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THE BASIC VILLAGE EDUCATION PROJECT

(PROGRAMA DE EDUCACION BASICA RURAL)

GUATEMALA



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THE BASIC VILLAGE EDUCATION PROJECT

The Basic Village Education Project (BVE) was an experimental non-formal education program designed to explore the potential of modern communication technology for use in rural development programs. More specifically, BVE sought to determine the effectiveness and relative costs of selected media combinations appropriate for use in development programs with limited resources. Carried out in two contrasting regions of Guatemala, BVE has more than local or even national significance. Both the results and the experience gained in developing and managing the educational program have much broader relevance and applicability.

The Setting and the People

Guatemala is a small agricultural country of great geographical contrasts. Its terrain ranges from the rain forests of the Peten and the rugged mountains of the Highlands to the wet, low-lying South Coast and the dry, hilly Southeast. But the agricultural productivity of this land is low.

About two-thirds of Guatemala's nearly six million people live in rural areas, and over sixty percent of the labor force is engaged in agriculture. Guatemala's peasant farmers share many characteristics with traditional peasant societies throughout the world. Relatively few individuals can read and write, and large numbers of rural families have not yet been reached by educational and other development programs. The people of Guatemala are as diverse as its terrain, however; they may be generally characterized as Ladinos and Indians, two highly distinctive broad ethnic groups.

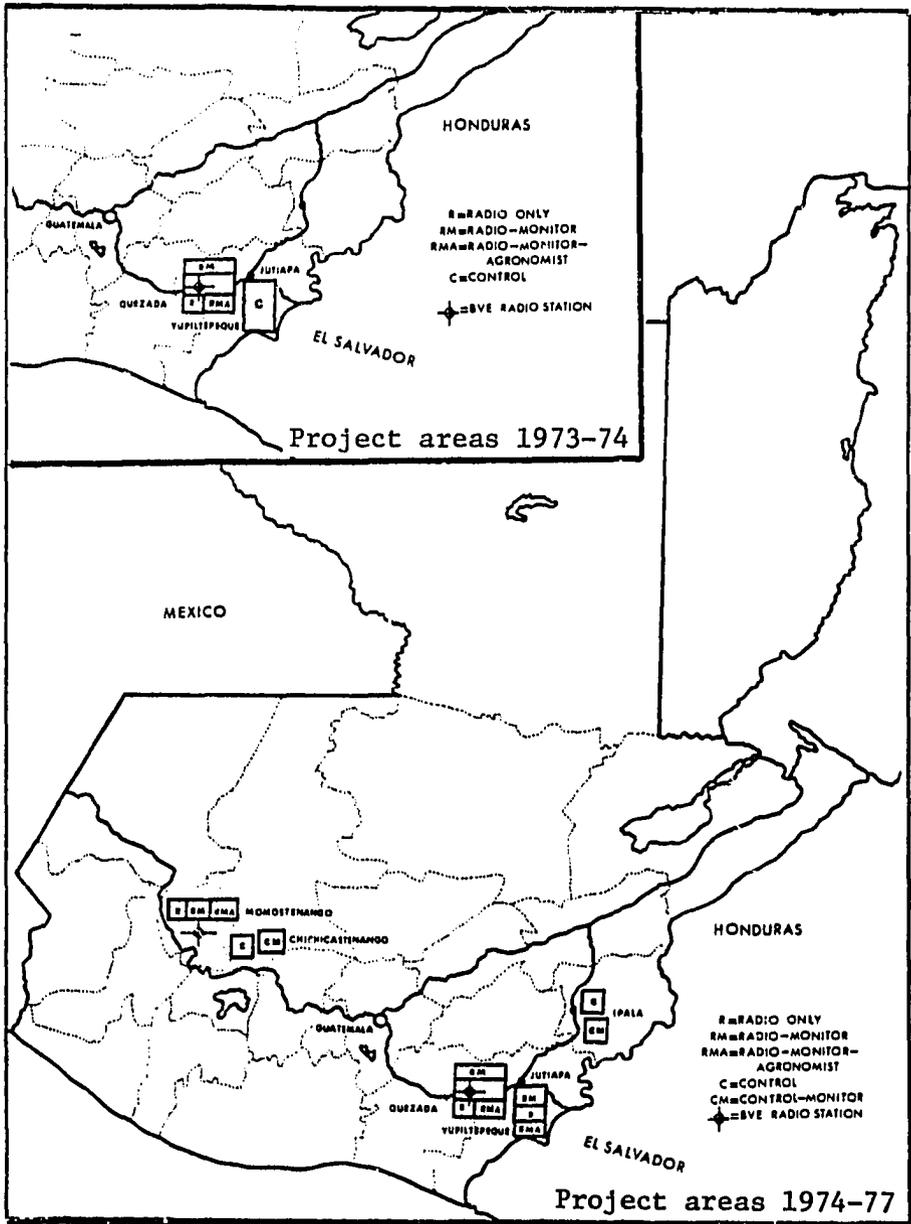


Figure 1

Basic Village Education Project experimental and control areas, 1973-1977.

Project Design

The Basic Village Education Project consisted of two parts. One was a carefully controlled non-formal education program whose participants were not required to be literate. The second was a rigorous evaluation of that program's impact on the level of knowledge, the attitudes, and the agricultural practices of its target population. Subsistence farmers, who eke out a living on small tracts of land and many of whom are illiterate, constituted the primary audience. It was to this group that timely agricultural information was directed in an effort to help them improve their production and income from subsistence crops.

For the BVE experiment, matched experimental and control areas were established in two strikingly different cultural environments. (See Figure 1). The program was initiated first in southeastern Guatemala, a region populated primarily by Spanish-speaking Ladinos. Later, it was activated in the area of Quiche-speaking Indians in the western Highlands. People in different parts of the experimental area in each region received the same basic messages through one of four combinations of communications media (message delivery systems). Insofar as possible, BVE messages were excluded from the control areas.

The BVE message delivery systems, three of which involved the use of educational radio, are described briefly below.

Under System R (Radio), educational messages reached the target population only through mass media, principally radio. The project installed two radio stations for this purpose--Radio Quesada Educativa to serve the southeastern region and Radio Momostenango Educativa for the Quiche-speaking Highlands. Each station was on the air eight hours a day during prime time, Monday through Saturday.

About twenty percent of the BVE radio programming broadcast from both stations featured information related to agriculture. Daily agricultural programs included a 30-minute core program, thirty to forty spot announcements, and notices of Ministry of Agriculture activities. The weekly radio forum was broadcast twice each Saturday. The daily core program, which was broadcast first in the afternoon and repeated over the air the following morning, included: an episode of a radio novel, counsel from the agronomist, and other short features interspersed with music. Programming was specially prepared for each region, taking into account cultural sensitivities as well as differences in information needs.

The greater part of the broadcast day was devoted to music, items of local color, and other types of non-agricultural programming tailored to attract and maintain a large listening audience. Mixed in with such entertainment each day were educational programs on health, family matters, and culture.

System RM (Radio-Monitor) utilized interpersonal contact to supplement the radio; farmers were linked through a "monitor" to the mass media delivery system. This monitor, a local person employed and trained by the project, worked directly with farmers in his own and in three or four neighboring villages.

The monitor visited each of his assigned communities weekly, talked with farmers about their agricultural activities, and invited them to attend a meeting in the late afternoon. When the farmers had assembled, he used a pre-recorded cassette tape with coordinated flip-charts in presenting and stimulating discussion on the agricultural message of the week. That same message was later broadcast, on Saturday, as the radio forum of the week.

Monitors met with their supervisor weekly to report on their work, on farmers' reactions to the program, and on what was happening in their villages.

In exchange, the supervisor handed out audio and graphic materials needed for the following week, and trained the monitors in their use.

System RMA (Radio-Monitor-Agronomist) was the most intensive treatment. In addition to the mass media and monitor combination described above, System RMA also provided a low level of technical assistance --the equivalent of about 600 and 300 families per agronomist in the Southeast and Highlands, respectively. Each BVE field agronomist assisted the monitors, attended radio forum meetings periodically, conducted agricultural demonstrations, helped identify local production problems, and advised farmers. This technical assistance agent also trained and supervised monitors, and operated as a key feedback channel from field to Project headquarters.

Under System M (Monitor Only), added in 1975 to ascertain the effect of the monitor apart from that of the radio, a monitor was supposed to work alone in an area where the BVE radio signal could not be received. In practice, however, the signal could not be excluded completely from the M zone, particularly in the Highlands.

These four systems were originally designed as independent variables. Experience demonstrated, however, that some interrelationship could not be avoided. For example, feedback received from the people through monitors and agronomists was used to modify and localize the messages delivered via all four systems. Although this made final evaluation more difficult, it was necessary to be sure that the same basic message was disseminated through all the systems.

Educational programming ran for three years in southeastern Guatemala and two in the Highlands. If startup, operation, and postprogram data analysis are all taken in to account, the Basic Village Education Project lasted approximately five years.

BVE in Action

The operational phase of the Project began in May 1973 when a small technical assistance team arrived in Guatemala to join forces with Guatemalan colleagues already assigned to BVE by the Ministry of Education. The team's arrival marked the culmination of more than two years of discussions, feasibility studies and negotiations involving several ministries of the Guatemalan government, the Agency for International Development, and specialists from various fields.

By mid-August, Project field staff and the University of South Florida evaluation team had completed the development of a comprehensive implementation plan. Major components of that plan were: the experimental design and plan for evaluation; a detailed implementation schedule; requirements for personnel, equipment, transportation facilities, supplies and other resources; and projected USAID and Guatemalan Government contributions.

Preliminary implementation activities began during the late planning stage to permit inauguration of educational programming in the early months of 1974 and 1975 in southeastern Guatemala and the Highlands, respectively.

The Southeast

Early field activity was concentrated in the southeastern region as planned. Experimental design and evaluation requirements placed stringent constraints on Project staff as they sought to identify suitable experimental and control areas. Some compromises were necessary--perfectly matched areas could not be found due to variability in land and people within the region.

Radio Quesada Educativa began broadcasting on March 22, 1974. The station's inauguration marked the

start of BVE educational programming. By then, baseline surveys had been conducted, field staff selected and trained, a program production system designed and activated, and the radio transmitter installed and tested.

In 1974, the BVE Project was confined to one set of experimental and control areas located in southeastern Guatemala. That year might be described as a "shakedown" period during which both operational and evaluation systems were tested and refined. The following year, the program for this region was expanded as planned to include two sets of experimental areas plus a new control area. (See Figure 1).

Experimental programming in the southeastern region was completed in December 1976, and final field data were collected in early 1977.

The Highlands

The Highlands represented a more difficult cultural environment in which to launch a program such as BVE than did the Southeast. Furthermore, the agricultural infrastructure in that region was less well developed and less was known about its agricultural production and potential. Therefore, the Project Implementation Plan called for starting BVE educational programming in the Highlands in early 1975, one year later than in the Southeast.

Implementation steps were similar to those used in the southeastern region with two major exceptions. First, a preliminary study was conducted during the first half of 1974 by a team of anthropologists to obtain more information about the social, cultural and agricultural characteristics of the Quiche-speaking region. Second, the ways in which BVE staff contacted authorities and obtained local permission to enter and work in the communities were modified to conform to the existing socio-authority structure.

Unfortunately, educational programming could not be initiated on schedule due to a series of delays with budget approvals and staffing, and to technical problems associated with installation of the radio transmitter. Radio Momostenango Educativa was finally inaugurated on August 29, 1975, and all delivery systems were functioning by late September.

The agricultural cycle was far advanced when educational programming began, and the Project had little opportunity to help change the knowledge, attitudes, or practices of the farmers until the following year. Consequently, operations were extended for one year in that region--through 1977--so the experiment could be completed according to design.

Staff and Facilities

The Ministry of Education assigned to BVE nearly all personnel required for operation of the educational program--about sixty full time plus a number of part-time workers. In addition, the Ministry of Agriculture provided several agronomists, and the Ministry of Health seconded a part-time health advisor. The Academy for Educational Development, on contract to AID, provided technical assistance and evaluation teams, interviewers, and (in the early stages) limited operational personnel.

Staff training and development were accorded high priority from the outset; personnel from the Ministry of Education had only limited prior experience and training in non-formal education or agriculture, much less in the intricacies of the project's integrated programming system. Training objectives were two-fold: to meet the requirements of the experimental program, and to develop a cadre of Guatemalans capable of building upon BVE experience to plan and implement regional or national non-formal education programs.

Project headquarters and facilities for producing audio/visual materials were situated in

Guatemala City. The only permanent BVE field facilities were the two radio stations, Radio Quesada and Radio Momostenango.

Interministerial Coordination

Although BVE was designed to fashion and deliver agricultural messages, the Project was not intended either to generate technical agricultural information or to provide the credit and other services needed by farmers. These had to come in large part from the Ministry of Agriculture. To facilitate close collaboration and coordination at the national level with that Ministry, a joint Agriculture-BVE liaison committee was formed in July 1973. At the field level, similar relationships were maintained through constant contact and interaction between BVE and Agriculture staffs.

The Ministry of Agriculture assigned a permanent representative to BVE for nearly three years and, beginning in 1975, provided an agricultural promoter in each region to serve as full time BVE field agronomist.

Educational Programming System

The BVE Project developed an integrated four-component system to facilitate the development of high quality educational programs. These four components, illustrated in Figure 2, are not themselves unique to the Project. But their handling was. The key to success in BVE programming was the manner in which the components were coordinated and integrated.

Simply stated, although difficult to realize, the goal of the system was to assure that integrated packages of relevant messages were developed and delivered in the proper sequence at the right time through appropriate media.

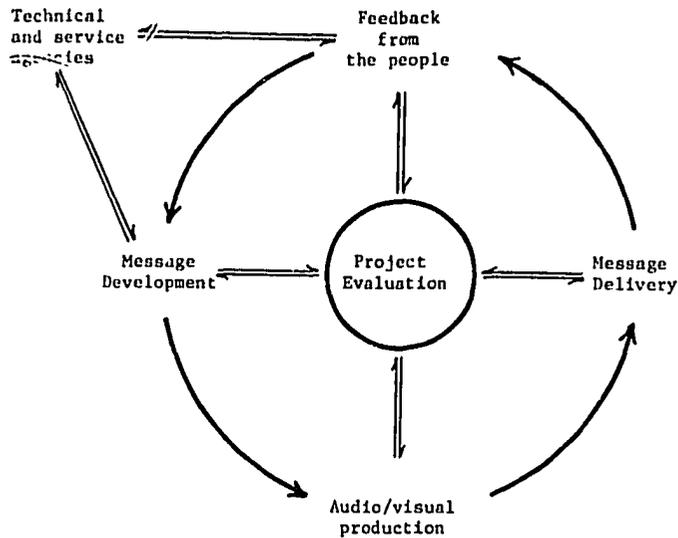


Figure 2

The BVE educational programming system.

Message Development

The small staff of agronomists comprising the Project's technical agriculture section bore primary responsibility for the agricultural content of BVE programs. They sought information from three sources:

- * the people to whom the messages would be directed;
- * institutions that generate technology and information;
- * institutions that provide farmers with needed goods and services.

The agronomists integrated technical information and put it into a form that BVE scriptwriters and

graphics production staff could easily use. They prepared a book of "technical contents" for each region organized around some twenty themes that together constituted the grist of a complete year of programming. The BVE agriculture section also developed for the text on each theme a scriptwriters guide that listed the key points covered and specified applicable behavioral objectives associated with their use in the program.

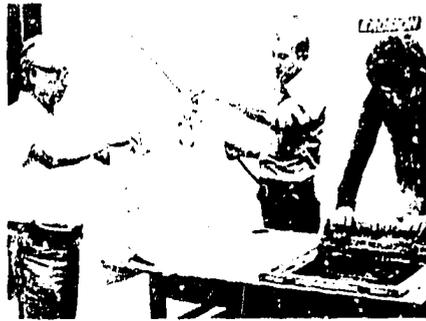
All technical information was submitted to the Ministry of Agriculture at the "technical contents" stage for review and approval before being used in BVE programming.

Educational Materials Production

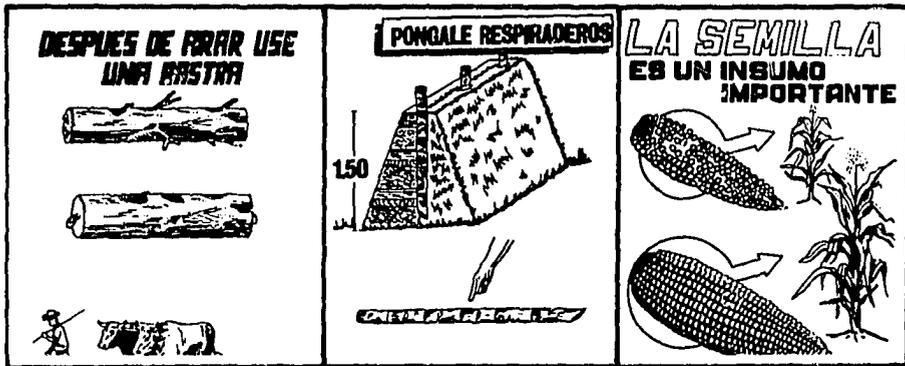
Materials production started with the development of an annual calendar of agricultural messages for each region. Those calendars, prepared late in the year by BVE and Ministry of Agriculture agronomists, indicated when each technical content theme should be used in each region in order to synchronize BVE messages with the local agricultural cycle.

The next step was preparation of bi-weekly programming strategies (based on the annual calendar) which indicated specific behavioral objectives and content for each program for each medium on each day. Production planning culminated in weekly meetings of agronomists and production staff. At these meetings, production staff were briefed on the specific objectives and content of upcoming educational programs, and on last minute adjustments to take current local conditions into account.

Scripts for radio programs and radio forums were written in Spanish and checked for technical accuracy by BVE agronomists. Those slated for use in the Highlands were later translated into Quiche. Both Spanish and Quiche programs were then recorded in the BVE sound studios at Project headquarters.



Over 10,500 different audio programs and 165,000 copies of 1,580 different graphic materials were created and produced by BVE for use in the Oriente and Occidente.



Farmers liked these BVE graphics with clear messages and only essential detail. Field evaluation revealed that they readily captured the significance of the cross-section (center) and arrows (right).

Preliminary sketches of visual materials developed by the graphic arts section were checked both for technical accuracy and to be sure they were coordinated with other program materials. Approved sketches were re-executed in polished form and reproduced by mimeograph (as handouts) or, beginning in 1976, by silkscreen (as flip-charts and posters). Prior to 1976, all flip-charts and posters were reproduced by hand.

Message Delivery

The validity of conclusions reached from BVE hinged upon the quality of delivery as well as on the quality of information and educational materials. Therefore, the Project gave as much care to the operation of its delivery systems (the media mixes described earlier on pp. 3-5) as to the other components of the educational programming system.

Operational Evaluation

Naturally enough, people listened to BVE radio broadcasts, attended meetings, or visited crop demonstrations only if they found what they heard or saw to be interesting or beneficial. Frequent checks of the quality of program content and delivery as perceived by the target audience were therefore necessary. A constant flow of reliable feedback from the people, received and acted upon quickly, was essential to BVE's continuing success.

Various mechanisms were used to obtain the needed feedback, such as:

- * weekly feedback reports from monitors and field agronomists--reviewed and distributed to Project staff in summary form within four or five days of their submission;

- * letters received from BVE radio listeners--nearly 3,000 monthly by the two stations combined;
- * program materials testing--to get the farmers' reactions to new types of materials before incorporating them into the ongoing educational program;
- * radio listener surveys--to determine who was listening to BVE radio and at what hours, and to solicit their comments;
- * radio signal penetration tests--to determine the total area of coverage and potential audience for each BVE station;
- * informal interviews and contacts--with farmers, local authorities, private and public sector organizations.

In late 1975, the Project established a small unit to strengthen the development and field evaluation of new materials in both regions. Among the findings of this unit were the following:

- * caricatures, silhouettes and stick figures used in graphic materials were not liked by farmers in either region, although they were usually understood;
- * the historieta, a graphic book with simple text, is a potentially effective medium widely accepted in both regions;
- * to have maximum impact, the message of the graphic material must be clear, the words simple, the lettering large and easy to read, and the artwork uncluttered;
- * literacy within the family appears to be an important factor in determining the best way to present a given message.

In general, more similarities than differences were found between farmers in the two regions with

respect to comprehension and acceptance of the message, and preferences among graphic materials tested.

Constraints and Adjustments

In common with virtually every project, BVE had to deal with a series of constraints and developments which, if ignored, could have seriously affected its performance. The complexity of both such problems and their solutions was perhaps greater than would have been the case in a purely operational (non-experimental) program. To the extent possible, constraints that could be anticipated in advance were handled at the planning stage. However, the Project still had to face and make adjustments throughout its operational phase for constantly emerging (sometimes conflicting) external forces and developments which affected the educational program and/or its evaluation. Compromises were often necessary between what would be desirable from the standpoint of research design and what appeared to be feasible.

Basic Village Education tried to remain sensitive to the constantly changing situation. Its educational programming system was designed to keep abreast of such developments and to adjust content or operations quickly without jeopardizing the integrity of the experiment. All necessary adjustments were carefully documented so they could be taken into consideration in the interpretation of Project results.

Project Evaluation

The extensive evaluation component built into the BVE Project to measure its impact was independent of the educational programming component. Distinct in purpose and function from the operational evaluation activities described earlier, the evaluation component included a baseline study conducted before the begin-

ning of educational programming, monthly "time sample" interviews carried out throughout each crop season, and an annual re-survey. Evaluation activities were governed by a rigorous experimental design, but also took social and political realities into account.

Joint planning of the educational program and evaluation activities helped guarantee the reliability of the results obtained. Although this approach imposed some restrictions on both programming and evaluation, it was essential to maintaining effective coordination.

The Project evaluation included measurements of BVE-induced changes in knowledge, attitudes, and behavior among farmers in each of the two BVE sites, and comparisons between the two groups and regions. Evaluation data also provided invaluable interim program feedback.

All BVE media combinations had measurable impact on knowledge about, attitudes toward and/or use of modern agricultural techniques, according to the evaluation results. The findings also suggest, however, that no single media combination works best in all situations. The potential effectiveness of the various media combinations varies with the local level of development, the economic well-being of the target audience, and the audience's prior exposure to mass media and technical assistance.

For an area relatively advanced in such respects (e.g., Quesada in the Southeast), radio alone will be immediately used as a source of new information, much of which may be translated into positive changes in behavior. In contrast, the full radio-monitor-agronomist media combination is required to foster maximum change in knowledge and behavior in an area rating relatively low on the development scale (e.g., Yupiltepeque in the same region). In a traditional area (such as the Highlands), radio is capable of introducing new agricultural ideas and reducing

farmers' fears of implementing them. In these areas, however, reinforcement by an agronomist and/or a monitor is needed to maximize the impact of radio as an information source and to translate that information into positive changes in behavior within two years.

In all settings, solid and comprehensive baseline information on the potential target area and population is a prerequisite to making astute choices of educational media.

Economic Analysis

A much longer experimental period would have been required for estimating long range benefits with reasonable certainty. However, the use of a series of assumptions and several levels of benefit projections permitted meaningful economic analysis of the project. That analysis indicated that most BVE treatments under most circumstances encountered in the experiment can yield substantial economic returns to both the individual farmers and to society as a whole.

Project Outreach

The BVE educational program clearly captured the interest and won the support of both the Government of Guatemala and the people in the areas of Project operation. It also attracted attention more broadly--both within and outside of Guatemala.

The Project responded to that interest insofar as its resources would permit. Visitors representing numerous national and international organizations were welcomed and briefed by Project staff throughout the course of the program. Representatives from BVE participated in national conferences and planning activities organized by Guatemalan agencies and in

international conferences. They also answered several requests to assist in planning programs in other Central American countries. In addition, BVE project staff helped train audio/visual production staff from a new Guatemalan non-formal education program and from a Honduran non-formal education program. Requests for this type of assistance are still being received.

A 35 mm. slide set with accompanying narration was developed in 1974 to describe BVE in theory and practice. A 16 mm. color film describing the BVE setting, objectives, design, and initial operations in southeastern Guatemala was also produced early in the project. Both have been updated, the latter re-shot to include coverage of BVE in the Highlands. A 16 mm. color movie on the world-wide use of communications technology filmed by NASA under contract with AID also contained a short segment on the BVE Project's Highland operations.

Periodic reports on the Project constituted another form of outreach. Interim reports on field operations and evaluation were prepared each year. A comprehensive report on the educational program and its results in the southeastern region (Oriente) was completed in late 1977, and a similar report for the Highlands (Occidente) was completed in mid-1978. The "final" report on BVE and a report of the economic analysis of the Project were also completed in 1978.

In progress now are plans for making BVE experience and results more broadly available through workshops, concise operational reports on key aspects of the Project, and other media.

Retrospect and Prospect

Experimental programming was completed in December 1976 in the southeastern region and one year later in the Highlands. But the same kind of educational programming is being continued in both regions by the

Ministry of Education. Moreover, the former Project unit has been granted broader responsibilities in planning and producing the audio/visual materials for their Ministry's non-formal education programs.

The Basic Village Education Project advanced knowledge of the integrated use of modern communications technology in rural development programs in at least two ways. First, the project's operational systems, tested and refined while in use, should provide models that can be adapted for use in many other programs. Second, BVE results yielded basic information on the impact of such systems on behavioral change, the determinants of such change, and the associated cost/benefit implications. The potential value of that body of interpreted information is enhanced by the fact that the data were collected in two highly different cultural settings.

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