ACTION RESEARCH

RESEARCHING CULTURE SHOCK:

THE <u>CULTURE SHOCK ADAPTATION INVENTORY</u> (CSAI)

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When a person goes abroad and enters a new environment, cultural cues that have been taken for granted as simply part of the "fabric of life" no longer are assessed accurately. Life becomes unpredictable and people have problems coping with even routine aspects of living. The simplest, semi-automatic tasks such as listening to the radio, getting a drink of water, going to the grocery store, driving a car, or chatting with neighbors require full concentration and attention to complete successfully. Since every detail, large and small, in the new environment demands the full attention of the expatriate, mental fatigue soon occurs which further frustrates the coping mechanisms.

This experience, as anyone realizes who has spent time in a foreign country or in a strongly divergent subculture in their own country, is known as "culture shock." Although the term "culture shock is often loosely applied to cover all forms of adjustment overseas" (Leveland, Mangone, & Adams, 1960, p. 47), Nagler (1977) through his examination of the research literature found that "there is general agreement on the broad definition of culture shock as a reactive phenomenon occurring as a result of culture change and including both cognitive and affective components combining to produce extraordinary stress on the individual migrant. The locus of this stress is variously identified. It is alternately regarded as the source and result of alienation from the new culture" (p. 35).

Whether or not an individual is able to adjust to the new environment and deal with the culture shock symptoms effectively is one of the primary determinants of cross-cultural success (Brislin, 1981; Gosnell, 1979; Harris & Moran, 1979; Stoner, Aram, & Ruben, 1972). With students, business executives, diplomats, technical personnel, missionaries, military personnel, and others travelling and living abroad and experiencing culture shock, it would expedite the adaptation process if agencies sponsoring these people were able to identify individuals who were having particular problems adjusting to the new environment so appropriate remedial measures, assistance, and/or intervention could be taken to prevent premature drop outs.

Because individuals differ greatly in the degree to which culture shock affects them (Oberg, 1958), individuals not able to make adequate adjustments to successfully ameliorate many of these symptoms are too often the "casualties" or premature drop outs from international living (Calhoun, 1977; Gosnell, 1979). In a study completed by the Center for Research and Education (CRE) in 1974, it was found that the "adjustment problems of Americans abroad are severe and adjustment failures... costly in terms of economics, efficiency of operations, intercultural relations, personal satisfaction with duty abroad" (p. 1). To promote the success and cost effectiveness of such international assignments, agencies are interested in identifying those who are likely to have problems or who are having problems in the second culture. No matter what function an individual fulfills overseas, strong culture shock, whether it results in lower productivity, mental/ emotional problems, or premature drop outs, is costly to all agencies involved internationally (Draguns, 1973; Dyal & Dyal, 1981; Harris & Moran, 1979; Tucker, 1974).

For example, according to figures supplied by the Military Personnel Budget Division, the Permanent Change of Station Budget Office (PERS 3112), it is "roughly estimated that the cost of early rotation from overseas amounts to over $20,000 for each officer and $9,000 for

each enlisted person... (with a) total cost to the Navy of early returnees for fiscal year 1974... estimated at $17 million" (Tucker, 1974).

U.S. multinational companies are also finding the attrition rate overseas to be costly. The money invested by the company in foreign transfers is sizeable taking into account the transportation of the employee, family, attendant household goods, cars, specialized training provided by the company and "hardship allowance" to improve the attractiveness of the position which often increases the salary to 2.5 times the U.S. equivalency salary. Precisely how many Americans "fail" overseas and return ahead of schedule varies from country to country and is very difficult to determine, but it was found in a CRE study (Harris & Moran, 1979, p. 163; Tucker, 1974, p. 1) that the most frequently cited figure for families who return early runs at the 33% mark. The company cost of early returning expatriates and their families to the United States varies according to the geographic area and employee status, but can range from $20,000 to as much as $210,000 for a top executive and family in a remote place (Harris & Moran, 1979, p. 164; Hays, 1972(a) (b); Daniels, Ogram, & Radebaugh, 1978).

Missionaries are also affected by a sizeable attrition rate. One-fourth of all missionaries do not complete their assignments or fail to return to the host country after the first vacation (Cleveland, Mangone, & Adams, 1960). In addition, Peace Corps volunteers evidenced an increasing attrition rate from 10% in 1961 to 37% in 1968 (David, 1972).

In addition, all too frequently international students on U.S. campuses become casualties of culture shock. Some are forced to return home prematurely and others decided to remain but fail to perform to the best of their potential (Clark, 1970; Gosnell, 1979; Johnson, 1971; Nash & Shaw, 1965; U.S. Advisory Commission of International Education and Cultural Exchange, 1974).

Unfortunately the number or percentage of international students who do not adapt is not known (Hull, 1978, p. 14). However, in a study conducted at the University of Michigan in

1978-79, 65.5% of foreign students polled on campus indicated that they had severe and very severe cultural adjustment problems, and 75.8% indicated that they had problems adjusting to the social structure (Oyeka, 1980).

Although cross-cultural researchers and the public sector have been highly interested in predicting overseas success for a variety of people in various functions such as the Peace Corps, business executives, technical assistants, military personnel, and international students, and have made repeated research attempts to identify those factors which reliably predict successful overseas adaptation (Brislin, 1981; Harris, 1972, 1973; Juarezm 1973; Smith, 1961; Tucker, 1974), predicting success and identifying those who will adjust successfully has proven to be elusive.

Because of the difficulty of identifying predictive variables, it may prove fruitful to step back a step to empirically identify those who are and are not adjusting to the environment. A number of researchers have remarked how little empirical work there has been done in the area of culture shock and cross-cultural adaptation processes. According to Klein (1979, p. 50) "there is a need for the development of concrete, objective means for assessing adjustment... in foreign student populations." Calhoun (1977) points out that although "the literature documents the existence of culture shock... and (the) negative effects (that) accompany the phenomenon, ...(there is) a paucity of literature which systematically investigates culture shock" (p. 2,5). He asserts that "the nature of culture shock and its effects truly need exploration" (p. 3).

To facilitate future research efforts, a new psychological assessment instrument was developed to assess the degree of culture shock a sojourner experienced.

Methods and Procedures

The culture shock Adaptation Inventory (CSAI) was developed in two stages: 1) A Pilot Test that produced the necessary background data to, in turn, produce 2) the revised edition

of the CSAI which was analyzed for initial reliability and validity. The instrument was designed to measure an individual's placement on a bipolar continuum reflecting the cross-cultural adaptation process, anchored with two poles: 1) CS Pole-Culture Shock and 2) CA Pole-Culturally Adapted. Four dimensions of culture shock adaptation were hypothesized: 1) Feelings of control of the environment; 2) Getting along with others; 3) Emotional well-being; and 4) Physical well-being, health, and safety. All test items were generated to reflect these two poles and four dimensions and these items were judged by a jury of seven experts from Foreign Student Advising, Bilingual/Bicultural Education, English as a Second Language, and Research and Measurement for appropriate placement on each of the poles and dimensions. This panel also reviewed the items for readability level, bias, offensiveness, and clarity. The Pilot Test of 112 items was administered to forty-two (42) graduate, undergraduate, and non-credit international students from 15 different countries attending English as a Second Language classes, excluding Level 1 (beginning English), at the University of Iowa Fall of 1982. In addition to using traditional psychometric analyses to assess item and subscale reliability and validity characteristics, construct validity evidence was also analyzed. Thirty-seven (37) items were identified for inclusion on the revised CSAI: The CE (Control of Environment) had 6 items; GA Scale (Getting Along with Others) had 10; E Scale (Emotional Well-Being) had 13; and P Scale (Physical Well-Being, Health and Safety) had 8 items.

The revised CSAI was administered to eighty-four (84) graduate, undergraduate, and non-credit international students from 29 countries attending ESL classes at the University of Iowa Fall of 1982 (excluding Level I) who had not been previously administered the Pilot Test. Coefficient alpha was computed to estimate the level of reliability for four subscales and the composite instrument. Construct validity was explored using multivariate and follow-up univariate analyses of variance (ANOVAs and MANOVAs) and by examining the relationship of the scale intercorrelations to the subscale reliability coefficients.

Summary and Conclusions

This study initially developed and validated the *Culture Shock Adaptation Inventory*, a psychological assessment instrument with four subscales each measuring a different construct, and all contributing to the total score measuring the culture shock adaptation of foreign students. The CSAI was initially validated on a sample population of 84 graduate, undergraduate, and non-credit foreign students from 29 different countries enrolled in English as a Second Language classes at The University of Iowa, Fall 1982. This Inventory was designed to be appropriate for use with the foreign student population at The University of Iowa and the appropriateness of its use with other foreign student groups is yet to be established.

The estimated reliabilities of the total CSAI was respectably high (.92) and compared favorably with other professionally-built, commercially-marketed validated psychological assessment instruments.

Both content and construct validity issues were relevant to this study. Content validity was addressed by careful sampling of a well-defined universe of items; by "sensible" methods of test construction; and through the efforts of a panel of seven judges, who reviewed, evaluated, and edited items for 1) appropriateness of content, 2) appropriateness of item categorization within the two by four (2 x 4) grid (two poles by four subscales) representing the "universe" of items, 3) for limited English proficient students, and for 4) bias and 5) offensiveness. In addition, items were empirically selected for inclusion on the CSAI using the results of item analyses.

Construct validity was addressed by comparing the intercorrelations among the subscales with their reliabilities, and conducting analysis of variance procedures to test whether nine hypothesized relationships between independent variables and culture shock

adaptation were significant, and whether other non-hypothesized significant relationships also existed among other independent variables and culture shock.

A comparison of the subscale intercorrelations and reliability estimates provided evidence for the uniqueness of the subscales in that their reliability estimates exceeded their subscale to subscale intercorrelations. This indicated that the scales were relatively independent of each other, and judging from the overall CSAI reliability estimate and subscale/ total correlations, the subscales contributed to the assessment of the underlying meta-construct—culture shock adaptation.

Nine hypotheses suggesting possible significant relationships were tested by analysis of variance procedures to further examine the instrument's construct validity. The results are presented below:

Supported	Hypotheses
No	1. Generally the longer the foreign student is in the U.S., the more adapted to U.S. culture s/he is as indicated on the *Culture Shock Adaptation Inventory*.
Yes	2. Students from the Orient will be less culturally adapted than their Western counterparts in the U.S.
Yes	3. Students who have lived abroad in another country before the U.S. will experience a higher degree of cultural adaptation.
Yes	4. Students who have previously traveled abroad in other countries will experience a higher degree of cultural adaptation.
Yes	5. Students living with Americans in home situations will experience a higher degree of cultural adaptation.
Yes	6. Students with a higher self-perceived English ability will experience a higher degree of cultural adaptation.

Yes   7. Graduate students will experience a slightly higher degree of cultural adaptation than undergraduates.

Yes   8. Sex will not be related to degree of cultural adaptation.

Yes   9. Age will not be related to degree of cultural adaptation.

In addition to these nine hypothesized relationships, further exploratory analyses of variance procedures were conducted to identify other possible relationships between culture shock adaptation and various character, behavioral, and attitude traits of foreign students. The overall MANOVAs identified 10 out of 16 remaining variables that had a significant ($p<.06$) relationship with culture shock adaptation. These were the following:

1. Number of American friends

2. Number of American acquaintances

3. Number of American homes visited

4. Expectations of life in the U.S.

5. Orientation to life in the U.S.

6. Personality type (Outgoing/ shy)

7. Planned length of stay in U.S.

8. Amount of time spent talking with Americans weekly

9. Employed in the U.S.

10. Time exposed to U.S. media weekly

The six remaining variables that were found to be independent of culture shock adaptation were:

1. Magnitude of religious belief

2. Number of years previously attended school

3. Marital status

4. Sponsored by an agency

5. Time at the University

6. Time talking to international friends weekly

Examining the results of the ANOVAs, it was found that the four scales interacted with the independent variables in ways that were supported by previous research evidence.

In conclusion, other data must be gathered to assess the CSAI's usefulness with other groups and for other purposes, but considering the minimum amount of development that has been involved, it appears that the *Culture Shock Adaptation Inventory* functions fairly well, and with additional research, the usefulness of the CSAI is likely to be improved.

Limitations

The results of this study may be limited in their generalizability. The reliability and validity data gathered apply only to foreign students, and may not be applicable to business executives, military personnel, or other persons abroad. Since current data on the foreign student population in the U.S. for the 1982-1983 school year is unavailable, generalizability to this more current population is a possibility that is, as of yet, unsubstantiated. In fact, the reliability and validity data are only preliminary for foreign students and further administrations of the instrument are necessary to more adequately sample the foreign student population of interest so that refinement of the items and subscales can be continued. Because most of the international students in the study were enrolled in English as a Second Language classes, language and cultural interferences may have occurred, but, based on the results of the empirical item analysis, only one item, GA6, seemed to have been subject to this interference. Instead of a longitudinal study of a group of international students, this survey sampled attitudes, feelings, and behavior of international students in residence from a few months to over four years. Because the numbers within each nationality

or ethnic group were too small for meaningful statistical analysis, responses from the sample were analyzed as one group.

The high number of questions may have produced a fatigue factor, but this was controlled for by attempting to give the largest number of items (112) to the advanced English-speaking group, and the final form (37 questions) to the intermediate and the remainder of the advanced ESL groups. Because ESL students were being polled, those international students with the highest English proficiency were not included.

Inherent in the self-report technique of gathering data was the limitation that self-perception or limited self-awareness may not produce the same results that the investigation of a trained and objective observer might produce; however, self-assessment provided the additional dimension of measuring the student' degree of confidence in his/her ability to speak English, which appears to be related to the degree of culture shock adaptation.

Significance of the Study

The *Culture Shock Adaptation Inventory* appears to be functioning well enough to merit further development and research. Some of the recommendations for future study include:

1. Maintain the four subscales since there appears to be substantial empirical evidence to indicate the reliability, validity, and usefulness of the four subscales, but as new items are added, conduct further empirical analysis to examine the effects of the additions.

2. Attempt to improve reliability and validity by adding more items to the scales and equalizing the number per scale. The effect of doing this is shown by the following example using the Spearman-Brown Step-Up formula (Lord & Novick, 1968). Assuming that the additional items are similar in nature to the items already on the

CSAI, increasing the four subscales from their present length to 15 items each, thereby creating a 60-item CSAI should provide the following results:

Table 21: Projected CSAI Reliabilities for 15-Item Scales

Scale	Present Number of items	Present Reliability Estimates	Projected Number of Items	Projected Reliability Estimates *
CE Scale	6	.53	15	.74
GA Scale	10	.76	15	.83
E Scale	13	.81	15	.83
P Scale	8	.70	15	.81
Total CSAI Scale	37	.92	60	.95

Reliabilities projected using the Spearman-Brown Step-Up formula for 15 items

Equalizing the four subscales would greatly improve the CE and P Scales' reliabilities, and should have a positive effect on the factor analysis and interscale correlations.

3. The CSAI should be administered to a substantially larger and more diverse sample population involving several campuses throughout the U.S. to further investigate its psychometric properties, and to, perhaps, eventually standardize the results.

4. A portion of experimental items should be included on each administration of the instrument to continue instrument development.

5. The possibility of developing other forms of the CSAI for other groups such as the Peace Corps, business people, the military, missionaries, and U.S.> students going abroad, or the possibility of developing different forms for various foreign student groups here in the U.S. could be explored.

6. With a larger and more diverse sample population, further construct validity can be pursued by applying two-way ANOVA tests with interaction to investigate what other variables may be effecting the culture shock adaptation process.

7. Also with this larger sample, smaller levels could be used in measuring the independent variables, and therefore trends could be more closely detected, e.g., the "U-curve" of adjustment in regard to the duration of the visit.

8. Item GA6 should be closely looked at and either modified or eliminated.

9. Edit all newly generated items plus the old ones to control for idiomatic or slang expressions, obscure vocabulary, semantic problems, syntactical complexity, and the use of passive voice.

10. Add more independent variables with which to measure the construct validity of the instrument and to find predictive factors.

11. Consider deleting some of the independent variables that had little or no correlation: Time at The University of Iowa, Number of years previously attended school, Sponsorship by an agency.

12. Develop institutional and student report forms.

13. Develop computer programs and forms to facilitate analysis of data and reporting of individual results to the institution or subject.

14. To further investigate the validity of the CSAI, the relationship between CSAI scores and foreign student adviser's evaluations of the degree of culture shock and type of adjustment problems individual students are experiencing, obtained from personal, in-depth interviews should be examined.