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ABSTRACT

A group of instructional planners from the United States was invited to help establish a vocational skills development project to help meet the need for adequately trained workers in Ecuador's small- and medium-sized enterprises in the industrial, service, commercial and agricultural sectors of the economy. A logicodialetical model called the CLER model was used in the conceptualization of the project. The CLER model assumes that the probability of a change event depends on the following: optimization of configurational relationships (C) and linkages (L) among the social configurations in the change event, the environments (E) to which the various social configurations in the change event are responding, and the resources (R) available to the social configurations. The project was intended to develop a training technology that would incorporate the principles of competency-based instruction, establish learning resource centers to undergird the new training technology, and institutionalize linkages between the training system to be proposed and the private sector. Training will be offered in the consultancy mode, and the training model will consist of five stages: demand, diagnosis, definition, design, and delivery. The project, which is still in the preliminary planning stage, is slated to have a built-in evaluation system that will use both formalized and naturalistic methods of evaluation. (MN)

SKILLS DEVELOPMENT TRAINING IN THE CONSULTANCY MODE: AN EXPERIENCE IN ECUADOR

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Training design is an exercise in instructional "systems" technology and should, therefore, involve systems thinking and systems practice. The current theory and practice of instructional systems technology, however, is less systemic and more systematic. Its creative ideology is that of logical-positivism. The basic design theme is to "program" the teaching-learning process. Most practitioners of instructional systems technology look inward to instructional systems components rather than outward to the social system that surrounds the total instructional enterprise. The "system" in instructional systems technology is narrowly defined as the setting in which instructional messages are received (1).

The purpose of this paper is two-fold: First, it will be suggested that the practitioners of instructional systems technology should let go of the ideology of logical-positivism and should adopt instead the creative ideology of logico-dialectics, thereby covering both the logical and the dialectical in educational change. This new ideology will enable them to take a broader view of systems; and give them the ability to put a "frame on the flux" of social reality. As a corollary, it will be proposed that the process of "training planning" should always precede the process of "training design" so that the larger socio-political and economic issues as well as some purely

technical considerations can be taken into account. The issues to be faced in a training design exercise may include recruitment pools, class basis of occupations, institutional settings of training and of work, incentive structures and distribution of rewards of productivity between employers and employees, and, finally, the political economy of development in the country.

Second, we will describe and briefly discuss the promise of what we have called the model of "training in the consultancy mode". It will be demonstrated that the contextually-correct approach to training design is indeed embedded in its own context. The process of training planning simply uncovers conditions that compell the choice of a particular training design to fulfil specific training needs in a given context.

Two cautions must be offered before the case study of training planning and training design for the development of technical skills of workers in Ecuador is presented.

The case study need not be considered premature simply because there has been no implementation; and, therefore, there are no findings to report on the effectiveness of the training design. Indeed, the project has not even been approved yet; and must go through a long cycle of development and reviews before it is even submitted for approval to the donor and the recipient governments. What we present here, then, is a study of the processes of training planning and training design in an initial stage (2). We do so in the hope that the case study has something to teach to educational planners in general, and to planners and designers of instructional technology systems in particular.

The second caution is about the generalizability of the models presented. The two models of training planning and training design should not be viewed as being either culture-bound, or sector-bound. Each model will apply equally well to societies other than Ecuador -- societies both developed and developing. Each model, again, will be found relevant to instructional situations both in-school and out-of-school, from formal schooling, through distance education, to family planning and agricultural extension.

The Case

In June 1985, the author was invited to join a group of consultants in the preparation of a Project Identification Document (PID) for USAID/Ecuador for a possible vocational skills development project to be implemented in Ecuador (3). The initial communication identified a serious lack of adequately trained workers in the small and medium sized enterprises (SME's) in the industrial, service, commercial and agricultural sectors of the Ecuadorian economy, resulting in serious constraints on production, productivity and employment. The USAID/Ecuador wished to examine the feasibility of providing technical assistance to improve the quality of vocational skills training in Ecuador, especially focussed on the needs of the SME's which were already contributing the largest share to the growth of total employment in Ecuador; and were seen to have an even greater potential if their productivity could be increased. In the context of the project to be proposed, USAID/Ecuador envisaged

the transfer of the best of the training technology, from the U.S. to Ecuador, incorporating competency-based training methodology; the establishment of learning resources centers to undergird the new training technology; and the institutionalization of linkages between the training system to be proposed and the private sector to ensure increased influence of employers on the training curriculum (4).

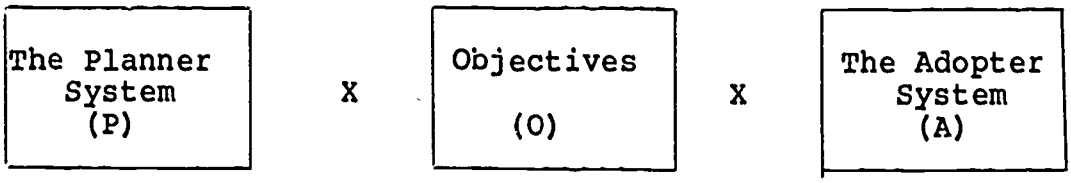
The model used for the conceptualization of the project: The process of training planning

The assignment given to the present author was to conceptualize the training project within the particular political and social framework of Ecuador; to relate training dynamically to employment generation and economic development; and to design an evaluation system that will effectively evaluate the process and results of the project.

The CLER model of innovation diffusion, planned change and development was used in the conceptualization of the project (5). The CLER model states simply that the probability of a change event occurring depends on the synergetic optimization of C (Configurational relationships between and among the social configurations involved in the change event); L (Linkages, both formal and informal between and among social configurations); R (Resources available, singly and jointly, to the social configurations in the planner system to promote change, and to the social configurations in the adopter system to adopt change); and E (Environment or environments to which the various social configurations involved in the change event might be responding).

The CLER model is a logico-dialectical model. It is

systematic and systemic; and it is dialectical. In the dialectical mode, the CLER model can be presented as follows:



The entities in the "P x O x A" ensemble above should be viewed to exist in a set of mutually defining relationships, each defining the others. This means that the Objectives (O) of a change project are not firm and final for all times, but keep on changing in both subtle and significant ways, as they enter into dialectical relationships with P and A in the "P x O x A" ensemble. Again, the Planner System (P) and the Adopter System (A) are also not systems with tight and unchangeable boundaries. The boundaries of these systems are indeed both elastic and permeable. The CLER model suggests that the P and A in the "P x O x A" ensemble should be described in terms of CLER; and then the ensemble should be looked at as one to develop planning-related statements and strategies.

The objectives of the Ecuador project

Even though objectives do change in the process of design and implementation, training planners and training designers must start with a primitive formulation of objectives to be able to initiate the logico-dialectical processes of planning and implementation. The objectives in the case of the Ecuador project were initially stated as follows:

1. To introduce and institutionalize a new and more effective technology of training design and delivery to serve, with greater efficiency and effectiveness, the existing as well as the evolving human resource needs of the SME's; and

2. To improve and expand, as appropriate, the existing institutional capacity of training institutions in Ecuador.

The achievement of these two objectives, it was assumed, would ultimately improve the human resource base of the SME's, both within the formal and the informal sectors of the economy; and would contribute to improved production, productivity and empolyment in the SME sector and in the informal sector of the economy.

The planner system in the Ecuador project

The planner system was, in itself emergent, but could be seen, initially, to consist of USAID/Washington, USAID/ Ecuador, and the consultants employed to work on the project. There were a large number of "sleeping stakeholders" both within and outside the Government of Ecuador that would, later, become active participants in the planning process. The World Bank, even though not directly involved in this particular project, was a most important influence.

The adopter system in the Ecuador project

The adopter system was not yet too well defined either, and was, again, in the process of emerging. To begin with, it was not clear whether all of the four sectors of industry, service, commerce and agriculture would be covered by the project or whether some would be given priority over the others, and

agriculture, perhaps, left out altogether to be covered by other programs already in force. Priorities within geographical regions were also to be established. The adopter system would perhaps include both employers and employees; and would thus encompass both local chambers of commerce and trade union shops.

The planner system characteristics and the policy environment

It is not enough for the planner of change to merely identify what social configurations, that is, what individuals, groups, institutions and communities are part of the planner system (or what social configurations constitute the adopter system). The planner of change must acquire substantive knowledge of all the social configurations involved in the change event. The planner must have knowledge of their behavioral patterns and propensities, about existing and possible linkages between and among them, of their resources, and of the environments to which they do and might respond (6).

The context of training planning and training design in Ecuador was found to have many layers: the development ideology of the US with its emphasis on private enterprise; the World Bank development assistance policy based on "conditionality"; the USAID policy on economic development and on skills training in Ecuador; and the Government of Ecuador's policies in regard to foreign trade, industrialization and employment. The more immediate institutional environment of the existing training institutions in Ecuador had to be considerd as well both in regard to their institutional culture and their institutional capacity.

Ecuador in the international context

Until (7) the late 1960s, Ecuador, an Andean country of some 283,600 square kilometers -- and some 8.3 million people in 1983 -- situated in the North-West of the South American continent, was one of the poorest countries of South America and showed all of the typical symptoms of underdevelopment. In 1967, oil was discovered in the Oriente; and by 1970 a pipeline had been completed so that oil could now be sold to the outside world. In 1973, with the coming of the OPEC, Ecuador was making windfall gains from petrochemical exports. During 1973-80, GDP grew at the rate of 8 per cent. From one of the poorest countries of South America, Ecuador became a middle income country in barely ten years.

In 1980, with the worldwide glut of oil and fall in oil prices, a different scenario began to develop. There was a drastic fall in oil revenues and the country entered a period of severe recession. On the one hand, there was a considerable reduction in employment in the oil-related industries; and, on the other hand, the economy was unable to generate any new employment in the medium term future. Thus, there were serious constraints in generating savings at home and in earning foreign exchange. As a result, the balance of payment problems became severe. In 1982, there was an actual reduction in per capita income of wage earners.

World Bank in Ecuador: Conditionality

In 1983, the World Bank proposed an austerity program which was accepted by Ecuador, fearing economic collapse and with

nowhere else to turn to. The World Bank's current economic development ideology is that of promoting partnership of the private and the public sectors in achieving development. A large part of resources in the Third World, the Bank points out, are privately owned, hence they must be manipulated privately (8). The Bank, at the same time, is taking an aggressive stand in regard to its lending to the Third World. It offers help conditionally: loans are provided only if the country seeking help promises to implement economic reforms suggested by the Bank. Under this so-called conditionality, Ecuador was asked to reduce local consumption, offer more attractive interest rates for savings, introduce a better pricing structure for public utilities, undertake a tax reform, achieve greater efficiency in public programs, assure better investment allocation of public funds, rethink some of the present investment plans and increase exports to earn foreign exchange.

US ideology and USAID policy

The US economic ideology under the present administration matches that of the World Bank. Developing countries are encouraged to make the policy shift from import substitution to export promotion and give greater role to private enterprise. The President's Task Force on Private Enterprise (9), for instance, saw the world in a "global struggle between free enterprise and statism" and recommended strongly that the U.S. Government should establish a link between trade and aid. The Task Force opined: "We can open new markets, increase trade, create new jobs, spread hope, and build the sort of climate in

which freedom can flourish in future generations." Naturally, the key theme of the Task Force was the growth of private sector activity and its key tool was the market mechanism. As a corollary, the Task Force had suggested that "To the maximum extent possible, the US Government should not channel its foreign assistance resources to governments, but to private sector in developing nations."

The Task Force understood the need for appropriate training for the implementation of the new policy initiatives. In the area of training as well there was to be a special emphasis on "private sector participation and needs" and there was to be "training for and by private enterprise" as far as possible. The Task Force took note of the need for "lower level, practical, hands-on training" which would include "managerial, vocational, and technical training." Special emphasis was to be put on "small and rural enterprises, the source of most economic activity in developing countries." The USAID policy in Ecuador sought to make this ideology concrete in local settings.

The culture and capacity of training institutions in Ecuador

As in most other countries of the Third World, the existing training capacity in Ecuador (10) is far less than the development needs of the country; and the culture of the training institutions that do exist is riddled with formalism. It is important to note that the training of teachers for the formal school system itself leaves much to be desired. Training of teachers to serve the special needs of students such as the vocationally oriented or the handicapped gets little attention.

Vocational training in out-of-school settings has a long and rather impressive history in South America. Early in the 1940s, Brazil trained manpower needed for its fast-expanding industry by establishing training arrangements in out-of-school settings and maintained on revenues collected from the industry itself. This experiment has since been repeated in many other countries of South America and elsewhere in the Third World.

Servicio Ecuatoriano de Capacitacion Profesional (SECAP) follows the pattern of SENAI in Brazil and SENA in Colombia. It was created in 1966 with the objective of providing "intensive professional training for the labor force and mid level technicians for industrial, commercial and service activities." The legal mandate of SECAP includes service to small enterprises excluding artisans and micro sector. In practice, however, SME's remain unserved. Things may change under a SENAI-World Bank Project that proposes to build 10 to 12 skills centers and will provide some mobile training units. These skills centers and mobile training units could perhaps serve the training needs of adults who are interested in training leading to a job.

Centro Nacional para la Promocion de la Industria y Artesania (CENAPIA) was another institutional entity of interest to the planning and design exercise described here. CENAPIA was created in 1975 with the legal mandate to provide technical assistance to the small industry and artisan sectors as well as to help these sectors with credits and other preferences. It has ambitious plans but concrete actions are yet to be taken. In the meantime, there are already signs of conflict between CENAPIA

and other institutions in the sector. This does not auger well for the future work of CENAPIA.

Another institution has been established to serve the small enterprises, namely, the Asociaciones and Nucleos de Pequenos Industriales, but it has yet to establish a track record. To sum, the needs of agri-businesses have been least considered and least served. In the other three sectors of industry, commerce and services, available training programs seem to gravitate towards formal training delivered in pr-packaged courses of long and short duration.

The adopter system: Who are the actors?

The CLER model in the dialectical mode invites due attention to the adopter system: A in the "P x O x A" ensemble. If planning has to be more than blueprint planning, enough should be known about the adopter system. If planning is for implementation, then we must have knowledge of all the actors in the adopter system and of relationships among and between them.

In the case of this particular project, the core of our adopter system consisted of the SME's. But as we pointed out, earlier in the paper, many questions remained unanswered: What SME's will be covered, in what economic sectors, and in what geographical regions of the country? Shall we target the employers or shall we reach the employees? Shall we cover also workers not employed but actively on the job market? Shall we consider the chambers of commerce as well as the trade unions as parts of the adopter system? What do we know about all these various actors within the adopter system?

As was indicated earlier, most of our knowledge about the present condition and potential of SME's came from three studies conducted by Partnership for Productivity, Washington, D.C. for the Private Sector Office of the USAID Mission in Ecuador; and an additional study also conducted for USAID/Ecuador by Professor Albert Berry on "intermediate cities" -- secondary cities that in terms of size stood between large cities and small townships. It is not possible to review in any great detail the findings of these studies in the space available. Only the most general conclusions can be presented.

The studies took note of the extreme politicization of the labor movement in Ecuador and found the labor and capital animosities to be severe. The labor market was thus in turmoil. On the one hand, there were unsatisfied aspirations; and, on the other hand, there were obvious inefficiencies crying for attention.

During the last 10 to 15 years, the Ecuadorian economy had moved towards the modernity end, but with all the progress, it still remained a substantially informal economy. In 1982, 42.5 per cent of the labor was employed in agriculture; 21.9 per cent in services; 10.4 per cent in management; 9.6 per cent in commerce; and 5.7 per cent in construction.

The economy needed to create employment for reasons both economic and political; and clearly must promote labor-intensive enterprises. The SME's were, therefore, central to the strategy of economic growth. Simply because of their size, informal and rural sectors of the economy held great promise. Agro-industries were clearly most important if the policy shift from import

substitution to export promotion had to be implemented. Within the SME's in the more formal sectors of industry, commerce and services, employment potential lay in new enterprises rather than in existing one.

In view of the preceding, the intermediate cities would play a most important role in the economic growth of Ecuador. Intermediate cities were dynamic and not averse to using labor-intensive production processes. Also, they were using very little import components. They already were focussed on agro-industries, artisanery and small industry.

These studies also brought up the need for the training of workers and managers if the development potential of SME's had to be fulfilled. Contrary to common belief, however, these enterprises did not seem to need training in the technology of production. They seemed to do all right on this score. What they did need was training in management, cost analysis, market research, credit assistance management, production management, inventory control, and information about export opportunities and regulations.

Generating planning statements:
Looking at the "P x O x A" ensemble as one

The CLER model suggests that after initial, but sufficient descriptions of P, O, and A have been established, the ensemble should be looked at as one and planning-related statements should be developed. No facile formulas can be offered for generating these planning-related statements. One has to look hard and think of what is amenable to change, choose the strategic from

among the possible alternatives, do mental experiments to test the relative goodness of the choices made, and make sure that the choices made are congruent with one's values. We will, later, in the paper list the statements derived from the "P x O x A" ensemble in this project, but first we must discuss the three overlapping thought processes involved in the planning of change whatever its size and scope.

From the theoretical to the existential

The reader's attention is invited to the graphic presentation of the CLER model appended to this paper. The three parallel lines running left to right represent three different but interacting processes involved in planning. In our first encounter with the situation of change, we begin by ordering and relating what we see. We impose a structure on that slice of the world that concerns us, placing boundaries around the planner system and the adopter system in relation to the objectives we may have in view. We look for the actors (individuals, groups, institutions and communities and subcultures) within the planner system and the adopter system and make sense of their relationships. Some temporal order is imposed as purposes and causes are assigned. Both facts and values are involved in this process.

Ordering and relating is both accompanied with and followed by the process of typifying and expecting. The various social entities, social processes and environments involved in the change episode just ordered, are now typified and expectations about their behavior and performance are built.

The third process involved is that of experiencing and

correcting. The planner is now immersed in the reality that is the object of manipulation. Theoretical knowledge which is most useful in the first two levels is not usable here. Now the theoretically designed strategies must be tested in the context of existential reality.

Thus, before an operational strategy for planned change can be developed, the "P x O x A" ensemble must go through these three processes. As is it implicit in the graphic presentation of the model, the implementation of S1 (Strategy One) will generate further knowledge which will make another multi-layered review of the "P x O x A" ensemble possible and, thereby, generate S2 (Strategy Two) for use in the change episode. The final objectives will be achieved, in some form, through a process of successive approximations.

In the case described here, most of the planning effort was spent in ordering/relating. Some typifying/expecting was also done, but this was at a general level. For example, we found out a lot about intermediate cities generally, but not much about the particular cities where we might want to locate the project. Again, we found lot of useful information about SME's in general but not much about particular SME's in particular sectors, in particular cities where we might work.

Planning related statements:
Determinants of training design

Looking at the descriptions of the planner system, the initial set of objectives and the adopter system in a dialectical mode, we were able to list the following statements that would

guide training design:

1. The project was to benefit productivity and employment in the private sector.

2. Within the private sector, SME's were to be targeted. (Which of the four sectors of industry, commerce, service and agriculture would be given priority was not yet clear.)

3. The project had to be a training project.

4. If at possible, training had to be delivered through the private sector to the private sector. Linkages had to be established with the private sector in such a way that the private sector had influence on the type of training delivered.

5. Training was to be basically training in management and entreprenership and not technical training.

6. Training design had to include the components of competency-based training design, learning resource centers and employers advisory boards all of which had proved to be useful in recent projects implemented by USAID/Ecuador in the country.

7. Special attention had to be given to the economic promotion of women and the poor.

The environment of uncertainty

The most important fact in the planning environment, however, was the current level of uncertainty. The choices of the intermediate cities where the project might be located and of the economic sectors it might serve were not made. Questions about training curricula were left unanswered as was the question of institutional location. Little was known about the trainees, their training needs and incentives to which they would

respond. The only thing that could be said with certainty was the fact that the project will have to respond to multiple contexts, and multiple needs which will, in turn, be constantly changing.

The training design, therefore, had to include a continuous design function in itself. The training system had to be designed as an intelligent system which would collect information in the course of performance and on the basis of that information make proper means and ends calculations. Only a few essential decisions would be made at the front end. These decisions had to be either fail/safe or reversible or low risk. Thus, only those components of instructional technology could be brought in that would be needed under all circumstances.

Training in the consultancy mode

Using the determinants of training planning listed above, the following technological decisions were made which gave us a model of training in the consultancy mode (11):

1. A number of Regional Training Support Systems (RTSS's) will be developed that will use the latest training technology including competency-based skills training and learning resource centers. In its fully functional final form, the project, on the one hand will have a national coordination mechanism; and on the other hand, will have a number of local level cells for effective outreach. A beginning will be made with three regional centers, one each in Quito, Guayaquil and Cuenca. The first center will be opened in Cuenca, a region of greater relative need. What is learned from this experience will be fed into the establishment

of the other two RTSS's in Quito and Guayaquil.

2. Each of the RTSS's will have two major components: a program development component that, in consultantion with client groups, will clarify training needs and establish training priorities; and a training design component that, on the basis of task analysis, learner analysis and environment analysis, will design and produce training courses, and instructional materials. Each of the RTSS's will be able to perform the following functions: learning needs assessments, liaison with small enterprises, training consultancies, training design and delivery, production and testing of courses, packages and materials, information and documentation, outreach through mobile units and evaluation. In collaboration with existing training institutions, the RTSS's will engage in both (i) supplementation of existing training and (ii) complementation of existing training. In other words, each RTSS will complement existing training through technical assistance and thereby improve training quality. Each RTSS will also supplement current training effort by offering new training courses to satisfy newly emerging needs.

3. The question of institutional location of the RTSS's will be decided later as more data become available about the cultures and capacities of the various possible institutional locations. The institutional arrangements to be established will reflect the policy orientations established by USAID. To ensure that the RTSS's are able to take affirmative actions in regard to the economic promotion of women, one of the two co-directors of each of the RTSS's will always be a women. The other may be a male or a female.

4. Each of the RTSS's will also have an advisory board to help it develop both long and short-term training policy.

5. In the development of local training capacity as well as in the delivery of training to client groups in the local setting, a multiplier model will be used which can be represented graphically as follows:

T1 --> T2 --> T3 --> T4 --> Groups of Trainees

Trainers from universities in North America (T1's), provided by USAID/Ecuador, will train their counterpart trainers (T2's) -- the later will be working whole-time within the RTSS's. Most of T2's will have had visited institutions of higher education and training in the United States and would have received formal and/or internship training in the area of instructional systems technology and training design. T2's will train the T3's, trainers already working within the training centers and institutions of Ecuador, especially those serving the particular needs of SME's. T3's will train T4 trainers -- those who might be functioning within individual economic enterprises or groups of enterprises to fulfil the immediate local needs of those establishments. T4's, of course, will be at the firing line in regard to the delivery of training. Where no T3's or T4's exist, T2's will work directly with T4's or the client groups as the case might be.

It is important to point out that trainers T1, T2, and T3 and perhaps even trainers T4, will be trained as <u>instructional technologists</u> and not in the various technologies of the SME's. They will, of course, have a general orientation to the

substantive content of training. But they will be basically specialists in training design rather than specialists in technical content. In the actual process of training design, training designers and technical specialists will work together in teams, each participant making his or her own special contribution to the task in hand.

6. The process of training design and delivery will be "demand-driven". It does not mean, of course, that the training specialists will sit in their laboratories and offices and wait for people to come to make their training needs known and demand that they be trained. We know now quite well that neither individuals nor institutions can always define and diagnose their problems. The definition of the problem may indeed be the stage at which potential clients may most need the help of a specialist. What we propose, then, is a mating of ideas between the training specialists at the RTSS's and the SME's.

7. The model of training in the consultancy mode will consist of five stages: Demand - Diagnosis - Definition - Design - Delivery. In the first stage, the model will involve establishing a mode for the encounter between the SME's and the RTSS's and the development of demand for its services.
In the second stage, there will be a more concrete diagnosis of the situation. The question asked will be: What is the problem? The question will not be: What is the training problem? In many cases, the problem may not turn out to be a training problem but another, such as: lack of credit, lack of marketing information, or need for legal services. The RTSS's should, in such cases, have the necessary information and the organizational

capacity to make referals to appropriate agencies.

If the problem is defined as a training problem, then the design process should begin. Here is where one of the typical instructional development models will be used (12). In the final stage, instruction will be delivered, that is, trainees will be trained for effective performance.

8. The model of training in the consultancy mode requires that the process of training design should be conducted anew for each and every training episode. This does not mean that pre-packaged training programs will have no part in this training model. What it does mean, however, is that the training approach will always be problem-centered and not course-centered; and that in each case, the training team will start with the problem definition, and diagnosis, before coming to the definition of the learning needs and undertaking the task of training design. If someone has already designed training for a very similar group with very similar objectives, and has produced instructional materials to go with this training, it would be absurd to waste resources for re-inventing the wheel. But even in such cases, the instructional package should be unpackaged and then repackaged so that the special ethos of the culture, the immediate organizational climate of training and economic institutions, the special needs of the group, and the local peculiarities of the technology and the materials in use can be duly projected in the design and delivery of training.

9. The model of training in the consultancy mode should not be used to make an overkill. There will still be need for

relatively standardised programs such as accounting, taxation and import and export procedures.

Not without institutionalization!

As indicated earlier, the question of institutional location of the RTSS's had been postponed until a list of possible candidates could be developed; information about each of them could be collected and, consequently, well-informed choices could be made. However, there are some problems with the concept of institution building (I-B) itself that have serious practical consequences. These problems need to be clarified to ensure that the decisions in regard to the institutional structure and institutional location of the project when made are appropriate.

First, we need to understand that whatever needs to be done systematically and with some expectation of continuity, needs a system -- in other words, some institutional arrangement is required to be established. Unavoidably, the RTSS's proposed above will have to be institutionalized. I-B, defined as the process of building new institutions to perform new social functions, or rebuilding existing institutions to help them to acquire new capacities and new objectives, has had a checkered history. The 1960s and the 1970s were the heydays of I-B (13). USAID was in the fore-front of the movement of institution building as part of their technical assistance effort. Since that time there has been a backlash against I-B. However, the critics of I-B seem intent on throwing the baby out with the bathwater. What was wrong with I-B was never the idea of I-B, but wrong decisions in the choice of strategies and impatience in

the implementation process. Practitioners of I-B were in too much of a hurry to get their job done. In place of facing the more difficult task of renewing existing institutions or managing the politics of building new institutions in competition with existing institutional arrangements, they chose to build brand new institutions isolated from local politics and under their own control -- out on the periphery and not in the mainstream. No wonder these institutions died as soon as the artificial life support systems provided by foreign technical assistance were withdrawn.

In the present project as well, the purpose should not be to avoid I-B. Indeed, the avoidance of institution building is not possible. What we need to do is to do a good job of institution building: to dare to renew existing institutions, and, if need be, to build new institutions within the existing institutional networks, whatever the cost in dollars and ulcers.

Evaluation of the project

Since the project is in a very preliminary planning stage, "evaluation planning" (14) in regard to this project must be more in the nature of a statement of evaluation principles rather than in terms of concrete evaluation proposals. First, the project will have a built-in evaluation system; in other words, evaluation will be an activity that permeates the whole implementation process. At the core of this built-in evaluation will be a management information system (MIS) which will record data as it is generated by the program and will, thereby, promote within the RTSS's, an organizational culture where information is

valued, and is systematically developed and used to make informed decisions from day to day. This should not be difficult to do within a project dealing with training design in the competency-based mode. The design process has to be based on data on learner characteristics and on teaching effects. Evaluation cycles are an integral part of such a process of training design.

The second important principle applied to evaluation in the project will be methodological pragmatism. Both formalized and naturalistic methods of evaluation will be used depending on the information needs. There will be competency tests and tracer studies in the formal mode. Naturalistic methods such as suggestion boxes, visitors' remarks, letters from workers, and employers, conversations, and observations will all be used to generate feedback on the effectiveness of training.

Problems and prospects

The training planning process through which we went and the training design that we came up with is by no means problem-free. It is important to anticipate some of the problems.

First and foremost, there is the problem arising from the project design being somewhat unusual. It is unusual in the sense that it proposes the initiation of open-ended processes rather than giving a list of concrete activities to be conducted or providing an inventory of definite tasks to be performed. The design is able to reduce very little uncertainty, and postpones many important decisions. It is honest in refusing to offer the readers the false sense of security to which we have all become so accustomed. But the problem is that the proposal may not

even make through the initial cycle of approval.

Second, the proposal will reguire a staff of very high quality both from universities in the US and from inside Ecuador. Hiring the merely second-rate and giving them impressive-sounding professional designations will not suffice.

Third, the project will have unusually high training needs of itself. Even the best qualified local staff will have to be sent to the US for training in instructional technology. At the local level, the training problem may be confounded by the fact that staff trained at the cost of the project may be stolen by competing institutions through the promise of better rewards.

Fourth, training in the consultancy mode takes time to design and time to deliver. This will mean a slow start and higher project costs at the front end.

Fifth, the SME's may not use the services of the RTSS's. They may consider the training process to be too formal and too sophisticated. The experience of the SME's with the government has been such that small entrepreneurs like to operate outside the institutional and legal framework designated to support their operations. They may avoid training help as well for fear of being trapped in something they do not understand. Those who do use training opportunities may use training for the greater exploitation of labor rather than to increase employment or to promote the welfare of those now in employment. As the Partnership for Productivity studies point out SME's after all have self-interest, not community interest at heart. On the other hand, if training is really effective, other larger economic enterprises may siphon off training resources. This is quite

possible, when they themselves serve on the advisory boards of these RTSS's.

Sixth, unless overall economic and political structures change, training may make no difference at all. Productivity may not change without change in incentive structures. The advantages of increased productivity may be kept by the employer and may not be shared with labor. Employment may not increase because of the geographical and class basis of employment.

Seventh, long-term funding may not develop and the project may fade away as soon as USAID funding is terminated.

Yet, if this bold initiative is accepted and implemented, real training needs of SME's may be fulfilled. Local training materials may be developed where none exist now. A new training culture may develop within the skills development training sector in Ecuador that may spillover into other sectors of education and development in Ecuador.

NOTES AND REFERENCES

1. See The Definition of Educational Technology. Washington, D.C.: Association for Educational Communication and Technology, 1977 for a delineation of the dominant paradigm in instructional systems technology. A popular textbook, representative of the field uses the word systematic in the title: Walter Dick and Lou Carey, The Systematic Design of Instruction. Glenview, Ill.: Scott, Foresman and Co., 1978.

2. This paper should be read as an individual contribution to the understanding of the process of training planning and training design. The paper has no official status whatsoever; and commits no one, official or non-official, in the US or in Ecuador, to the contents of the paper. Documentation used for writing the paper is all in the public domain.

3. The three-week invitation to the author came from Professor Gene Lamb of San Jose State University, currently, Distinguished Research Fellow in International Education with the United Schools of America Incorporated, Miami, Florida. Dr. Lamb, in addition to writing several parts of the project, has the overall resposibility for final editing and submission of the project proposal. This author's debts to Dr. Lamb are many and, in the writing of this paper, it has not always been possible for me to separate his ideas from my own.

4. These three components have been well-tested and had indeed proved their worth in projects designed and implemented in Ecuador under Professor Gene Lamb, e.g.: the project of institutional development of the Centro Juvenil San Patricio; the project dealing with the development of an urban technical school, namely, Escuela Anzoatequi under Filantropica, in Guayaquil; and the creation of the Instituto de Desarrollo Professional (IDEPRO) under Camara de Comercio, Guayaquil.

5. See H.S. Bhola (ed.), Planned Educational Change: A Model and Critiques Thereof, a special issue of Viewpoints in Teaching and Learning, Vol. 58, No.4, Fall 1982 for a detailed elaboration of the CLER model and its tests and applications. The

methodology of the CLER model in the logico-dialectical mode is presented in H.S. Bhola (with Joginder K. Bhola), Planning and Organization of Literacy Campaigns, Programs and Projects. Bonn, FRG: German Foundation for International Development (DSE), 1984. ERIC Document No. ED 240 302. See also a more recent paper by H.S. Bhola, "Tailor Made Strategies of Dissemination: The Story and Theory Connection," paper presented to the Seventh Nationwide Vocational Education Dissemination Conference of the National Center for Research in Vocational Education, The Ohio State University, Columbus, Ohio, November 13-15, 1984. (ERIC Document No. ED 253 728). It must be pointed out also that USAID has a model of its own that is required to be used in the design and evaluation of its projects, The Logical Framework -- Modifications Based on Experience. Washington, D.C.: Agency for International Development, November 1973. In the document that I prepared I thought with the CLER model and wrote with the logical framework. The logical framework is not incompatible with the logico-dialectical CLER model, but it does not go far enough in dealing with what can be called frame factors. The logico-dialectical nature of the CLER model enables one to put logical frames on social reality that is in perpetual flux.

6. Acquiring knowledge about configurations, linkages, resources and environments in the context of a change event is never a one-shot affair. Knowledge constantly grows as more and more is read and discussed; and as research findings are complemented with first-hand experience. Knowledge is also continuously being tested as it is put to work to make sense of the reality, to design strategies of change, and to learn about effects. The experience

of this author in Ecuador was no different. Some knowledge was acquired on campus, more was learned in interaction with colleagues in Ecuador, and even more through an immersion in the local reality.

7. This section and the one following is based on World Bank documents on Ecuador and, particularly, Ecuador -- An Agenda for Recovery and Sustained Growth (A World Bank Country Study). Washington, D.C.: The Bank, 1984.

8. Economic Development and the Private Sector. Washington, D.C.: The World Bank, 1983.

9. The President's Task Force on International Private Enterprise: Report to the President. Washington, D.C.: USAID, December 1984. Also, Private Enterprise Development. (A.I.D. Policy Paper: Revised). Washington, D.C." U.S. Agency for International Development, March 1985. The USAID training policy is included in their Basic Education and Technical Training. (A.I.D. Policy Paper). Washington, D.C.: U.S. Agency for International Development, December 1982.

10. This section and the one dealing with the adopter system is developed on the basis of personal notes made by the author during his visit to Ecuador and on the following documents: Employment and the Role of Intermediate Cities in Ecuador During the Coming Years, prepared by Albert Berry for USAID/Ecuador, July 1984. The three studies prepared by the Partnership for Productivity / International for the Private Sector Office, U.S. AID Mission, Quito, Ecuador are: A Small Enterprise Development Program for Ecuador: Economic Background

Paper by Jorge Sanguinetty, Albert Berry and Augusto de la Torre, June 1985; A Small Enterprise Development Program for Ecuador: Institutions Background Paper by Gino Lofredo, Liza Valenzuela and Miguel Maldonado, June 1985; and A Small Enterprise Development Program for Ecuador: Strategy Paper by Albert Berry, Gino Lofredo, James Hochschwender and Liza Valenzuela, June 1985.

11. Many of the ideas that finally entered the model of training in the consultancy mode came from Professor Gene Lamb of United Schools of America, Miami, USA; Mr. Patricio Maldonado of USAID/Ecuador, Quito; and many others with whom the author had the opportunity of interacting and discussing.

12. See Robert M. Gagne and Leslie J. Briggs, Principles of Instructional Design. New York: Holt, Rinehart and Winston, 1979. Also the Dick and Carey book referred to in Note 1 above.

13. Melvin G. Blase, Institution-Building: A Source Book. Washington, D.C.: USAID, 1973.

14. See H.S. Bhola, Evaluating Development Training Programs. Bonn, FRG: German Foundation for International Development (DSE), 1982. ERIC Document No. ED 238 651. Also, H.S. Bhola, Evaluation Planning, Evaluation Management and Utilization of Evaluation Results within Adult Literacy Campaigns, Programs and Projects. Bonn, FRG: German Foundation for International Development (DSE), 1982. ERIC Document No. ED 221 759.