

THE USE OF Q METHODOLOGY TO INVESTIGATE
ATTITUDE CHANGE IN AMERICAN STUDENTS
WHO PARTICIPATE IN FOREIGN STUDY PROGRAMS:
A REVIEW OF THE LITERATURE*

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Foreign study programs have traditionally had four major goals: (1) general educational development, (2) technical and specialty training, (3) personal growth, and (4) international understanding. The first two objectives have been relatively easy to measure. For example, grades received in class or scores on a language proficiency exam given at the end of the foreign study program are indicators of the success of the program in the educational sphere. Changes in personal growth and international understanding are much harder to detect. Past research has uncovered a discrepancy between statistical results and reports of directors and participants. Even though most studies employing traditional statistical methods have reported no significant atti-

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tude change (Sell, 1980), those who participate repeatedly attest to important personal growth resulting from such cross-cultural experiences.

Q methodology, developed by William Stephenson (1953; also see Brown, 1980), has been suggested as an alternative method in studying the impact of foreign study programs because it is sensitive to individual change within the group context. Each participant's viewpoint is obtained subjectively through the rank-ordering of statements or adjectives in a Q sort. Q sorts from all participants are then analyzed objectively through correlational and factor analysis to uncover composite viewpoints (factors) and each student's relationship to them (factor loadings). Although a pioneering work was published in 1953, most of the research utilizing Q methodology to investigate participant attitude change has been conducted during the past seven years.

Taba (1953) worked with Stephenson in analyzing the Q sorts of 45 members of the 1950 International Relations Club Tour. Not until 1975, however, when McKeown and Craig investigated the impact of the Kent State in Mexico program on 31 participants, was Q methodology used again in this field. Kent State in Mexico participants were studied in two further analyses employing Q: Sell (1980) investigated the impact of the 1979 program on 29 participants, while Sell and Craig (1982a) conducted an intensive micro-study of seven members of the 1980 program. Fisher (1982) utilized Q methodology in her analysis of the 1981 Vanderbilt-in-Spain program in which she served as a participant-observer. These recent studies, which are reviewed extensively below, have uncovered an impressive amount of change, specifically in students' views of host nationals. One of the major conclusions reached by the authors is that not all change is positive: Cross-cultural contact is not, in itself, a guarantee of positive attitude change toward host nationals.

1950 INTERNATIONAL RELATIONS CLUB TOUR

Published in 1953, Taba's analysis of the impact of

the 1950 International Relations Club Tour was the first application of Q methodology to this field. Forty-five members of the Tour, ranging in age from 18 to 25 and in educational status from high school senior to graduate student, were administered various questionnaires and a Q sort before and after their eight-week experience in Western Europe. The Tour consisted of a four-week seminar in Paris, a one-week seminar in Geneva, and three weeks of free travel. The Q sort administered was composed of 71 statements describing typical and atypical characteristics of France, the United States, and an "Ideal Society." These statements were representative of seven categories: (1) social relations, (2) temperament and personality, (3) government and politics, (4) technology, (5) religion and morals, (6) intergroup relations, and (7) decision-making. Six variables consisting of pre and post perceptions of the three societies were obtained for each participant. Analysis of the resulting 270 variables produced both group and individual stereotypes.

A consensus occurred in the stereotype of the Ideal Society, and in all but one case, participants increased their agreement with the factor at post-testing. The Ideal Society was viewed as (1) rational and pragmatic, (2) committed to family values, (3) fostering democratic human and group relations, and (4) having a government which is in the hands of its people and is characterized as internationally minded. The group stereotype of the U.S. was less precise and universal than that of the Ideal. In democratic human relations, the U.S. was viewed as having both good and bad qualities; e.g., a lack of social class distinction and racial discrimination. Their homeland was also perceived as practicing pragmatism and materialism. The group stereotype of France was most dispersed and inconsistent. The French were perceived as nonpragmatic and concerned with culture and aesthetics. Taba concluded that the "Tour experience was not sufficient to bring about a systematic and focused change in the ideas Tour members held about France" (p. 37).

When the U.S. and France were compared to the Ideal

Society, it was found that the U.S. failed to live up to the Ideal in 38 characteristics, while France failed in 32 characteristics. France was viewed as having 20 characteristics in common with the Ideal, while the U.S. had only 15 in common.

When individual viewpoints were examined, three main types emerged. Type I individuals were most able to distinguish the three cultural patterns. Upon analysis of the Q sorts of these 23 individuals, two factors emerged. Factor A represented their view of the Ideal, while factor B was bipolar with the U.S. and France sharing no qualities in common. Taba wrote that for type I individuals "the main impact of the Tour experience...was to clarify their picture of France, to make them a bit less idealistic about it, to reduce the scope of their picture of France, and thereby also make it less 'opposite' to their picture of the United States" (pp. 42-43).

Type II included nine students who held two viewpoints different from those held by type I. In factor C perceptions of the Ideal and France converged, while factor D, independent of C, represented their perception of the U.S. Consistently lower factor loadings indicated an inability on the part of the nine individuals to formulate clear pictures of the three cultures. They tended to idealize France while overcriticizing their homeland. "The immediate impact of the Tour on Type II," according to Taba, "consisted of a reality correction of some illusions about France with attendant shrinkage of both their concepts of an Ideal Society and France" (pp. 51-52), while their perception of the U.S. was strengthened.

In the views of the eight Tour members classified as type III, the U.S. and Ideal Society converged (factor E), while France was unique (factor F). Changes by the eight individuals "failed to fit a logical pattern of learning" (p. 57). Only a few type III students became more realistic about their homeland at the end of the Tour.

Taba offers an extended analysis of the backgrounds and experiences of three individuals, one representing each type. She concluded the monograph with the following: "It is quite evident from this analysis

that the methods of forming concepts of a foreign culture are related to the structure of concepts of, and attitudes toward, the home culture, as well as to the ideals and feelings that the individuals hold regarding what is characteristic of an ideal culture" (p. 64).

1975 KENT IN MEXICO PROGRAM

In the winter of 1975, McKeown and Craig (1978) investigated the impact of the Kent State in Mexico program (in Cholula, Puebla) on 31 participants. Two Q sorts were developed by the authors and administered at two time periods. The first, "Images of Mexicans," included 50 adjectives and was given prior to and at the end of the Mexico experience. Factor analysis of these Q sorts uncovered three views of the Mexican character: (1) "romantic" positive (active, hardworking, rational, proud, tolerant, ethical, and willing to get along with others), (2) "realistic" positive (proud, ethical, honorable, strict, realistic, cautious, suspicious, possessive, and frustrated), and (3) negative (tough, frustrated, materialistic, aggressive, possessive, irrational, inconsistent, foolhardy, and crude). Nineteen of the 31 respondents shifted factors (viewpoints) at the end of the program; eight of them attributed negative characteristics to their host nationals.

The second Q sort, "Cultural Awareness," was an attempt to investigate the nature and degree of culture shock. Therefore, it was administered three weeks into the program and again at the end. Students were given statements involving their adjustment, their views of Mexican life, and views of the U.S. Three factors emerged from the statistical analysis: Students with significant loadings on the first found their adjustment to be easy and held favorable attitudes toward the U.S. Students on the second factor also experienced little difficulty in adjusting but when compared to those on factor 1 they held less favorable attitudes toward their homeland. Those on factor 3 had the most difficulty in adjusting to the Mexican lifestyle and, like factor 1 stu-

dents, they held a favorable view of the U.S. Less pronounced shifts occurred at the end of the program, with only four participants moving to a new dimension. Five students who had significant loadings on one dimension at the first administration had loadings on two dimensions at the end of the program, while six students consolidated their viewpoints at the end, changing from two dimensions to one. One student with significant loadings on all three dimensions consolidated his viewpoint to two dimensions by the end of the experience. "Although confusion exists in the interpretation of the culture shock theme," concluded the authors, "the study does support the contention that foreign study programs such as the Winter Quarter in Mexico can make a difference in the perspectives and understandings of the students who participate" (p. 37).

1979 KENT IN MEXICO PROGRAM

Sell (1980) analyzed the impact of the 1979 Kent State in Mexico program (in Jalapa, Veracruz) on 29 participants, 16 of the 29 having participated in an orientation course one quarter prior to the Mexico experience. The "Images of Mexicans" Q sort was adopted with minor modifications from the one used by McKeown and Craig (1978). It consisted of 64 adjectives, and participants were asked to determine whether each one was most like or most unlike Mexicans in general. This sort was administered to the 16 members of the Honors Colloquium on Mexico at three time periods--during the initial weeks of the orientation class, prior to departure for Mexico, and during the last week of their quarter in Jalapa. The 13 participants who did not enroll in the fall quarter class completed the Q sort prior to departure for Mexico and during the final week of the program. In all, 74 Q sorts were analyzed and from that analysis emerged three factors, each representing a different view of Mexicans. Factor I depicted an idealistic and romantic vision of Mexicans. The factor II viewpoint was negative--subjects loading on this factor saw their hosts as self-centered and egotistical. Factor III repre-

sented a work ethic perception in which Mexicans were viewed as hard-working and ambitious.

Attitude change was evidenced in two ways: (1) movement from one factor to another, and (2) increase or decrease in a factor loading on the same factor. Of the 16 participants who completed the "Images" Q sort three times, 11 evidenced change from time 1 to time 2, and 13 evidenced change from time 2 to time 3. The orientation course had as much impact on attitude change as did the program itself. A large number of alterations from time 1 to time 2 resulted in the acquisition of the negative factor II viewpoint. The director, in his attempt to present a realistic picture of Mexico, obviously facilitated students' questioning of their stereotypic images of Mexicans. In all, 23 students changed their perceptions as a result of the Mexico experience. Unfortunately, not all students acquired a positive view of their Mexican hosts. Contact with nationals of a host country, therefore, is not in itself sufficient to guarantee positive attitude change.

The "Cultural Awareness" Q sort administered by Sell consisted of 52 statements involving reactions to the Mexico experience. Construction of the sort was based on a 4×2 factorial design: The overall Mexico experience involves attitudes toward (1) Mexico, (2) the Mexican people, (3) the U.S., and (4) personal development. In addition, these attitudes may be positive or negative. This sort was administered during the second and final weeks of the quarter in Jalapa to determine whether culture shock occurred and to assess change in participants' perceptions of their experience. Two factors emerged from the analysis. The first represented a positive viewpoint: factor I subjects loved Mexico and its people, preferred aspects of Mexican life over American, experienced personal growth, and denied feeling any culture shock. The factor II viewpoint was mixed: students loading on this factor both loved and hated Mexico and its people, preferred the U.S. to Mexico, experienced personal growth, and felt some culture shock. It is noteworthy that although the factors represented different perceptions of the Mexico ex-

perience, all students reported significant personal development from living and learning in another culture.

Of the 29 program participants at time 1, 18 held the positive factor I viewpoint, six ascribed to the mixed factor II position, and five held both viewpoints. By the end of the program, 13 students held the factor I viewpoint, 10 ascribed to the factor II position, and six held both. More movement occurred to the factor II viewpoint than vice versa. During the first two weeks of the program, culture shock was not as widespread as a reading of the literature would lead one to expect. This was evident in the fact that at time 1 only a minority of students agreed with culture shock statements, and these statements were not the major focus of factor II. Events occurring between the second and final weeks of the quarter caused nine students either to share or shift to the factor II position. Possible explanations, such as illness or rejection by a girlfriend or boyfriend, can be put forth to explain this shift. However, cultural awareness does not require loving another culture above one's own. It does involve personal growth and a more mature and realistic way of looking at other cultures. Cross-cultural contact, concluded Sell, may thus reduce stereotypes and create clarified and multifaceted views of a host country and its people rather than induce positive feelings in all participants.

Six months after their return to the U.S., the 29 program participants were sent follow-up questionnaires consisting of the "Images of Mexicans" and "Cultural Awareness" Q sorts. Responses were obtained from 23 students, a substantial 79% return rate. A different procedure was followed in analyzing the data from these follow-up Q sorts. For "Images of Mexicans," the 23 follow-up Q sorts were correlated with the three ideal sorts, each defining one of the factors (romantic, negative, or work ethic) found in the above analysis. (These follow-up correlations are themselves factor loadings because they represent the degree of relationship between follow-up Q sorts and factor Q sorts.) Of the 23 students participat-

ing in this stage of the investigation, 15 held significantly different views of their Mexican hosts six months after returning home. Only four subjects returned to their original perceptions; the other 11 did not display a consistent pattern of change. Eight of these latter 11 students associated with more than one viewpoint at time 4, while the other three agreed with only one image of Mexicans (Sell & Craig, 1982b).

A similar procedure was followed for the 23 follow-up "Cultural Awareness" Q sorts. Each was correlated with the two ideal sorts which define the positive and mixed viewpoints found in the original analysis. These perceptions were more stable than their images of Mexicans as only six of the 23 students altered their views of the Mexico experience after six months at home. Four of them returned to their original agreement with factor I, dropping any negative reactions to Mexico. This study, along with the Sell and Craig investigation below, attests to the value of the follow-up as a means of detecting the lasting nature of change.

1980 KENT IN MEXICO PROGRAM

Seven members--one male and six females--of the 1980 Kent State in Mexico program (again in Jalapa, Veracruz) were the subjects of a micro-study by Sell and Craig (1982a). A 57-adjective Q sort was employed to assess students' perceptions of (a) Mexicans in general, (b) how Mexicans view Americans, and (c) how the students view themselves. The three Q sorts were administered at four time periods: (1) at the beginning of the program director's fall semester orientation class, (2) at the end of this course, prior to departure for Mexico, (3) in Mexico, at the conclusion of the semester, and (4) two semesters after their return home. Q sorts for all seven subjects were available for the first three time periods, while the follow-up (time 4) was returned by six students.

Three factors resulted from the statistical analysis of the Q sorts displaying the students' perceptions of Mexicans. The first and most popular factor was interpreted as a "Latin Lover" or romantic char-

acterization of Mexicans, specifically Mexican males. Factor I subjects viewed their male hosts as proud, aggressive, possessive, romantic, and self-centered but not straightforward, open, realistic, humble, trusting, nor consistent. Subjects agreeing with the work ethic factor II viewpoint also saw their hosts as proud and aggressive. Other adjectives deemed significant included tough, demanding, independent, shrewd, and domineering. In this world of work, however, Mexicans were not viewed as trusting, open, timid, humble, submissive, or tolerant. Factor III subjects may have been describing the Mexican female martyr who suffers in silence, sacrifices everything for her children, and is complacent about her husband's extramarital affairs. She was characterized as proud, hospitable, cautious, warm, affectionate, and religious but not offensive, unhappy, nationalistic, self-centered, materialistic, uncompromising, or cynical.

Six of the seven program participants changed their perceptions of Mexicans as a result of the orientation course (time 2). From time 2 to time 3 (post-Mexico experience), six of the seven students changed their views. Finally, after two semesters at home (time 4), four of the six students altered their perceptions of Mexicans. In the follow-up testing, no one returned to his or her original perception. Impressions of Mexicans were influenced by both the orientation course and Mexico experience, and the changes appear to have been lasting ones.

Two factors emerged from the analysis of the Q sorts in which the seven participants were asked to describe how Mexicans view Americans. Subjects loading significantly on factor I believed that Mexicans view their American neighbors as arrogant-ambitious-modernists. Adjectives supporting this interpretation included arrogant, vain, proud, ambitious, materialistic, uncompromising, domineering, and nationalistic. Americans, as seen by Mexicans, were not humble, simplistic, old-fashioned, religious, trusting, warm, sincere, or sensitive. In contrast, subjects agreeing with factor II felt that Mexicans view Americans as confident-humanists. According to this

viewpoint, the American was considered confident, independent, ambitious, materialistic, aggressive, open, straightforward, hospitable, and warm. But he was not frustrated, timid, humble, malicious, or offensive.

Less change occurred than was reported for the "Perceptions of Mexicans" Q analysis. Three of the seven students evidenced change in their views of how Mexicans perceive Americans as a result of the orientation course, three of the seven changed as result of the Mexico experience, and only one student changed during the two semesters at home. More agreement occurred with the negative factor I characterization. At final testing, six students associated with factor I, while four students held the factor II perception. (Three students shared both views of how Mexicans perceive Americans.)

For the final Q sort, participants were asked to describe themselves, and two factors emerged from analyzing their Q sorts. Subjects loading significantly on factor I described themselves as ambitious. Adjectives in support of this characterization included ambitious, realistic, independent, hardworking, consistent, conscientious, and responsible, but not timid or submissive. Humanistic and modernist traits were also in evidence: sensitive, sincere, but not rude, malicious, offensive, arrogant, superstitious, or old-fashioned. Humanistic traits predominated in the factor II viewpoint. Subjects agreeing with this factor saw themselves as hospitable, sensitive, tolerant, trusting, open, and considerate, but not domineering, uncompromising, malicious, arrogant, decisive, aggressive, or materialistic. Modernist traits were in evidence as on factor I: factor II subjects did not consider themselves superstitious or old-fashioned.

Three of the seven program participants changed their self-perceptions from time 1 to time 2, four of the seven changed as a result of the Mexico experience, and only one student changed during the two semesters at home. At final testing, five students agreed with the ambitious factor I characterization, while three agreed with the humanistic factor II.

(Only one student shared both viewpoints.)

Two conclusions were drawn from the results of this analysis: (1) The orientation course was as important as the Mexico experience in producing change. As a first exposure to "things Mexican," the orientation course may have led to a questioning of students' previously-held stereotypes. The semester in Mexico would then either confirm or deny the impressions acquired during the orientation. (2) Less change was uncovered in the follow-up testing, indicating that a stabilization of attitudes had occurred. To retest these seven students one or even two years later would be interesting. However, it would be difficult to account for all the influences on their attitudes during such a lengthy time period.

1981 VANDERBILT-IN-SPAIN PROGRAM

A unique aspect of the Q analysis conducted by Fisher (1982; cf. Fisher, Craig & Sell, 1982) was her role as participant-observer. This addition of an ethnographic research technique gave Fisher the opportunity to be "on hand" to witness events that accounted for change. Thirteen members of the 1981 Vanderbilt-in-Spain program--10 women and three men--agreed to participate in this investigation of change in perceptions of Spaniards. A 57-adjective Q sort was administered at the beginning and end of the Spain semester, while interviews were conducted at three time periods--beginning of the program, midway through the term, and during the last week of class.

Three factors emerged from the Q analysis. Factor I subjects viewed their hosts in an idealistic positive light. Spaniards were considered hospitable (+4), open (+4), proud (+4), warm (+3), sincere (+3), honest (+3), and happy (unhappy: -3) but were not viewed as cynical (-4), malicious (-4), irresponsible (-3), or self-centered (-3). Subjects who loaded significantly on factor II held a Latino macho negative view of their hosts. They described Spaniards as romantic (+4), vain (+4), nationalistic (+4), proud (+4), impulsive (+3), and irresponsible (+3). Their hosts were not deemed hardworking (-4), con-

scientious (-4), or ambitious (-4). Further support for the Latino macho characterization came from agreement with the following adjectives: affectionate (+3), inconsistent (consistent: -3), rash (cautious: -3), resolute (timid: -3), old-fashioned (+2), unpromising (+2), self-centered (+2), and arrogant (+2). Factor III represented a more realistic viewpoint including both positive and negative traits. Factor III subjects attributed the following positive characteristics to their hosts: honest (+4), hardworking (+4), trusting (+4), nationalistic (+3), and sincere (+3). The Spanish people were not considered timid (-4) or tough (-4). Negative traits included materialistic (+4), insensitive (sensitive: -2), and offensive (+2).

As a result of their semester in Spain, 10 of the 13 participants changed their perceptions of host nationals. There occurred no consistent pattern of change as indicated in the following breakdown by subject: (a) Two subjects (*d* and *k*) significantly decreased their factor loadings on factor I. (b) Subject *a* significantly decreased her loading on factor II. (c) A significant increase occurred in the factor III loading for subject *h*. (d) One subject, *i*, significantly decreased her loading on factor I, while increasing her factor II loading. (e) Two students (*c* and *l*) diversified their viewpoints; both moved from significance on factor I to significant loadings on I and II by the end of the Spain experience. (f) Two students consolidated their perceptions: Subject *f* moved from agreement with factors I and II to factor I only, while subject *m* moved from factors I and II to factor II only at time 2. (g) Finally, one subject (*b*) did not associate with any factor at time 1 but became identified with the factor III viewpoint by the end of the program.

In her conclusion, Fisher points to a gender difference in participant-host national contact. She observed that opportunities for genuine contact with Spaniards were more available to men than women. The Vanderbilt-in-Spain participants were therefore classified into three groups: (1) males who were able to associate with the Spanish people on numerous levels;

(2) females who dated Spanish men and acquiesced to their assigned role in the relationship; and (3) females who did not date Spanish men, kept company with other Americans, and therefore rarely used Spanish. Most of the changes in perception of their hosts can be explained by the group in which the students found themselves. In support of her participant-observer role, Fisher argued that the "interview technique is invaluable as an aid in explaining seemingly mysterious changes in factor loadings over time.... The student status of the researcher made available to her observations and off-the-cuff remarks of a kind not generally available to a program director or administrator" (Fisher, Craig & Sell, 1982: 22-23).

DISCUSSION

What is the advantage of Q methodology over traditional statistical methods in assessing the impact of foreign study on participant attitudes? Past research has seldom verified attitude change empirically. Researchers have attempted to detect significant change on such abstract concepts as worldmindedness and ethnocentrism. When no statistically significant increase or decrease is uncovered, they conclude that the foreign study experience had no impact on its participants. In direct contrast to this conclusion, program directors and participants repeatedly attest to important personal development resulting from cross-cultural experiences. Q methodology offers an alternative to the purely objective and subjective analyses reported above. Through the rank-ordering of adjectives or statements, individuals construct their viewpoints subjectively. Yet the resulting Q sorts are analyzed objectively through correlational and factor analyses to determine both composite perceptions and each individual's relationship to them. Pre and post administrations of the same Q sort are employed in determining perception changes, and a follow-up administration detects whether the changes are lasting ones.

In the five studies reported in this manuscript in which Q methodology was utilized, a remarkable amount

of diversity was uncovered in participant perceptions of the host country, its nationals, and themselves. No longer should we, as researchers, be concerned solely with whether a student has become more "world-minded" or less "ethnocentric." What must be examined is the diversity of viewpoints, how these views shape a participant's experience, and how the experience in turn modifies his initial perceptions. For, as Sell (1980) concludes, cultural awareness does not require loving another culture above one's own. It does, however, involve personal growth and a more mature, realistic way of viewing these cultures.

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NEWS, NOTES & COMMENT

Q and the Policy Sciences

Garry D. Brewer (Yale U), although not mentioned as such, is the primary author of "Elite Viewpoints on Energy," a Q study which appears as Appendix A (the 60-item Q sample comprises Appendix B) in Martin Greenberger, Brewer, William Hogan, and Milton Russell, *Caught Unawares: The Energy Decade in Retrospect* (Cambridge, MA: Ballinger, 1983). Two core viewpoints emerge from a Q cluster analysis of 150 Q sorts provided by energy elites in industry, government, and the academy primarily. The Traditionalist view is that oil and natural gas should be deregulated, that oil and gas prices are too low, that opposition to nuclear waste disposal overlooks technical solutions, that the likelihood of nuclear accidents is exaggerated, and that U.S. dependence on imported oil is a threat to national security. By way of contrast, the Reformist perspective emphasizes renewable sources (solar, biomass), the need for vigorous enforcement of environmental protection laws, and the value of a resource-conserving ethic. Both groups are sensitive to the vulnerability of the U.S. economy to oil cutoffs from abroad, but are equally agreed that military