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SOME NOTES ON

THE MEASUREMENT OF INSTITUTIONAL MATURITY

By R. W. Roskelley*

INTRODUCTION

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This report is a supplement to two other studies entitled, "Study of Institutional Maturity of West Pakistan Agricultural University, Lyallpur," Contract No. AID/nesa-413 and 414, and "A Study of Institutional Maturity of East Pakistan Agricultural University, Mymensingh." Both studies and reports were done by J. A. Rigney and R. W. Roskelley.

The search for the meaning of maturity: how to identify and measure it in agricultural universities in developing countries are questions of merit.

Maturity is defined and used in this paper and others by the same authors as that stage in the development of an institution when it has acquired the minimum physical facilities, plus the combination of total resources necessary for teaching, research, extension, and administrative functions that enable it to play a vital, dynamic role in the economic and social development of its country.

The challenges of building maturity into an agricultural university became matters of real concern when it was discovered that in those cases where technical assistance had been withdrawn before maturity

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had been achieved, the university soon became engulfed again in ivory tower traditions and practices. The absence of a vital concern among faculty members and administrative personnel about pressing problems and rendering practical services to the country make it impossible for the university to play a significant role in promoting the agricultural economy of the nation. To the extent that this has happened in the different developing countries of the world, there was a serious loss of technical assistance investment.

That part of the CIC-AID study which was devoted to an analysis of institutional maturity sought answers to a number of questions.¹ One of these that was answered in an earlier study was: "What are the essential attributes of an institution per se?" The answer to this question was found in the study reported by Esman and Blaise.²

A second question was: "What combination of distinct attributes and characteristics have the great agricultural universities in America acquired which have made it possible for them to contribute so abundantly to the economic and social development of their respective states and to the nation?" In trying to find the answers to the second question, it became obvious that rendering service to the public, that is, discovering and teaching answers to current and pressing problems, was the secret of success of the great universities in America. With this plausible answer for the reasons of success, the next question asked was: "What features or attributes do the universities have which enable them to render effective service?" Interviews with many people, plus some

¹R. W. Roskelley and J. A. Rigney, "Measuring Institutional Maturity in the Development of Indigenous Agricultural Universities," one portion of the Final Report of the CIC-AID Rural Development Research Project, Contract No. AID/csd-840.

²M. J. Esman and H. C. Blaise, "Institution Building Research: The Guiding Concepts," (Mimeograph), Graduate School of Public and

reading and reflection, provided some suggestive answers. It was the attitudes, the doctrine, and the philosophy toward the university, toward its goals and roles, plus the unique means that were employed to implement the ideals that constituted the essence of the university. These ideals found expression in many ways. Hence, it was the quality of teaching, research, off-campus education, administration, and relationship with individuals and groups within the state and the nation that were the heart and soul of the great university. It was the unique, distinctive features that have been developed in each of these variables that helped account for the dynamic attributes of the institution. An examination of those foreign institutions where technical assistance had been terminated before maturity had been reached revealed that the technical assistance processes had not brought about meaningful changes in these areas from those already found in the typical Asiatic university.

The CIC-AID study referred to above sought to identify some of the critical ideas and practices in each of the areas identified above.³ Steps were taken to develop measuring instruments to determine the extent to which these variables have become a significant part of any developing agricultural university. It should be noted in passing that the Blaise and Esman study, referred to above, devoted itself exclusively to the delineation of the guiding concepts of building institutions of higher education in general. The task which the CIC-AID study attempted to answer was:⁴ "What are the particular and unique distinguishing features that are identified with dynamic, vital, service-oriented agricultural universities?" It was felt that anyone attempting to develop these kinds of programs through technical assistance, should

³Roskelley and Rigney, op. cit., p. 5.

⁴Ibid., p. 6.

know the essential features of such an institution. They should also know the ways and means of incorporating these features into the functional organization.

The important variables whose presence or absence determines the vitality of an institution are listed in the study by Roskelley and Rigney.⁵ The variables are:

A. Teaching

1. Teacher's attitude toward his major function
2. Teacher's relationships with students
3. Teacher's execution of function
4. Teaching methods employed to achieve objectives
5. Relationship of subject matter content to the country's needs

B. Research

1. Volume and productivity of research
2. Proportion of projects directed to high priority problems
3. Capability of staff for documenting the relevance to the country's needs

C. Extension Education

1. Definition of extension function by the university
2. Identification of priority activities with the country's needs
3. Coordination with other agencies
4. Improvement of system (organizational self-improvement activities)
5. Use of such principles and processes as: group dynamics, local leadership, and community organizations
6. Focus on best technology

D. Administrative Incentives

1. Stimulation of professional improvement
2. Recognition and reward for excellence
3. Delegation of authority
4. Sharing in making professional decisions
5. Effective use of controls
6. Development of public support

⁵Ibid., p. 7-8.

AN ASSESSMENT OF THE PROCESS

I. Not enough work was done to create the necessary understanding among the U.S. or host country personnel as to the purposes and procedure of the evaluation team. The visiting team attempted to telescope too many activities into too short a period to achieve the greatest possible results. Local power struggles and political unrest also proved to be disturbing elements in the exercise.

Our original task was to assess maturity. This was later changed and we were asked to help personnel at the host institutions develop instruments to measure maturity and set the stage for actual measurement at some future date. The latter exercise is to be done by the local staff. This change in directives did not, in itself, present great handicaps. There was not sufficient understanding of the whole exercise among enough people, however, for it to function most effectively. Lack of understanding did create problems.

For the most part, we were given a welcome by everybody, including the host nationals. They were willing to assist in every way possible. However, it was not possible for them to be helpful in terms of a real understanding of what we were about to do. They found it difficult to define their own roles and contribute to the exercise in a meaningful fashion. Because of this lack of knowledge, it was difficult to prevent the exercise from being carried out by the visiting team rather than a joint exercise in which the visiting team could have become a functional part of a maturity exercise that was understood and had developed some momentum before their arrival.

The earlier work on institutional maturity that was carried out by the visiting team in 1967 was done over a period of several months. Much time was spent during the early stages to try and involve the staff members at the host institution and other interested people in the importance of assessing maturity. Consideration was given to defining maturity, as well as exploring some ways and means of evaluating it. In light of our Pakistan experience, these preparatory activities must be done, and if this preliminary work is not carried out, the exercise of measuring maturity cannot be done most meaningfully.

Based upon our experience to date, it appears that the maturity measurement operation can be divided into about four phases and last from four to six months. The identification of these phases, an enumeration of some activities, and who should be involved are presented in the following:

A. The first phase or stage could be defined as one of warm-up and general orientation.

This part might be carried out by USAID or contract personnel who have some insight into the subject of maturity measurement. (Experience suggests that technical assistance personnel must learn more about the different aspects of institution building as such, in order to function most effectively.) They should work in cooperation with a few host institution faculty members who are most knowledgeable in the field of building institutions. The early work should include a review and discussion of the literature on the nature of institutions and the measurement of their maturity. Dialogues should be developed as to the need for such measurement, the purposes served, how it could be done, and its contribution to the further development of the institution. Out of

this general dialogue, it should be possible to create a general understanding and a desire on the part of the host institution personnel to proceed with the evaluation even though there is, at this stage, some lack of knowledge about the details of the anticipated exercise.

In phase one, the committee members should be very certain that they arrive at a consensus and understanding as to the role and the function of the institution. They each should also understand the features that should be built into the institution to enable it to play the assigned role. Unless this is done at an early stage in the operation, the measurement activities or other things that are anticipated in later developments have little meaning.

Our work in Pakistan was seriously handicapped because practically no one at the host institution or USAID headquarters in Pakistan had seen any of the published literature on the development of a measurement exercise. The team sensed acceptance of the objectives, however, and there was a general favorable reaction to the proposed operations, although neither USAID nor host country nationals really understood very much of what was expected. Thus, the preliminary ground work that could have provided greater understanding and cooperation was not carried out. Even though we were received very cordially by the host country nationals, we sensed that they still retained some fears and apprehensions. These fears could have been obviated to a great degree if the exercise could have been more completely understood before the arrival of the visiting team. The literature did not get into the hands of enough persons allied with the institution before the team arrived. But a few copies were available and these had not been studied extensively.

There are other reasons why the groundwork, as described above, needs to be done with host nationals before strangers are invited in to assist

with any measurement exercise. If sufficient understanding is not created, the best nationals have great difficulty in understanding what the visitors are attempting to accomplish. There was evidence that a number of university staff members at Lyallpur and Mymensingh did not get a true picture of what the evaluation team was attempting to do until it was about ready to leave the campuses. Some faculty members never learned what the exercise was about. An example of the kinds of problems encountered in West Pakistan illustrates the necessity of doing some basic preparatory work before the arrival of an evaluation team. Even though the team was welcomed in a wholesome fashion, they sensed some uneasiness among host nationals about the exercise. The team was not able to identify the difficulty at first. Later, however, it was learned that a number of host nationals were concerned lest the evaluation reveal some defects that would be exposed to the public. The host nationals were not sure what use would or could be made of the data collected in evaluating maturity. The exercise was nearly over before the team members understood the serious lack of understanding that prevailed among the local staff. In terms of strategy, it would seem most important to establish correct understandings early in order to avoid the necessity of correcting misunderstandings later in the exercise.

Meaningful cooperation and maximum learning experiences for the host nationals in institution building cannot be generated during a short period of time attempting to evaluate maturity if the necessary preliminary groundwork has not been carried out.

B. During the second phase, the instruments should be developed and decisions made about procedures for carrying out the evaluation exercise.

This phase could be carried out by the same committee that worked and gave direction to phase one, with the assistance of at least one person, perhaps from the outside, who is experienced and knowledgeable about maturity measurement exercises. During this second step, programs should be developed to further orient, interest, and involve the faculty. The host nationals can acquire meaningful experiences in building institution by assisting to develop the measurement instruments. Measurement instrument already developed in other exercises should not be presented to the committee at this time. Instead, the basic measurement ideas should be discussed and the committee should explore different procedures for measuring all aspects of maturity. Only after this necessary groundwork has been accomplished and understanding has been achieved should the formal measurement instruments that have been developed to date be presented to the committee. Even then they should be submitted only as suggestions that are subject to modification or change that is consistent with the interests of the committee and good measuring techniques.

In any effort to measure institutional maturity, it is extremely important that participating individuals know what the essential elements of an institution are. In addition, they need to know the particular features of the institution they are trying to develop. There are many different kinds of universities. It is important that the essential elements of the land grant model be incorporated into the measuring device and not elements peculiar to other types of universities. In addition, it is important to realize that the measuring exercise should assess the

elements of an institution as such, and not the products of an institution. Examples have been encountered which suggest that sufficient differentiation has not been made between an institution per se and the products of institutional operation.

As a part of phase two, attention should be given to methods for checking the validity and the reliability of the data collected through the use of the questionnaires. There are many ways that this can be done. Attention should also be given to techniques of quantifying, coding, tabulating the data, and presenting the results. Such methods and procedures are obvious to any person really acquainted with behavioral science research.

C. The third phase of maturity measurement is the actual utilization of the developed instruments at the particular institution.

The general instructions that are given in the manual entitled "Measuring Institutional Maturity in the Development of Indigenous Agricultural Universities," by Roskelley and Rigney,⁶ spell out in some detail the steps that can be taken in the measurement process. If the instruments used have a reasonable likeness to those presented in the manual mentioned above, the general procedures can be followed. If, however, there is a great deviation from this kind of measurement practice, then new methods of procedure must be developed and, after adequate testing, applied in the measuring exercise.

The use of any measurement instruments involves techniques developed to provide checks and cross-checks to insure a high degree of validity and reliability. Errors in reporting do arise. These need to be found and corrected. Our technique, which has proven quite satisfactory,

⁶Ibid., p. 14.

is to interview additional staff members and seek their confirming or modifying comments relative to the information collected. Experience has shown that staff members will cooperate effectively, and that it is possible to appraise the validity and reliability of the data collected if the host staff has a thorough understanding of what the exercise is trying to accomplish.

D. The fourth phase is to codify the data and tabulate it in the most meaningful form and to provide an interpretation of the results.

Special attention should be given to the kinds of analysis that show the strong and weak points in the institutional maturity scale as revealed by the different measurement criteria. Reference is made again to the Roskelley, Rigney manuscript on pages seven and eight.⁷ An examination of these areas of investigation reveals that there are several questions in the instruments of measurement that refer to each of the topics listed. It is possible to develop a score for each of the topics. With such a score on each idea, comparisons can then be made with general areas of teaching, for example, thus revealing where improvements are needed. By working out a cumulative score for each general area, it is possible to make comparisons between the different aspects used to insure maturity. The weaknesses indicate areas where additional technical assistance can be utilized to strengthen the institution. In attempting to measure different segments of maturity, it is important that the investigators not stop when the weak places are identified. Consideration should be directed toward use of resources, kinds of inputs, timing, and strategy to overcome the revealed deficiencies.

⁷Ibid., p. 6-7.

Although the research team was not able to use the questionnaire in East Pakistan or West Pakistan because of reasons reported, there is nothing in the experience which would indicate that the instruments were not valid as a means of measuring institutional maturity where possible.

We found that visits with deans, department heads, and staff members were very meaningful experiences. Through the informal visits, we were able to ask many of the same questions that would have been asked by the questionnaire; and we think we received some valid answers.

On the other hand, our experience with the use of two methods of assessing maturity, the informal interview and the application of the measuring instruments, suggests that the interviews, if used alone, have some serious limitations. First, it is difficult to obtain enough detailed, hard data. Second, the development that comes to host country staff members who go through the complete exercise of developing and using formal measurement instruments designed to measure true maturity is a meaningful educational experience. And, once the assessment has been made, if the host nationals can be helped to sit down and study the data, ask what it means in terms of the strengths and weaknesses of the institution, and initiate steps that will assure maximum future growth, then and only then can the full potentials of the evaluation exercise be realized.

The experience of the evaluation team to date suggests that the real question is not whether one method is better than the other, but rather how both methods can be used most effectively in the evaluation exercise. The informal, partially structured visits have a real place

in collecting data and gaining insight into the maturity concepts that must, in turn, be reduced to precise measurement. The informal interview also is valuable as a means of checking the validity and reliability of some data collected with the instruments. Neither method is completely adequate if used alone. Both complement and supplement each other. The task of using both is not so time-consuming that they cannot be carried out to good advantage together during the exercise of measuring maturity.

II. The importance of strategy was verified.

Strategy, as a key concept in institution building, was given much consideration in the CIC-AID research project.⁸ The Pakistan experience on measuring maturity re-confirmed the significance of this concept. The experiment placed certain features of strategy into sharper focus and indicated some new dimensions.

A review of the two reports named at the beginning of this paper reveals a rather significant difference between the two institutions. Each university, as it existed at the time of the study, was a product of the patterns of strategy exercised to date. There is some evidence of lack of strategy at each institution. However, it is more pronounced at one than at the other. In the foregoing papers, an effort was made to identify patterns of strategy that were needed to correct weaknesses that existed in the respective institutions. Suggestions were made regarding the use of technical assistance in terms of the goals that were expressed. Suggested technical assistance was also spelled out in the light of the desired patterns of maturity. Changes in the mix of inputs and timing were emphasized.

⁸Ibid., p. 105-128.

Changes of inputs in relation to timing and goals are important. However, in reviewing the goals of the institution during the later stages of maturity, it is very necessary to decide the activities that need to be completed, cleaned up as it were, before new patterns of relationships emerge.

Persons engaged in programs designed to develop agricultural universities are confronted with the challenge of identifying a series of stages from the beginning of the project until it reaches maturity. This kind of planning and operation would imply short time and long time goals. The former should contribute to the achievement of the latter in a definite fashion. Specific kinds and mix of inputs should be made at those times when greatest returns could be realized. All these kinds of things involve strategy. It should be explicitly conceived and applied in project operation in terms of goals and stage of maturity.

AN ASSESSMENT OF THE CONTENT OF EVALUATION

I. Introduction

The experience of the evaluation team in Pakistan confirms the general validity of the criteria presented earlier in the printed publication entitled "Measuring Institutional Maturity in the Development of Indigenous Agricultural Universities." On the other hand, the experience also revealed the need for the addition of some new concepts, a change in the use of some terms, more emphasis on certain ideas, and some additions and deletions in the content of some measuring instruments. The discussion which follows provides an assessment of the content of evaluation.

We found that the areas of teaching and research, as spelled out in the publication by Roskelley and Rigney,⁹ are adequate for two of the four general areas listed; namely, teaching and research. The teaching instruments, as they are, allow for patterns of flexibility in their application. By using discussion with individuals or small groups, good opportunities are provided not only to collect data, but to discuss a variety of ways to make teaching and research more effective.

Examination of the instruments designed to evaluate the quality of research indicates the great emphasis that can be placed on delineating present problems for research. Consensus can be sought easily from the groups indicated in the outline. The steps taken by the host staff members to obtain consensus and support from groups and individuals outside of the university community are a good measure of existing linkages. They also provide effective ways for establishing new ones.

⁹ Ibid., Appendix, p. 1-11.

II. New Concepts that Need to be Added to the Idea of Maturity:

A. The Role of the Institution in Society. The Pakistan experience suggests that this is a critical issue. At one institution there is a clear, meaningful definition of the institution's role in society. Consensus is evident. Both the clarity of the conceived role and the consensus are strong motivating forces to achieve excellence at the university. At the other agricultural institution visited, however, there is a considerable difference of opinion among the staff members as to what the role of the institution in society should be. These conflicting ideas prevent the university from successfully developing towards maturity.

The desired information relative to the role of the university can be obtained by formal questionnaires or by informal interviews. If the material is obtained by instruments, a sheet could be given each staff member with the request to answer the following question: "What do you think the role of this university should be in society?" Another alternative would be to list a variety of roles that the university might play, and ask the person to check the two which he thinks are the most important. If interviews are held, identical questions should be asked and the answers should be recorded.

B. The Ability of the Institution to Develop its own Leadership. This element was not identified in the preliminary maturity measurements. Experience in Pakistan indicates that attention should be given to this area. When an institution is mature, it must have arrived at that stage where it has confidence in itself and has acquired the necessary capabilities to be an agent in the creation of new knowledge.

at the master degree and doctorate levels. This means that the university will be more or less independent of outside resources for training its staff. This goal of independence is one that the institution should keep in sight. The technical assistance program should help pinpoint the degree of attainment a university should reach before the institution itself can assume the major role of creativity.

III. Change of Terms

Substitute the Word Leadership for Administration. The word administration is a sensitive, threatening word even in America. Here most administrators feel somewhat threatened when their functions are examined. In developing countries the positions of administrators are very precarious. Appraisals are also more threatening because the word administration often carried many political connotations. The Pakistan experience suggested substituting the word leadership for administration. It is much less threatening. Experience suggests that questions in the field of administration in the manuscript outlined above can be asked if the work is done in the name of leadership instead of administration.

IV. More Emphasis of Certain Ideas

Linkages. The Pakistan experience indicated the necessity of giving additional emphasis to the subject linkages in the measurement of institutional maturity. Many of the individual questions in the instruments for measuring research, agricultural extension, and administration provide meaningful insights into the presence or absence of the formation of linkages by the university. The Pakistan experience suggested, however, that the subject of linkages needs to be followed

out and given more attention. It is felt that additional formal measuring instruments are not necessary, however. Sufficient data can be collected by personal interviews with administrators and staff members. General inquiry can be made of the broad patterns of working relationships that the university personnel have with segments of off-campus society. Considerable attention is given to the subject of linkages in the reports on institutional maturity at Lyallpur and Mymensingh.

V. Some Additions and Deletions of Content of Some Measuring Instruments

Agriculture Extension. Agricultural extension programs will depend somewhat upon the concept that the institution has of the role it should play in its country. The definitions of these roles vary greatly from university to university throughout the world. For this reason, the same measuring devices cannot be used for all institutions. It is felt, however, that there are some common elements in any agricultural university regardless of its specific role in the operation of an extension program throughout the nation.

Our experiences in Pakistan indicate that three variables must be given consideration in the maturity evaluation of extension at any university. They are not included in the publication by Roskelley and Rigney referred to above. These variables are: first, the development of curriculum and the formal teaching of courses which are designed to acquaint prospective agricultural extension workers and other students with the theory, philosophy, and techniques of agricultural extension procedures. These courses and teaching procedures could be evaluated in the same manner as any other academic discipline.

Second, the role of the extension service in bridging the gap between the university and the outside world needs attention. This function is usually given to the agricultural extension service. It needs to be accorded high priority in institutional development. It does not preclude nor limit individual staff members from developing connections with the outside public. In the Pakistan experience, no formal list of questions was asked. At one university informal discussion with the extension personnel revealed that they had some specific concepts as to what they thought needed to be done in bridging the gap between the university and the outside world. They had also developed some meaningful programs to achieve their objectives. At the other university very little had been accomplished.

Third, the evaluation of extension for the role that it is playing in creating a public image of the university within the society needs to be included in the maturity measurements. This is a vital function and one that can be determined rather easily by simply making a series of inquiries about the public relations programs that are being developed through the newspapers, radio and television stations, and other communication channels.

If the extension service does not envision any use of extension specialists, the material presented in the publication by Roskelley and Rigney¹⁰ cannot be utilized as such. On the other hand, the basic concepts that are being studied are important to the total maturity exercise. If they are not included under the work of the specialist, the ideas should be included in some other part of the evaluation program.*

¹⁰ Ibid., Appendix, p. 16-18.

* The writer is aware of the fact that little attention is given to any measurement of physical structures or other features that are easy to count in this report of the maturity exercises. Experience suggests that, as a rule, they are well documented but are not the critical variables.

ASSESSMENT OF SENSITIVE TOPICS

I. More cooperative working patterns between USAID and university contract personnel are needed to help develop the broader objectives and activities of the agricultural universities.

There is ample evidence that USAID and university personnel have centered upon the particular jobs they thought were within their respective areas of perceived responsibility. Little attention, however, has been given to the jobs they both must work on to achieve success. Isolation and separation are characteristic of most institutions in developing countries. Some degree of integration and cooperation with other institutions operating in Pakistan is the pattern that must be achieved if the agricultural universities are to grow and make the contributions they should. Each agricultural university in the United States has a headquarters with an identified geographic home base. On the other hand, each of the universities has looked upon the boundaries of its respective state as the limits of its campus. This has meant the establishment of many patterns of cooperation with other institutions or groups within the state. A few years ago the land-grant universities re-defined their boundaries and extended them to include the nation. Today in many of the universities, one would find many staff members who insist that the world is their campus. All technical assistance personnel must help the host institution understand and acquire patterns of operation that will enable them to gradually exert an ever-expanding sphere of influence and operation within their nation, as well as beyond.

II. There is urgent need for parallel growth of the vital segments of the institution.

Institutions are composed of many interlocking and inter-related parts. The four traditional areas that are recognized as most significant in an agricultural university consist of teaching, research, extension, and administration. There is an old adage which says that "a chain is no stronger than its weakest link." In a sense, this observation holds true with institutions.

The CIC-AID study of institutional development in various countries has revealed cases where parallel growth of all of the vital segments of the institution has not occurred. Frequently, the greatest and most gratifying growth has occurred in the teaching and research fields. In some universities extension has made significant progress. In yet other universities administration has proven to be vital and dynamic in the institutional development. On the other hand, there is much evidence in one of the two institutions that were examined in Pakistan which indicates that the differentials in growth of the different parts of the institution may serve as a great impediment to the over-all development and achievement. In East Pakistan particularly, the areas of teaching and research are far ahead of the agricultural extension. It is unlikely that much research information will be shared effectively with the farm population or other groups because the agricultural extension services have shown but little development. Equally serious is the lack of cooperation patterns between the extension service in the ministry of agriculture and the extension program of the university. Some attention is being given this problem now; but for the most part, it is rather weak. In the report that was prepared before leaving Pakistan, mention was made that the extension staff is poorly trained in comparison to the rest of the institution's

staff. This means that the image of extension on the campus is not too favorable. In addition, extension functions which may be assigned this division will not be carried out effectively with other institutions in the country because the staff members are not capable enough to perform the required tasks. Other cases of comparable nature could be cited.

In East Pakistan, agricultural engineering has received very little attention to date in the development of the total university. Because agricultural engineering is a critical area for teaching, research, and general improvement of the total agricultural segment of society, the delay in building this program will likely cause a rather significant delay in the over-all maturity of the institution; and its impact upon the country will be minimized.

III. Steps need to be taken to fully utilize the host country's own teacher-education institutions to provide technical assistance to agricultural universities and improve teaching quality.

The report on maturity of the agricultural universities in each wing of Pakistan suggested that there was a need to strengthen the teaching field. Some suggestions were made as to how further technical assistance from the U.S. could be used. But this is only a partial solution. A review of the academic training of the average staff member revealed a conspicuous absence of any training in the art and science of understanding and teaching students. Most faculty members of agricultural universities have assumed that proficiency in one's chosen academic discipline qualifies one to be a good teacher.

The U.S. technical assistance program has helped develop some fine faculties in teacher training institutes in Pakistan. These, if properly

utilized, could contribute greatly to the improvement of teaching programs in the agricultural universities. Ways and means need to be developed and explored by which the technical competence found in the host country's teacher education institutions can be utilized to upgrade the teaching in the agricultural universities. It would seem that technical assistance personnel, USAID, and contracting universities should help establish these necessary cooperative patterns.

IV. Some problems can be avoided and training programs can be maximized if the participants are encouraged to do their graduate work at different U.S. agricultural universities.

In one of the universities in Pakistan, it was learned that nearly all of the participants had completed their graduate work on the campus of the sponsoring U.S. university. One of the serious handicaps that the host university encountered to date has been the lack of consensus due to conflicting points of view between European and U.S. trained personnel as to what the role of the university should be and how it should be executed. Some personnel recognized this, but expressed concern about what they thought was already another serious source of irritation and dissension on the campus. These difficulties centered around the problem of whether a person had or had not received his graduate training on a particular campus in the United States. Cleavages, both social and professional, had developed. Some persons were included and others excluded, depending upon the place of their graduate training. A few administrators and staff members expressed concern about these growing cleavages and felt that they would grow worse in the future. Those who spoke felt that professional acceptance based upon the place of graduate work was contrary to the very essence of a university.

The worldwide study reported in the book entitled Building Institutions to Serve Agriculture,¹¹ discovered evidences that clanishness and other problems on campuses developed when too many of the trainees did graduate work at the sponsoring institution. In the light of these kinds of difficulties which are an outgrowth of policies, considerable concensus emerged among staff members on the project to the effect that not more than fifty percent of the trainees should do their academic work on the campus of the university providing technical assistance. Institutions in developing countries will be delayed in achieving maturity if the processes of technical assistance contribute to situations creating discord within the host institution itself. There is need to capitalize on the potentials of developing maximum breadth and depth in academic affairs of the host university by broadening the base of the participant training program.

V. Experience has proven that persons who are not host nationals, but are participating in the maturity exercise, should be extremely careful and avoid the use of terms or doing anything that in any way can be construed as representing cultural imperialism or interference in local power struggles.

In most of the developing nations, there is a keen sense of pride and much identity with their own country. They are very resentful of impositions by people from the outside. If the maturity exercise is not handled very carefully, it can easily be identified as an encroachment upon the prerogatives of the host nationals, or it can be viewed as a threat to someone in the traditional power struggles. Experience suggests that even though

¹¹Building Institutions to Serve Agriculture, A Summary Report of the CIC-AID Rural Development Research Project, Committee on Institutional Cooperation, Purdue University, LaFayette, Indiana.

much care is exercised, difficulties will arise if considerable understanding about and the will to participate in the maturity exercise are not generated among the local staff before activities are initiated.

VI. In university circles there is much evidence of apathy toward the results of research on institution building.

When USAID and U.S. universities started to develop programs designed to build agricultural universities in foreign countries some 17 years ago, there was only limited information on the theory and the procedures of institution building. In the absence of anything derived from research, the persons engaged in technical assistance operated on the basis of best judgments and hunches.

In recent years several research reports on institution building have been published. The Pittsburgh study and the one completed by CIC-AID are illustrations of meaningful research. These reports have been the product of scientific inquiry. In them one can find statements of theory and operational principles. There is much consensus among persons most knowledgeable in institution building to the effect that if the principles as such can be studied, understood, and applied in project development, the effectiveness of the technical assistance program would be improved a great deal.

Recent experiences abroad, plus observation on some campuses in the United States suggest that there is much apathy toward these studies in the academic communities. There is evidence of a great tendency for administrators and technicians to shelve the studies after a brief review and continue to implement technical assistance programs using only best judgment and hunches without ever getting thoroughly acquainted with the published

material or subjecting it to tests in order to determine its validity or usefulness.

There is a great need within the university circles to find ways and means by which the studies can be understood and used to implement technical assistance projects now. If this were done, it would be possible to draw tentative conclusions as to the relative merits of hunches or published principles derived from research, as the best means of building institutions. In the process of testing, it is quite likely that new methods and better ways of technical assistance would be discovered.

The Agency for International Development of the United States government needs to examine, very critically, the extent to which its field staff members, charged with the responsibility of institution building, are making a full use of the results of research in order to play their respective roles most effectively.

VII. There is need for better understanding of the various aspects and implications of "phase out" programs by all technical assistance personnel and host nationals.

The termination of a technical assistance project is a topic and a process that is accomplished with many emotional overtones.¹² U.S. interests are best served if the phase out exercise is done in an atmosphere of complete understanding and agreement on the part of all parties participating in the contract.

In order for this to prevail, there must be consensus about the different phases and degrees of maturity that should be achieved before termination becomes operative. Pre-project planning and frequent project review

¹²Ibid., p. 117-118.

provide for the establishment of goals and decisions on strategy to achieve them. If goal achievement, as the basis of termination, can be thoroughly explained and understood, the traumatic experiences of termination are reduced to a minimum.

There are many reasons which suggest that the understanding of the term, "phase out", should be conceptualized in relative terms. That is, before U.S. technical assistance has been discontinued, patterns of cooperation between two sister institutions should have been developed to the extent that they will continue to operate beyond the time when technical assistance is terminated.