

CHAPTER VIII

CHAPTER VII

SUMMARY, CONCLUSIONS, IMPLICATIONS AND SUGGESTIONS

7.0.0 Introduction

The final chapter draws together the summary of the investigation, major conclusions, educational implications and suggestions for further research. Before proceeding to any of the conclusions and their implications, it may be mentioned here that the generalizations based on this study are applicable only to similar population (Vide Caption 2.2.0). Moreover, greater confidence can be placed on conclusions when applied to groups rather than to individuals. The conclusion have their implications in the field of cross-cultural perspective in creativity and environmental factors in creativity.

7.1.0 Summary

A summary of the total investigation giving briefly the rationale of study, the problem, objectives, hypotheses, design, sample, tools is presented below.

7.1.1 Rationale of the Study

Torrance on the basis of records pleads :
"Historical records are compelling. How can one otherwise account for the great number of creative musicians in the period of a single century in Europe? How can one account for the preponderance of great artists and sculptors during the Renaissance? Why were there so many inventors in the late nineteenth century? Why does Australia produce so many good tennis players, and Russia so many good woman athletes? Why has the past ten years produced so many outstanding Negro athletes?" As Reynolds (1958) has pointed out, it is doubtful that the basic potentialities of people vary greatly from one century to another. It seems that many kind of talent, including creative talent, exist in most populations at any given time. Reynolds explains this by suggesting the principles that "talent will develop most frequently and to the highest level in the fields that are given heroic character essentially what Plato said in ancient Greece. Such are the powerful influences of cultural and historical factors in the nurturance of creative development and functioning. It is because of these influences that the nature and number of creative productions showed great -

variations between cultures and within the same culture at different times (Kroefer, 1944). Since culture has such a pronounced role in creativity development, the understanding and study of cultures in relation to this important human functioning has its own right for research.

Cross-cultural psychological research as Horrocks (1972) has pointed out, is becoming increasingly common and increasingly extensive in scope. But in spite of the fact that the volume of literature on creativity has increased very rapidly since the early 1950's cross cultural creativity research is almost neglected. A survey of the Psychology of Creativity Bibliography by Hlavsa (1972) shows that only .58 percent of literature is devoted to cross-cultural explorations. Most of it is buried in master's thesis, doctoral dissertations, and other unpublished reports. Of 50 completed comparative studies of creativity, using instruments developed by Torrance (1969), only 12 have been reported in easily accessible sources. In the main, creativity research has been national oriented rather than international.... Few studies have investigated the educational and cultural determinants of creative behaviour in other cultures (Ogletree, 1971). The present study will, perhaps,

answer some questions to this maddeningly complicated area.

According to Taylor and Holland (1964) they have mentioned that "creativity attributes may possible be modified in either positive or negative direction by environmental influences." The investigator as a Thai student studying in India has observed that the main differences with regard to academic institutions between Baroda City (India) and Bangkok City (Thailand) were educational setting, working conditions, climate and training programme. If the differences in creative thinking exists, it may be the results of differences in these environmental factors.

There are other studies aiming at comparing the creative thinking of samples across cultures. These studies are conducted by Mead and Metranx (1953), Johnson (1963), Vernon (1966), Alex Osborn et al (1965), Torrance (1969), Stevens (1970), Singh (1970), Mari (1971), Torrance and Walker (1971), Langgulung and Torrance (1972), and Vullope (1976). The studies related to correlates of creativity across the culture of Thailand and India are not available. Therefore, the present study was undertaken to compare the Creative Thinking of Indian students (Baroda) and Thai students (Bangkok) belonging to age range 13⁺ to 16⁺ in the context of independent variables of -

socio-economic status, school climate and classroom behaviour. While selecting these variables the investigator has kept in view the effect of them to the creative thinking of the child (Roe, 1953; Weisberg and Springer, 1961; Mackinnon, 1965; Schaefer and Anastasi, 1968; Oden, 1968; Coleman, 1961; Elizabeth Drews, 1961; Soar, 1968; Flanders, 1970 and Rappel, 1970). These researchers have reported that among the home and institutional environment factors affecting creative abilities, the roles of family background, school climate and classroom interaction are very important.

Scientific investigations on the various environmental factors (both in home and school) conducive to creativity are sadly lacking in India and Thailand. In fact, seen in the perspective of the overall - investigations in the field of creativity, their proportion is very small suggesting the field as a whole is open for research and is mostly unexplored. The present study is one which make an effort to resolve the issue as whether the differences in creative thinking is a function of environmental and cultural factors.

7.1.2 The Problem

The problem reads as : A comparative study of

creative thinking in relation to socio-economic status, school climate and classroom behaviour of high school students in Baroda City (India) and Bangkok City (Thailand). It was designed to compare the Indian high school students and Thai high school students in relation to their socio-economic status, school climate and classroom behaviour. In the present study, the creative thinking has been represented by various dimensions of the Passi Tests of Creativity (PTC - Verbal Form) and the Torrance Tests of Creative Thinking (Figural Version Form A and Verbal Version Form B). It is studied in relation to socio-economic status measured, by the Kuppuswamy's Socio-Economic Status Scale, school climate measured through the Organizational Climate Descriptive Questionnaire developed by Desai, D.M. and Samrong (1975), and classroom behaviour as observed by the Flanders Interaction Analysis Categories (A ten category system).

7.1.3 Objectives

The following were the objectives of the present study :

- (i) To compare creative thinking of Indian students (Baroda) and Thai students (Bangkok).
- (ii) To study the relationship of creative

thinking of high school students of Baroda City (India) and Bangkok City (Thailand) in accordance with their socio-economic status, school climate and classroom behaviour.

(iii) To study the interaction effect of country, socio-economic status, school climate and classroom behaviour upon ^{their} creative thinking.

(iv) To compare the factor structure of the space due to variables relating to creative thinking of Indian (Baroda) and Thai (Bangkok) students.

7.1.4 Hypotheses

Bearing the above objectives in mind, the investigator formulated the following null hypotheses for the present study :

(i) There is no significant difference in the creative thinking of the high school students in - Baroda City and Bangkok City.

(ii) There is no relationship between the socio-economic status and creative thinking of Indian students (Baroda) and Thai students (Bangkok).

(iii) There is no relationship between school climate and creative thinking of Indian students (Baroda) and Thai students (Bangkok).

(iv) There is no relationship between classroom behaviour of teachers and creative thinking of Indian students (Baroda) and Thai students (Bangkok).

(v) There is no interaction effect due to - country, socio-economic status and school climate of Indian students (Baroda) and Thai students (Bangkok) upon their creative thinking.

(vi) There is no interaction effect due to country, socio-economic status and classroom behaviour of Indian students (Baroda) and Thai students (Bangkok) upon their creative thinking.

(vii) There is no significant difference in the creative thinking of Indian students (Baroda) and Thai students (Bangkok) with respect to sex.

These null hypotheses were tested. The alpha level of 0.05 was accepted as the level of confidence for rejecting or retaining any of these hypotheses. The definition of the terms used in the hypotheses have been given in Chapter I, under Caption 1.9.4.

7.2.0 Design

It is a descriptive correlational study which involved variables of creative thinking as criterion variable and socio-economic status, school climate and classroom behaviour as variates (independent variables). Therefore, there are three sets of

variables - criterion variables of creative thinking namely, Seeing Problems (SP), Unusual Uses Fluency (UF), Unusual Uses Flexibility (UX), Unusual Uses Originality (UO), Unusual Uses Creativity (UC), Consequences Fluency (CF), Consequences Originality (CO), Consequences Creativity (CC), Creativity Total (CY), Figural Fluency (FF), Figural Flexibility (FX), Figural Originality (FO), Figural Elaboration (FE), Figural Creativity (FC), Verbal Fluency (VF), Verbal Flexibility (VX), Verbal Originality (VO) and Verbal Creativity (VC) - controlled variables of country and sex and independent variables as socio-economic status, school climate and classroom behaviour.

7.2.1 Sample

The present study employed the stratified cluster design of sampling. The population in the study included all the secondary school students with age range of 13⁺ to 16⁺ years of grade IX in Baroda City (India) and Bangkok City (Thailand).

The study employed three different samples :
 (i) Student Sample; (ii) Teacher Sample - 1; and
 (iii) Teacher Sample - 2.

(i) Student Sample : The student sample consisted of 300 Indian students (Baroda) and 300 Thai students (Bangkok) of grade IX belonging to

age range 13⁺ to 16⁺ years. The sample was drawn from six English medium schools in Baroda and six secondary schools from Bangkok. The details of student sample with regard to age and sex are given in Table 7.1.

TABLE 7.1 COMPARISON OF SAMPLE OF INDIAN STUDENTS (BARODA) AND THAI STUDENTS (BANGKOK)

COUNTRY	VAR	YEARS	NO. OF STUDENTS		TOTAL	PERCENT		TOTAL
			M	F		M	F	
INDIAN	AGE	13 ⁺	41	61	102	13.67	20.33	34.00
		14 ⁺	57	72	129	19.00	24.00	43.00
		15 ⁺	30	21	51	10.00	7.00	17.00
		16 ⁺	11	7	18	3.67	2.33	6.00
			139	161	300	46.34	53.66	100.00
THAILAND	AGE	13 ⁺	16	25	41	5.33	8.33	13.67
		14 ⁺	43	53	96	14.33	17.67	32.00
		15 ⁺	59	54	113	19.67	18.00	37.67
		16 ⁺	33	17	50	11.00	5.67	16.67
			151	149	300	50.33	49.67	100.00

M = Male.

F = Female

(ii) Teacher Sample - 1 : The teacher sample consisted of 100 Indian teachers and 100 Thai teachers. These teachers were selected from same six schools in Baroda and Bangkok which the student sample was - selected.

(iii) Teacher Sample - 2 : Three teachers of grade IX from each of the six schools were selected for observation. Therefore, eighteen teachers were selected from Thailand and the same number from India. Each teacher was observed twice by Flanders' Interaction Analysis Categories System (A ten category system).

7.2.2 Tools used

The tools used for the present study were :

- (i) The Passi Tests of creativity (Verbal Form).
- (ii) The Torrance Tests of Creative Thinking (Figural Version Form A and Verbal Version Form B).
- (iii) The Kuppuswamy's Socio-Economic Status Scale (Form B).
- (iv) The Organizational Climate Descriptive Questionnaire (Based on eight dimensions of Haplin and Croft's Organizational Climate Descriptive - Questionnaire).

(v) The Flanders' Interaction Analysis Categories System (A ten category system).

The rationale for selection of these tools is given in Chapter II (Vide Caption 2.3.1).

The brief description regarding the tools used in the study is given as follows :

(i) The Passi Tests of Creativity (PTC - Verbal Form) :

The battery of "Tests of Creativity" was constructed and standardized by Passi in Punjab University in 1967, both in English and Hindi. The details of standardization sample, validity and reliability are not given here. This consist of six subtests : The Seeing Problem Test, The Unusual Uses Test, The Consequences Test, The Test of Inquisitiveness, The Square Puzzle Test and The Blocks Test of Creativity. Among them the first three are verbal tests and the others are partially non-verbal in nature. The first four can be administered to a group of 30 students at a time or individually and the fifth test namely, the Square Puzzle Test can be administered either individually or to a group of not more than six students. The sixth test can be administered individually only.

In the present study, only the three verbal tests namely, the Seeing Problems Tests, the Unusual

Uses Test, and the Consequences Test have been used.

(ii) The Torrance Tests of Creative Thinking (TTCT) :

These tests are very popular in this field and consisted of four batteries of test activities - two verbal and two figural. These were developed after a lot of research efforts. These tests included Verbal Form A, Verbal Form B (an equivalent alternate form to verbal A), Figural Form A, and Figural Form B (an equivalent alternate form to Figural A). An attempt is made, however, to assess the products that result from the administration of these test activities in terms of divergent thinking factors like fluency, flexibility, originality, and elaboration.

In this study, The Torrance Tests of Creative Thinking (Figural Form A and Verbal Form B) were used. The Figural Form A of the Torrance Tests of Creative Thinking (Torrance, 1966b) consists of the following three 10-minute tasks or activities : Picture Construction, Picture Completion, and Repeated Figures (Parallel Lines). The Verbal Form B (an equivalent alternate form to Verbal A) consists of the following seven tasks or activities : Asking Questions, Guessing Causes, Guessing Consequences, Product Improvement, Unusual Uses of Tin Cans, Unusual Questions and Just Suppose. The most recent -

information regarding reliability, validity, norms, scoring, and test administration are provided in the technical manual (Torrance, 1966).

(iii) The Kuppuswamy's Socio-Economic Status Scale (Form B) :

Kuppuswamy (1962) developed a socio-economic status scale (SES), consisted of two forms; namely, Form A and Form B. Form A is meant for adults who are either earning or who are out of employment. It may be used as a schedule to be completed by the investigator by asking question, specially, when the persons are illiterate. Form B is for school boys. It is based on three criteria namely, Education, Occupation and Income. In the present study the investigator used Form B to obtain socio-economic status score of the pupils.

(iv) The Organizational Climate Descriptive Questionnaire (Based on eight dimensions of Haplin and Croft's Organizational Climate Descriptive Questionnaire) :

The present version of the organizational climate descriptive questionnaire was based on Haplin and Crofts' Eight Dimensions. It was adapted by Desai, D.M. and Samrong (1975) by adding the other four new dimensions. The classification of dimensions were as follows : Disengagement, Hindrance,

Esprit, Intimacy, Allofness, Production Emphasis, Thrust, Consideration, Freedom and Democratization, Communication, Human Relation and Organization - structure. It was likert type scale consisting of 120 statements.

(v) The Flanders' Interaction Analysis Categories (A ten Category System) :

Flanders Interaction Analysis Category System (1970) was used to observe the classes. It is an observational technique designed to observe and code classroom verbal behaviour of the teacher every three seconds, using a ten category system. The system is made up chiefly of three major components - teacher talk, student talk, and silence and/or confusion. The details of various categories and their description may be seen from the Appendix XI.

7.3.0 Major Conclusions

To achieve the objectives of the study, seven hypotheses were tested. Eighteen criterion variables of creative thinking were the main criterion variables, based upon which major conclusion were drawn. (Vide Caption 7.2.0). They are given below.

There exists significant difference in the mean creativity between the Indian students (Baroda) and the Thai students (Bangkok). The Thai students

have significantly higher mean scores in all dimensions of creative thinking than their Indian counterparts.

Socio-economic status has impact on creative thinking scores of both the Indian students (Baroda) and the Thai students (Bangkok). The students from higher socio-economic status have more creative thinking than the lower socio-economic status for Indian, Thai and Total Samples.

The open school climate group and closed school climate group for Indian, Thai and Total samples were found to have significant mean scores in the case of sub-tests of the PTC but the results were reverse as regards the dimensions of the TTCT.

The different classroom behaviour groups did not differ significantly with regard to criterion variables of creative thinking for Indian, Thai and Total samples.

There is no interaction effect among country, socio-economic status and school climate of the students upon their creative thinking.

There is no interaction effect among country, socio-economic status and classroom behaviour of the students upon their creative thinking.

There exists no significant difference in

creative thinking scores of the students for Indian, Thai with respect to sex.

When principle component of factor analysis on the correlation matrix (19 x 19) was carried out and varimax rotation was done, four and six rotated varimax factors of Indian and Thai samples were extracted out respectively. Out of them, seven factors were named. They were : (i) General Creative Process, (ii) Consequences Creativity, (iii) Figural Elaboration, (iv) Unusual Uses Fluency, (v) Verbal Creativity, (vi) Non-verbal Creativity and (vii) Sensitivity to Problems.

7.4.0 Educational Implication and Suggestions

Creativity is a goal that educators will have to strive towards more earnestly in the last quarter of this century. This is a necessary response to the processes of rapid scientific and technological advancement which have moved the quality of everyday life towards great complexity and diversity. "Creative children constitute one of the nation's most valuable assets. The future of our nation - our very survival depends upon them. A dearth of creative man-power is now felt in every branch of our national life and is probably one of the highest bottlenecks to our progress. Poor as we are financially, the poverty of creative talent is still greater. Hence the

national interest now demands increased emphasis on creativity in all branches of science, technology, literature and art. We must invest in them because the return to society is many times more than what it costs" (Singh, 1977). At this juncture, it can only be said that the research in creativity have not - attained sufficient maturity to the extent that categorical answers to the questions raised by Trowbridge (1966) as (a) Can creative talent be measured in - advance? (b) Is it capable of modification to a desired direction and extent? (c) Are the efforts put into increase the creative talent sufficiently rewarding? and (d) Are researchers aware of the socio-psychological methods and techniques which would surely contribute to increase in creative thinking? may be given.

Taylor and Barron (1963) in their editorial comments said "We are perhaps more in the dark about the environmental conditions which facilitate creativity than we are about any other aspect of the problem. There are many other instances where difficulties have been observed, experienced and reported by researchers in the context of such fundamental questions."

Before making any specific recommendation, the investigator further submits that the generalisations based on these study are dependent upon the efficiency

of the sample and tools used and are applicable to similar population (quoted earlier). Nevertheless, keeping in view the available resources of money, personnel, and attitudes of the administrators the investigator would recommend formulation and execution of new policies based on the findings of this study. The following few suggestions having educational implications are made.

It is surprising that comprehensive and effective educational programme for creative children has not yet been tailored and scientifically tried out. Kothari Commission (1966, page 240) has rightly reported, "Even the talent that enters school and succeeds in climbing the educational ladder does not flower fully because it is not discovered sufficiently early and is studying in poor schools. For obtaining the best results in quality, talent has to be located early and allowed to grow in the best atmosphere and under the best teachers." Identification consists of screening and selection of creative children. It is not to stamp them with a seal and an end in itself. It is to be functional and geared to the educational ~~observation~~ programme. Early identification, on the basis of tests and observation is always desirable. The provision of experts' service is of immense value for making their correct identification.

The findings of the present study have their implications relating to cross-cultural perspective in creativity. It has been found that there exists significant difference in the mean creativity between Indian students (Baroda) and the Thai students (Bangkok). Each culture, as Ross Mooney (1969) maintains; has a "logos". It is, perhaps, this logos which either acts as a catalytic force or as a deterrent to the development and expression of creativity. It is because of this logos that cultures differ in the specific activities which they encourage and stimulate and value. The "higher mental processes" of one culture may be relatively worthless "stunts" of another (Anastasi, 1949). Cropley (1972) says that cross cultural creativity research should help in checking out the universality of experimental findings, and in explaining the relationship between various cultural practices and styles and later behaviour - it will provide a kind of natural laboratory, in which, for example, the variability (or absence of variability) in adult behaviours seen in different cultures can be related to differences and similarities in child rearing in those cultures. It also provides a new vantage point from which to study one's own culture.

If culture and historical influences are so powerful, is it possible for teachers, educational

methods and materials, and parents to make real differences in the creative development and functioning of children? Evidence calls for definite "Yes". Each culture should develop its own ways and means to encouraging the creative thinking in children. This has to be done with the reason that one technique of enhancing creative thinking may be fitted to one culture but not to the other and vice versa.

Again the conclusions of the study have immediate implication for environmental factors in creativity. It is proper here to quote Gupta (1977) that unless teachers, parents and guidance personnel know about the various environmental factors which may influence creativity, they can not devise effective ways and means to nurture and enhance children's creativity. Torrance (1963) says similar thing as "I know fully well that creative performance depends heavily upon home and school conditions, the response to creative needs, and whether creative thinking and creative achievement are rewarded or discouraged".

Therefore, the parents and teachers should be aware of the important role of home and school environment in order to provide desirable situations to creative growth of the children.

Creative pupils need creative teachers for importing them instruction in creativity. In the national system of education and training centres, provisions should be made for the training of creative teachers in various fields of creativity. Centres of Extension Services in Creativity should be started and teachers and pupils should be given fair opportunity to receive instruction in the specific aspect of creativity. Services of eminent creative professors should be employed in these centres.

Since the democratic educational institutions make provisions for the maximum development of all the important disciplines of life and since every creative aspect needs promotion of the specific creative factors and specific type of trait development in the creator, it is essential that creative environments for various aspects of creative products, i.e. scientific, artistic, mathematics, etc. facilitative to the specific creative process must be promoted in the educational institutions by organising various outdoor as well as indoor programmes and by equipping the classroom lesson with stimulating and encouraging three dimensional teaching aids and educational instruments.

Newton, S. Metfessel (1967) has outlined the

following techniques which may enhance creativity in the school learning situations :

- (i) Place a high value on creative output.
- (ii) Reinforce creative performance in a positive manner.
- (iii) Emphasize divergent rather than convergent thinking.
- (iv) Assist students in the development of models of inquiry and discovery.
- (v) Guide students in the use of multi-disciplinary approaches.
- (vi) Assist students in the crossing of - subject-matter lines.
- (vii) Allow students to initiate, carry out and evaluate their own research projects.
- (viii) Establish climates of flexibility and openness by exemplifying warmth, permissiveness and acceptance.
- (ix) Provide a rich variety of materials and experience opportunities.
- (x) Strive for a fine balance between individual enterprise and co-operation in creative endeavours.

The following general suggestions are offered for the promotion and preservation of creativity in the educational institutions of India and Thailand :

(i) The creative persons should be given due recognition in the societies by the Indian and Thai leaders in politics and in academy who are traditionally a bit critical, closed and non-appreciative in outlook.

(ii) The creative process should not be blocked because of external or internal factors creative confusion and conflict in the creator.

(iii) The creative products should be duly rewarded in the societies and the creators should be encouragingly reinforced for their contributions.

(iv) The politics - oriented educational system should be converted into academy - oriented education.

(v) Creative environments should be promoted in the educational and social institutions by organising various programme and by equipping the class-room-teaching with stimulating teaching aids.

(vi) Creative talents should be given full freedom for the expression of their creativity in school and at home.

(vii) The intellectual and creative aristocracy should be honoured, encouraged, promoted and preserved.

(viii) A scheme of Extension Services Centres for creativity should be launched in every state. Several fronts imparting instruction on a specific area of creativity should be started. Pupils and teachers should be given fair opportunity to attend these centres and to refine their creative process and creative products.

(ix) Creative pupils should be imparted instructions in the specific area of creativity by specially trained creative teachers. All training colleges should make provisions for the training of creative teachers in their specific areas.

(x) The social perception of the society should be radically changed. The strong faith of the society in the convergent thinking of the pupils should be broken and an equal social status should be ascribed by the society to the divergent thinkers also. The creative persons and creative products should be socially approved, accepted and recognized. The students should be helped to develop the hope of success and a purpose of life. The generational gap should be bridged by developing new socio-academic norms for the creative leaders of this democratic nation.

(xi) For promoting divergent, unusual, original thinking, social values should be effectively taught

in the schools. Three dimensional way of teaching should be emphasized. The creator should be - honoured with appreciation, reward and reinforcement, and not at all with doubt, depreciation and discouragement. Creative products should not be thought of by the teachers as objects of challenge, risk and danger, but should be considered as object of honour, of reputation, and of glory.

(xii) Creative pupils should be given full freedom for thinking, feeling and doing. Novel ideas of the creator should be a source of joy, and hence, they should be welcomed, enjoyed, promoted and - preserved.

Opportunities should be made available to the talented pupils for insightful observation and rich experience by organising visits to the places of scientific exploration and technological excellence, or by meeting the persons of eminence in various fields of creativity.

7.5.0 Suggestions for Further Research

Keeping in view the findings of the present study, as well as that of related studies, the following suggestions for further research are being put forward :

(i) In the present study, the creative thinking of Indian students (Baroda) and Thai students (Bangkok) was observed in students of grade IX only. More research studies should be done covering different grade levels (cross-sectional approach).

(ii) It should be replicated with other samples (various cities in India and Thailand), in order to see whether the differences in creative thinking exists or not.

(iii) Studying the effects of different background conditions on abilities listed in the "Structure of Intellect" (S-O-I model), and particularly creativity should be conducted.

(iv) Comparison of creative works when there is consistent Weltanschauung and when one is lacking, or when there is a conflict of philosophies (Stein, 1967). This should, perhaps, mean sort of "temporal" cross cultural studies.

(v) Child rearing practices and creative - development across various cultures.

(vi) Comparative studies of creativity in - public school and traditional school students to answer question about continuity and discontinuity.

(vii) Motivational and cognitive styles of the creative persons across culture who break out of their cultural milieu and cultural envelop, i.e., transcendence of cultural background.

(viii) Training for creativity and cultural effects.

(ix) Cultural change and creativity.

(x) Malnutrition, cultural deprivation and creativity.

(xi) Pluriculturalism (Cropley, 1973) and creativity.

(xii) The creative thinking in relation to aptitudinal variables should be undertaken in these two countries.

There is much room for more studies on cultural determinants of creativity and such studies should help develop "antropology and sociology of creative thinking" (Yamamoto, 1969). It is suggested that while making cross-cultural exploration, researchers from various disciplines need to collaborate, otherwise it may prove to be a love's labour lost. Interdisciplinary approach to cross cultural research may, perhaps, solve many issues. Cole et al

(1971) too proposed that educators may capitalize on the anthropologist's experience and method in delineating settings and descriptions in natural settings and descriptions in natural arenas in ways that are not culture bound and on the psychologist's experience in designing experiments and measuring outcomes. Without the first, no meaningful instrument or experiment can be designed, without the second, intuitive hunches go untested. Ones may feel that they can learn more together than they can separately.