the hardest time in my life although i do not agree some of them, i still

A big program

When i first came here, i cannot speak Japanese. Although it is hard but i love to study Japanese here because i can concentrated and be surrounded

How are these groups similar?

How are these groups different?

Figure 7. Step seven from our informant's post-study abroad SAS

Step eight shown in Figure 8 is the final step of the SAS. This gives the participant an opportunity to provide any extra information they might want to convey to us. This information could be about what they have written so far, about studying abroad, or about the SAS. The time it takes the participants to complete the SAS is about the same for the PAC Analysis. We do allow students to take a break between steps three and four.

Figure 8. Step eight of the SAS

Results of our pilot study

The SAS was first used in April 2009 with a 20-year-old female student from Hong Kong. Prior to entering the Japanese language program she had only 45 hours of instruction in Japanese. Her native language was Cantonese, but was able to communicate in English.

She was the first person to use the SAS and we had her try the program after her arrival in Japan. She did the pre-study abroad SAS on April 3, 2009 and the post-study abroad SAS on July 30, 2009. The SAS was administered in English.

Figure 9 shows the dendrogram produced by the information she provided on the SAS for her pre-study abroad.



Figure 9. Pre-study abroad SAS dendrogram with group numbers

Here is how she divided the groups with their keywords (language quoted directly and unaltered). The numbers indicate the importance she assigned the idea in step two.

Group 1 Communication and learning problems

- 3 - Communication with others become my main concern and worry.
- 4 - After I arrived, I feel really anxious because my Japanese level is really too low and I can't understand what people are talking about.
- 5 - I am also worry that I will bring a lot of trouble to my classmates.
- 6 - I also afraid that I would learn too slow because I have heard that our level is gar too lower that the other exchange students

- 7 - However, before I come, I feel nervous because I know very little Japanese, for example, how to introduce myself, some daily expressions and some nouns only.

Group 2 Reason for coming

- 1 - I think Japan is a country with unique cultures. Beautiful views and friendly citizens so I really looking forward to come here.
- 2 - I want to learn Japanese so I also think that studying in Japan with be the best and the fastest way for me to learn this language.
- 10 - I am a person who love to travel around and experience different cultures. So I would love to go to exchange and I choose Japan.
- 11 - I know in my dormitory, I would know other students in different countries so I may meet some new friends.

Group 3 Adaptation and Homesickness

- 12 - For Homesickness, I seldom worry about this because I came here with my friend and I can talk to my mum and dad through the internet.
- 13 - However, I am not scare to adapt to the new environment because the weather, food and living style in Japan is quite similar to Hong Kong.

Group 4 Expectations

- 8 - I won't expect I can talk in Japanese very soon but I think I will become so much better when I finish this semester.
- 9 - I also think that hardworking and a positive attitude are the most important thing for me to stay and study in Japan.

Figure 10 shows the results from her post-study abroad SAS.

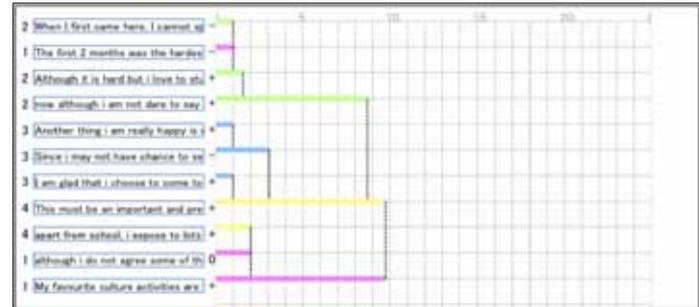


Figure 10. Post-study abroad SAS dendrogram with group numbers

Group 1 Before and after

- 2 - The first 2 months was the hardest time in my life.
- 10 - Although I do not agree some of them, I still respect them.(culture)
- 11 - My favourite culture activities are tea ceremony and sumou.

Group 2 A big progress

- 1 - When I first came here, I cannot speak Japanese.
- 3 - Although it is hard but I love to study Japanese here because I can concentrated and be surrounded by Japanese.
- 4 - Now although I am not dare to say I am good at Japanese, at least I have confident to say I can speak Japanese.

Group 3 Japanese culture

- 5 - Another thing I am really happy is meeting a lots of good friends here.
- 6 - Since I may not have chance to see them again, this make me sad.
- 7 - I am glad that I choose to come to study abroad and I am no regrets on this decision.

Group 4 friends

- 8 - This must be an important and precious memory in my life.
- 9 - Apart from school, I expose to lots of Japanese culture here.

At the beginning of the study abroad program she was interested in Japanese culture, but worried about her Japanese language ability. Her purpose for taking part in the program was not only to improve her Japanese language skills, but also to meet people from various countries. She was not worried about adjusting to the culture in Japan nor was she worried about becoming homesick.

As for her post SAS she looked back on her experience and was pleased that she was able to survive the first two months of living abroad, which were very difficult for her. She was pleased with the improvement she made in her Japanese ability and was able to deepen her understanding of Japanese culture and make many friends.

She commented that the SAS forced her to classify her expectations and anxiety before studying abroad and also gave her an opportunity to evaluate the experience and concretely understand what study abroad meant for her.

Comments from the interviewer

There are limitations to the SAS compared to the PAC analysis because the researcher is unable to be with the informant throughout every step of the process. However, when using the SAS, the informants produced longer phrases in step one. Those subjected to the PAC analysis tended to write single words or very short phrases. The ability to download the data any time after the informant finished saved a lot of time and put less of a burden on the interviewer. During the PAC analysis the researcher can ask for clarification during the step-by-step process. It is not possible to ask for clarification during the online process, but questions can be asked during the interview once the informant arrives at the host institution. The time saved by using the SAS has the benefit of being less stressful for the researcher and makes it possible for all of the students to take part in the activity. In the interview that is conducted after the completion of the SAS, both at the beginning and the end of their study abroad experience, the researcher is able to concentrate on the interview and is not interrupted by inputting the data into the computer to make the dendrogram. In the post-study abroad interview the interviewer can, just like with the PAC analysis, show the participants their pre-study abroad results so they can reflect on how much they have changed and see what they were worried about.

Differences between face-to-face interview and using the computer

One of the reasons for making the SAS was to save time for the researchers. We were able to accomplish that goal by going from spending an hour to an hour and a half per student to 20 minutes per student. By having the students type their information into the system there are no mistakes from the researchers inputting data because the students did that themselves. By

administering this over the Internet there is no restriction on time or place for the student. The students can do this in their home country before even setting foot in the host country, which eliminates any influence from doing this in the host country. The participants do not have to feel the existence of the researcher and are able to input their ideas without feeling any pressure from another person being in the room with them.

When doing the PAC analysis face to face, students wrote an average of eight words per card, but with the SAS they wrote an average of 16 words per card, which showed a tendency for the students to explain in more detail. We found this increase in the number of words is helpful for the interviewer because of the detail that comes about. By using the computer, it is much easier to accumulate the data, but with face-to-face interaction with the researcher, the researcher gets a deeper understanding. The computer does not reach that level, but the participants are able to look deep into themselves when doing this and further their understanding. The researchers also are able to learn a bit about the student which may help them to solve any problems the student may have during their time in the host country.

Conclusion

Although the SAS has been successful in this pilot study there are some improvements that we would like to make in the future. Currently the interface is only in English, but we would like to make it multilingual and allow participants to choose their language at the beginning. Since we only have Japanese and English speakers working with the international students at our university we would not be able to read what is written in other languages such as Korean or Chinese, so we would like to add a translation function for the report. We understand that current technology would not be able to give us a perfect translation, but it would be able to give us some insight into what the student is feeling or thinking.

We would also like to use the data that we collect to help improve pre-departure orientations for the students and the program itself. We could look at what students are worried about and try to address those before they arrive in Japan. Also, since we are able to administer the SAS over the Internet there is a possibility to do a longitudinal study to find what kind of impact study abroad has had on the lives of former students.

Informed consent

The authors hereby declare that the research subjects gave their informed consent.

Bio data

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