
Nov 94


Reports - Evaluative/Feasibility (142) -- Speeches/Conference Papers (150)

*Cognitive Processes; Cooperation; *Culture; *Decision Making; Educational Research; *Evaluation Methods; *Information Theory; Models; Naturalistic Observation; Organizational Development; Program Evaluation

An expanded vision of evaluation is offered that accommodates the use of both descriptive information and evaluative information, and which connects evaluation in the naturalistic paradigm with evaluation in the rationalistic paradigm for making informed decisions within programs of education and development. The model of "Information Development and Evaluation" as presented herein is the conceptual structure around which vibrant cultures of information can be built within program organizations; and such organizations can then socialize reflective practitioners, promote collaborative group decisions and action, and shape themselves into learning organizations. (Contains 4 figures and 72 references.)

(Author/SLD)
INFORMED DECISIONS WITHIN A CULTURE OF INFORMATION: 
UPDATING A MODEL OF INFORMATION DEVELOPMENT AND EVALUATION

H.S. Bhola
Indiana University

Abstract

An expanded vision of evaluation is offered that accommodates the use of both descriptive information and evaluative information, and which connects evaluation in the naturalistic paradigm with evaluation in the rationalistic paradigm for making informed decisions within programs of education and development. The model of "Information Development and Evaluation" as presented herein is the conceptual structure around which vibrant cultures of information can be built within program organizations; and such organizations can then socialize reflective practitioners, promote collaborative group decisions and action, and shape themselves into learning organizations.

INFORMED DECISIONS IN A CULTURE OF INFORMATION: 
UPDATING A MODEL OF INFORMATION DEVELOPMENT AND EVALUATION
---

Introduction

Informed decisions are the crux of the matter in all purposive action from policy development, planning, project design, to management, implementation and evaluation. To ensure regularity of informed decisions by individual agents within organizations, individual decision-makers must be supported by vibrant "cultures of information" -- i.e., organizational cultures that both value and use information -- continuously and systematically collected and retrieved for use by all.

Evaluation theory is, of course, about making informed decisions, but by its relatively greater focus on "evaluative information" it seems to have neglected the equally, if not the more important, role of "descriptive information" in decision making. Needed is a model that encompasses an expanded view of evaluation, accommodating both descriptive and evaluative information -- both of which are equally necessary in decision making [1]. Such a model should also serve as a structure around which a culture of information can emerge within a program organization, in turn, enabling reflective practice, collaborative action and learning organizations.

The Multiple Contexts that Shaped the Model

The triad of ideology, theory, and practical experience together have attended the development and updating of the model now presented below:

The Model in the Context of Practice

The model presented herein was born in the context of practice, in a series of evaluation workshops for middle level workers in literacy programs in some Eastern, Central and Southern African countries from 1976 to 1987 (Bhola, 1989b); and was tested-in-use in the course of evaluation field studies conducted in Botswana, Malawi and Zimbabwe (Bhola, 1988, 1989a, 1990a).

During these many encounters with practitioners in the field, it was found that practitioners wanted, first and foremost, to be informed about what was going on on the ground within the framework of their programs. The questions, "How well?" and "To what affect?" would come later. It was learned that most decisions made by program administrators in on-going programs were related to the needs for program expansion, teacher recruitment and choice and provision of reading materials. What
these literacy practitioners and administrators needed first for making all these decisions was descriptive information based on data which should typically be found in a Management Information System (MIS), howsoever rudimentary such and MIS was to be. Most of the information that practitioners within literacy programs wanted did not seem to require sophisticated evaluation studies. Literacy workers were already committed to the idea that some literacy was better than no literacy. They were not ready to commit scarce resources either for "questioning" their own commitment to the program, or for answering fine-tuned, "scientific" questions in relation to correlations and comparisons among and between organizational patterns, methodological approaches and reading materials written in different instructional styles.

That is not to say that data about affects are not required at all. Surely, data on literacy affects were needed. What the decision makers did not need in the beginning were rationalistic evaluations establishing causes and correlations between factors and effects. What they did need was personal testimony from new literates, community leaders and other extension workers in the field to the effect that the programs they had launched were useful. They wanted to know what the programs were doing to these people, at home and at work. Such data could be supplied only by evaluations conducted in the naturalistic mode. But since such information was not being produced, most of these decision makers ended up using the weaker impressionistic and anecdotal data.

This experience from the field spread over many years pointed out to the necessity of developing an evaluation model that would be based in the real-world needs of the practitioners. It was thus the product of a practical necessity.

The Theoretical Context of the Model: Within the Paradigm Debate

There is, of course, always a dialectical relationship between theory and practice. The initial conceptualization of the model and its later elaboration had been possible because of the very nature and quality of the paradigm debate which at the time was beginning to move towards a paradigm dialog (Guba 1990). Many evaluators were heeding Firestone (1990) who had suggested that paradigms were not systems of rules connected in a network of deductive operations. Rather, paradigms were cultures of research which as such can be brought into dialectical relationships between seemingly opposite views. One could indeed take the position, I should add, that statistical interpretation of reality as part of the positivist paradigm could be considered to be one "special construction" of reality. In and of itself, this special construction may be a partial description of reality but it is yet a "reality" that does hold within some particular
contexts and on the basis of which some decision makers would be ready to act.

In the language of Cronbach (1980), part of a program context could be defined as the "context of control" and thereby connected to positivist assumptions. Another part of a program context could be defined as the "context of accommodation" and may be have to make constructivist assumptions. The challenge was to make appropriate assumptions in appropriate contexts, and avoid being mired in mixed assumptions. Thus, in the same one program, all of the questions such as the following are relevant and necessary: How many students are there and what is their age structure? How are literacy and numeracy correlated? How do people, right or wrong, feel about their personal objectives being fulfilled by the program? How are lives of the new literate being changed through their acquisition and use of literacy skills? What new symbioses are appearing between orality and literacy. Different paradigms and different modes of information development and evaluation can, of course, be used as appropriate to answer each different question.

Descriptive and evaluative information -- a false dichotomy? It was also becoming clear that description and evaluation was a false dichotomy. As Donald Davidson (1968) suggested descriptive information by being situated in wider social and linguistic context and through "redescriptions" can become evaluative information. Thus, it is proper to work with the larger category of information and then think of information as being of two kinds descriptive information and evaluative information.

The Ideological Stance of the Model

The ideological spirit of the age was also congenial to the model as it was being elaboration. The ideology of development now asked for endogenous planning and innovation, collaborative decision making, and participative evaluation. The model responded to these ideological positions in affirming internal evaluation and promoting reintegration of evaluation back into the day to day practice of education and development. It did seem that the over-professionalization of evaluation as a specialization had blown asunder the necessary symbiotic relationship between purposive action and evaluating [2].

While the level of professionalization of evaluation over the last thirty years has been impressive and while some evaluation studies may have influenced national and international policy debate, there have been some unanticipated negative consequences. One unfortunate consequence of this otherwise impressive professionalization of evaluation may have been this disassociation of evaluation from implementation. The practitioner who implements purposive action does not feel
obliged to evaluate his or her own practice. This is reinforced by the professional evaluator who sees the practitioner neither as competent nor objective in the evaluation role. Thus the practitioner undergoes a split in the middle of the practitioner’s role, and is seriously disabled in regard to reflecting on his or her own practice and from taking informed decisions.

Concomitantly, all internal evaluation when undertaken is discounted as inferior and undependable. Thereby, the practitioner loses professional control of his or her work to the outsider. It is the outsider who then reconstructs hierarchies of significant objectives, establishes the criteria of success, selects sources of data that would be preferred, and methods of measurement and then makes pronouncements on the success or failure or programs. The situation is ironic. The outsiders first use local people and insiders to translate and administer instruments initially written in a metropolitan language. Then the outsiders use the insiders to translate back into the metropolitan language the interview or questionnaire data collected in an indigenous language since the so-called external and objective evaluators neither have the time, nor the language, nor social access to the subjects of the study.

In the case of bilateral and multilateral projects, the control we have talked about may often shift to foreign agencies and institutions thousands of miles away. The consequences of such shift of control can be serious and need not be recounted here in any detail. We accept, of course, that donor nations, within the context of technical assistance, are entitled to know how the resources made available by them are being spent and with what effectiveness. However, evaluation patterns should not be imposed from the outside to distort local objectives and methods and to destroy local initiative and responsiveness to popular needs.

The model offered below takes the ideological stance that without undoing the professionalization of evaluation, internal evaluation should be given a place of its own in the process of generating information for informed decisions. In rehabilitating internal evaluation, the model points to the necessity of rejoining "valuing" with "doing", that is, implementing with evaluating. The practitioner should not merely be allowed but expected to be engaged in continuous self-monitoring -- description and evaluation of practice in using feedback for feedforward. The amputation of the practitioner’s role must be avoided. We should all be practitioners and evaluators at the same one time.

Ideology, theory and experiential realities have thus converged in the model presented below.
A Description of the Model of Information Development and Evaluation: An Expanded View of Evaluation

An expanded view of evaluation is claimed for this model (see figure 1 attached), first, because the typically used category of "evaluation" is expanded into the larger category of "information" and thereby descriptive information is added to evaluative information in our conception of the processes of making informed decisions; second, because, both paradigms of making warranted assertions about reality -- naturalistic-constructivist and rationalist-positivist -- have been included; and third, because evaluators are invited to rise above and go beyond occasional, untimely, stand-alone, discrete and sometimes disruptive evaluation studies; and instead, be challenged to create vibrant "cultures of information" within programs and organizations (Bhola 1991a, 1991d).

While we argue for the development of overall cultures of information within program, the triangulated approach to information development and evaluation offered in the model is applicable to individual evaluation. Idles as well that may be conducted as part of the overall program evaluation and in the process of moving towards a vibrant culture of information. (See figure 2 attached).

A Description of the Model

As can be seen, three modes of information gathering are presented -- Management Information System (MIS), Naturalistic Evaluation (NE) and Rationalistic Evaluation (RE). There is a triangular relationship among them. The box including the "Management Information System (MIS) juts into the upper half of the rectangle to indicate that the two categories of descriptive information and evaluative information are not completely separate and inclusive but rather overlapping. The so-called descriptive information has evaluative content in that good descriptions implicate decision makers toward particular prescriptions.

[INSERT HERE THE FIGURE: An Integrated Model of "Information Development and Evaluation."

[INSERT HERE THE FIGURE: Integration of Methodological Approaches within a Stand-alone Information Development / Evaluation Study.]
The Management Information System (MIS)

It should be noted that the MIS is the foundational component of the model and should be the "first" to be installed and implemented within a program system. The MIS will include descriptive information about the size and scope of a program. An MIS in its initial state need not be complete and comprehensive covering the total set of all possible indicators of a program, but should expand with the growing information needs. MIS's need not always be computerized, and could easily be a paper-and-pencil affair. Ideally such information will be generated in the very process of the implementation of a program.

To each MIS, its own SIM -- the necessity of a corresponding set of integrated materials (SIM). Every MIS must be complemented with a good SIM (Set of Integrated Materials) in the form of text, voice and image. Instructional materials, periodical reports, newspaper stories, pictures and photographs, specimens of writing, tapes, videos, should all be stored in this SIM. Each item should be indexed in relation to the numerical data included in the MIS.

Qualitative data, once quantified, may not remain qualitative. Evaluators may sometime claim to have used qualitative approaches in their evaluations when in reality they may not done so. What they may have done is to have obtained some open ended responses from their respondents and then scored them to covert those responses into numerical data. This quantitative transformation of open ended data does not qualify as qualitative approach.

Adding a true qualitative component to the MIS. A question is often asked: Is it possible to add qualitative data to an MIS? The answer is "Yes!" Modern computers today can store immense amounts of data and provide instant random access to various sets of data within a large data set. Such data sets need not all be numerical, but can also include narratives, that is, computers can include contextual, and qualitative information for interpretive use. Figure 3 attached to the paper indicates how this might be possible to do. Relevant computer software may be available or available computer software may be easily adaptable to this use.

[PLACE HERE FIGURE: Showing the Structural Design for a Computer Program Linking "Numerical Data" with "Narrative for Interpretation.]
With the use of a format as proposed, numerical data and narrative for interpretation on an individual, a particular group, a community or a region can be linked. At the same time inter-individual, inter-group, inter-district, and inter-regional comparisons can be made.

The narrative for interpretation will, of course, have to be developed through analysis of contextual materials such as historical data, policy and planning documents, and by conducting naturalistic studies focused on individual, groups, communities, and regions that are included in the numerical data sets in the computer-based MIS.

**Naturalistic Evaluation (NE)**

An MIS-SIM while a necessary component of the information development and evaluation plan is not by itself sufficient. Naturalistic Evaluation (NE) is an absolutely necessary supplement and complement to the MIS. Naturalistic evaluation gets the "second" priority in this model of information development. There is a two way relationship between MIS and NE -- MIS will provide "empirical" grounding to many of the assertions made on the basis of NE, while NE will make MIS data meaningful, explaining how people within programs of literacy, for instance, were experiencing those programs and how they were reconstructing their lives at home and work as new literates.

Let us be reminded that the inclusion of qualitative data called the "narrative for interpretation" to be stored in the MIS will almost all be generated through naturalistic evaluation. Some additional materials will come from historical documents, five year plans and other policy materials.

**Rationalistic Evaluation (RE)**

Rationalistic evaluation gets the last position in this model of information development and evaluation. The last can sometimes mean the least, but it certainly does not mean complete exclusion. RE studies will be required at some times in the life of a program to develop information dealing with comparisons between various pedagogical or organizational approaches to literacy work and there may be occasions when correlations between various outputs have to be studied. To answer these types of questions, we will have to use RE studies. What we are saying is that in the early life of a program, RE type studies are seldom needed. MIS and NE studies are much more in demand. Quite often an RE study would be based on samples from data already in the MIS. Sometimes additional data may have to be collected. Quite often, an RE study on completion will be incorporated within an extended MIS.
Towards a Vibrant Culture of Information

Students of human cultures have often talked of how structure and culture exist in a relationship of mutual shaping. To help promote a viable and vibrant culture of information, an intelligent use of an appropriate structure (in this case the integrated model of information development and evaluation) will have to be made.

A culture of information can be conceptualized as an emergence from: (1) the values and norms held by participants in a system in relation to the development, validation, and utilization of information in decision making; (2) the patterns of social and organizational relationships within which information is held, withheld, and used; and (3) the tools used for collecting, collating, and storing information.

An Ideal Culture of Information

All human organizations have communication patterns and, therefore, have a culture of information. But these cultures of information may not be healthy. In an ideal culture of information, information is valued, without discounting intuition; disinformation is not deliberately allowed to enter or to emanate from within the program system; information is legitimized and validated using non-political criteria and within collaborative-participative patterns; information is obtained from all possible categories of stakeholders within the program system as well from the community outside; and information developed or obtained is allowed to flow freely both vertically and horizontally.

In healthy cultures of information, information collection is not separated from information utilization. For example, information developed by a functionary is used by that functionary and others at his level without having to wait for orders from above. In other words, every member of the organization has the right to use the available information in making decisions within his or her jurisdiction at his or her level. Finally, tools of information collection, and methods of collation, storing and retrieval of information are appropriate.

Creating an Ideal Culture of Information

Creating cultures of information is a slow, complex and difficult task, involving changes in or renewal of existing norms and values about validating, legitimizing and using information; in ways and patterns of holding, withholding and utilizing information; and in the tools and techniques currently in use in gathering, collating and storing information. This is a contradictory process that involves both "strengthening and
subverting, reinforcing and renewing" the culture which now exists and is undergoing renewal (Bhola 1990c).

Cultures of information can not be created in a social and political vacuum. We need to understand that the culture of the surrounding organization, of the community, and the politics of the society in which programs are being implemented will together determine the limits and the possibilities of such cultures being recreated.

In the context of an international project involving intercultural comparisons (Belanger 1991, Ouane 1991), several interlocking processes will be involved: intercultural communication; changes in the authority structure of the organization and in relationships between the program organization and the community; resocialization of both functionaries within the organization and of those they serve within the community; and training of those within and outside the program organization.

Let us now change the perspective and look ahead from the vantage point of teams of practitioners involved in developing cultures of information within projects.

Renewing Cultures of Information from the Inside

Renewing and recreating cultures from the inside is not merely a matter of issuing new office orders. It is unlearning some of the old values and internalizing some new ones; it is learning new ways of relating, and organizing; and it also involves learning new technologies through a long collaborative and participative process.

There are two parts to the process:

A. Making the existing culture of information "visible". Make the existing culture of information visible and identify its inadequacies, distortions and dysfunctions (in relation to an ideal culture of information); and

B. Renewing the existing culture of information to make it more "viable" and "vibrant". Make changes so that the new culture-in-the-making becomes more viable and vibrant (desirable in relation to the criteria of an ideal culture of information and feasible in relation to the realities of the context of the program).

A. Practical steps in making the existing culture of information visible

1. A vanguard group in a continuous seminar. Establish a vanguard group, with functionaries from all levels of the
organization to meet in the context of a continuous seminar so as to keep on learning about a particular educational program in the country; and to acquire appropriate skills in making the current culture of information in your country project, first, visible and then renewing the existing culture of information to make it more viable and vibrant.

2. **Taking stock of tools of information collection.** In making the existing culture of information visible begin by examining the existing tools of information collection. Collect and make a list of all the tools of information collection, collation, record and storage of information now in use within the program. In each case ask the following questions: When, and why this tool was introduced, by whom and who designed this tool? Has the tool been revised, when and why? Has the tool worked well in terms of the expectations from it at the time it was introduced? What information has been developed from the use of the tool and to what use has this information been put? Taken together do the tools of information gathering currently in use fulfil the information needs of the program in question? and What other information do decision makers seem to need to increase the effectiveness of the program?

3. **Information salience, selection, flow, and control.** Begin by asking the question: Is the need for dependable information salient within the program organization? Do formal information-handling roles exist within the organization? Are appropriate resources committed to information development and utilization? Examine the patterns of information selection, and information flow within the program system and to the stakeholders outside, and identify the patterns of control of information by various functionaries at various levels.

Some further questions such as the following may be raised: Is information defined only as formally collected information or does it also include "informally" obtained information? If "informal" information is part of the information pool, how is it validated, and made part of the usable information within the program? Who has the right and the opportunity to contribute information to the program's pool of information? Does it include the beneficiaries of the program in question? In addition to formal evaluations, what approaches are used to generate quantitative and qualitative information? What use is made, for example, of reports written by officials after field visits, of communications from the field initiated by field workers, or by community leaders, etc.? Once information has become formalized as information about the program, how does this information flow within the system -- horizontally and vertically? Does all information become semi-confidential or fully confidential once it has been processed? Is too much of information unnecessarily considered confidential? Is information flow controlled by level of hierarchy? What kind of
information can functionaries use, as they find it, without having to get "approval" from above?

4. The values and norms of information use. In a more crude form, this is the issue of the politics of information. The following questions should be asked: What are the current values about informed choice? Is information collection a mere ritual? Is the morality and the economics of non-use of information understood? Is there democratic access to information? Is there misuse of information by omission or commission?

B. Practical steps in the process of renewal of the existing culture of information viable

All the questions raised in the section A above will not only make the culture of information visible, it will also provide ideas and data on how to make it more viable and vibrant. Whereas Section A above described the analytical phase, the present Section B is focussed on the design phase. The design phase will involve the creation of a structure (a body of tools, rules and work patterns) that provides the technology; and a super-structure (of values and norms) that will provide the soul for the new culture of information.

The Dividends of a Culture of Information: Connections with Theories of Reflective Practice, Collaborative Action, and Learning Organizations

Reflective practice, collaborative inquiry and action, and the learning organization are three of the most important and recurrent themes of social and behavioral sciences today. All these three traditions are post-positivist, humanistic and participative. The triumvirate is thus paradigmatically and theoretically sound and ideologically congenial. The democratic ethos of our times encourages creativity, effectiveness and fulfillment as it asks professionals to engage in reflective practice. Collaborative inquiry and action is again in the democratic spirit. Finally, the learning organization by definition asks organizational actors, irrespective of location in the hierarchy in the organization, to learn and to inter-learn, and in the process claim ownership of the organization's mission and operations. What is ideologically good is also theoretically sound. Reflective practice does work better. Collaborative groups are more productive and creative. Learning organizations treat the insiders humanely and compete with the outsider successfully.

It should now be stated that the relationship between the quality of the culture of information of an organization and the social and behavioral life of that organization are two aspects
of the same reality. Information is the glue that connects roles and rules and tasks within an organization together into a living system. The availability, accessibility, and patterns of utilization of information within an organization shape not only the effectiveness of decision-making but also the commitments and competencies of role performers and the overall health of the organization itself. The culture of information is the environment within which reflective practice, collaborative inquiry and action will germinate and an organization will become a learning organization. Stated in another way, an organization without a viable, vibrant and robust culture of information is unlikely to accommodate reflective practice on the part of its members, will inhibit collaborative inquiry and action, and will not become a learning organization (see figure 4).

[PLACE HERE THE FIGURE: A Model of the Process of Emergence of a Viable Culture of Information Within Learning Organization.]

Reflective practice and action at the individual level. Reflective practice is a particular epistemology of practice that goes beyond technical rationality to reflection-in-action. But a reflective dialog between the teacher and the taught while intuitive and creative, is neither mysterious nor uninformed. In fact it is the status of being informed that permits the reflective thinker to make intuitive leaps. Reflection does not take place in an information vacuum. To be in a culture of information is to know-in-action.

Collaborative learning and action in groups. We are seeing a rejection of the norms of rugged individualism, selfish self-sufficiency and competition. We are discovering the uses of cooperation and collaboration. It is asserted that intellect flourishes in social settings of interaction and exchange, and that knowledge produced in social settings through interaction has greater validity. Similarly collaborative action has greater salience and possibility of implementation.

Once, again, it is clear that good participation and collaboration can not reside in mere sharing of ignorance, enveloped in the indulgent emotion of being all in togetherness. Nor is cooperation and collaboration a pseudo democracy of unexamined choices. Good collaborative thinking and action lives on a healthy diet of information. Many collaborative strategies are per se strategies of information development and information use.

The learning organization: the institutional level. The concept of the learning organization is a continuation of the theoretical traditions of the healthy, democratic, and humanistic
organization. Theory development in the area of learning organizations has come from Shrivastva (1983), Pucik (1988), Argyris (1990), Senge (1990), March (1991) and Simon (1991). The essence of the theory of the learning organization is that (i) an aggregate of learning individuals do not simply add up to a learning organization though continuing self-learning and training of members of the organization is an essential condition of a learning organization; and (ii) that being a learning organization is dependent on storing and structuring organizational experience in both the quantitative and qualitative modes, having open ended processes for making decisions, self-conscious, collaborative planning, and engaging in systemic thinking to be able to connect with the living environments in the world around. In other words, a learning organization must be a culture of information as well.

Back to Cultures of Organizations

Organizational learning, on the other hand, is premised on systemic thinking. Peter Senge (1990) says that when teams think systemically, they develop a language that enables them to discuss complex issues. As they move beyond "mere openness" to "reflective openness" they move from simple discussion of values and ideas to a willingness to look inward and challenge their own thinking, values and ideas. Obviously, these processes can be actualized by the well-informed, living and working in an environment of openness.

Sarason (1991) most directly raises the important question "How do you build into a new school self-correcting forums and mechanisms so absent in our schools?" (p. 120). He then goes on to suggest that "The task is not evaluation in the narrow sense, but development of an organizational culture that makes self-correction a norm and not a war (p. 120)." The statements are easily translatable in the language of open communication and a culture of information as we have discussed in the above.

To sum, organizations that subscribe to Theory Y, that are healthy organizations and are learning organizations are also "cultures of information." Communication and control are a part of the definition of all social systems. Consequently, any human system (from family, community, organization, to the state), by the very fact of being in existence, will have a culture of information embodied in it. Therefore, we do not create cultures of information from scratch within human systems. Cultures of information good or bad, pre-exist. We only assist in the process of making those existing cultures of information more sufficient, more functional and more dynamic.

Connections with Planning, implementation and evaluation. As the graphic presentation of the connections among and between the expanded vision of evaluation, the culture of information,
reflective practice, collaborative learning and action, and learning organizations shows, such a culture will have consequences in all the various aspects of purposive action from planning through implementation to evaluation.

**Conclusion**

Does the model as elaborated even have a chance of succeeding? Is it not an exercise in Utopian imagination? Are evaluation professionals going to like this suggested move toward recombining "evaluating" with "implementing" and the accompanying shift back to internal evaluation? Are the pundits of methodology going to accept this paradigmatic hybrid? Are the practitioners themselves going to like this "additional work" of evaluating their own programs and reflecting on them -- becoming uncomfortable as professionals and vulnerable as officials? Are the higher-up within organizational hierarchies going to like the openness that the model as a structure for a culture proposes -- after all information is power, and power is exercised through being secretive about information and by manipulative of communication? Would the power-holders not simply damn the culture of information and capture the structure of information, to centralize information and power for their own good?

The answers to all these questions may not be comforting. But then that would be the situation in relation to most of these questions in any setting of social change that questions complacency, demands commitments, requires higher competency, and disturbs vested interests rooted in the status quo. We have to assume a moral order, and hope that we have people in leadership who have good intentions. We must take up the challenge of approximating to the ideal, howsoever hard and slow the road ahead.
NOTES

1. The model now presented is an update of the model developed within a series of evaluation workshops in East, Central and Southern African countries during 1976-87 and which was first published in H.S. Bhola, Evaluating Literacy for Development: Projects, Programs and Campaigns (Hamburg: Unesco Institute for Education / Bonn: German Foundation for International Development, 1989/90). [The book has since become available also in French, Spanish, Arabic and Farsi.]


BIBLIOGRAPHY


Figure: An integrated model of "information development and evaluation." (Bhola, 1992)
Figure: Integration of methodological approaches within a stand-alone information development / evaluation study.

©Bhola (1993)
Figure: Showing the structural design for a computer program linking "numerical data" and the corresponding "narrative for interpretation" for various units of analysis, e.g., individuals, groups, program districts and the next larger program units, (Bhola, 1994).
Figure: A model of the process of emergence of a viable culture of information within a learning organization. (Bhola, 1994)