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Planning Powerful Extension Programs

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This article is Part II on the subject of diagnosing problems and reacting to these problems by planning Extension educational programs. Part I on problem diagnosis was published in the last issue of the *Journal of Extension*. This article focuses on the Extension educator applying his skills to the analysis of the problem and establishing Extension programs that will meet the needs of the people facing the problem. The authors provide a framework for the practicing Extension educator to use. The article is worthy of considerable discussion by Extension professionals.

Man has long been preoccupied with diagnosing or understanding the "why" of things. Whether he derives this understanding from research findings, from a psychiatrist's analysis, or from an analysis based on a theoretical frame of reference, any individual has a sense of completion when he increases his knowledge or understanding of the "why" of a problem.

While in certain pursuits diagnosis can be an end in itself, the goal for the practitioner is problem solving as well as diagnosis. As in medicine, diagnosis is essential to the cure, but very different from it.

The first article in this series discussed problem diagnosis. This second article focuses on the "cure," describing how to effect change, which for the Extension agent means planning and implementing successful programs.

Definitions

Program planning involves two sets of actors: (1) the planners, sometimes referred to as change agents and (2) the intended audience, or the client system. In each case, the change agent and the client system can be either people or organizations. In most instances, the

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planner will be a person or a small group of people working as representatives of an organization, and with the backing and sanction of the organization and its members.

A program is simply a series of intended or actual activities or events. Planning may be described as simply thoughtful and purposeful design.

“Powerful” refers to the capacity of a program to influence or to effect change, for the planning of a successful program depends on generating a capacity to influence.

Much of the planning of change agents is designed to produce social change, defined as a difference in a selected social variable at Time II in contrast to what it was at Time I. While social change can be a product of undesigned components, our focus is designed social change—how a planner can use the components at hand to effect desired or intended change.

Types of Change Programs

Many social change programs have been designed around single-factor theories. Consider the many programs based primarily on goal attainment, such as monetary incentives, promotions, tenure, retirement, publicity and status enhancement.

Another tradition in program planning focuses on re-

structuring the system in terms of norms and expectations. Conflict theories assuming the necessity of force have resulted in programs built around power and its strategic manipulation. Excommunication, banishment, divorce, severe punishment, and imprisonment have been used to back up the inculcation and enforcement of value standards.

Education focuses primarily on the concept of ability centering on intelligence, knowledge, and skills. Programs based on ecological theories with an emphasis on population, organization, environment, and technology also fall primarily under ability. Programs such as language training, typing lessons, music training, and military drills are largely built around habit formation.

On the other hand, programs designed by some social systems make use of festivals, celebrations, and rituals to instill and reinforce customs and traditions. In another vein, federal assistance programs, counseling services, Extension programs, and lending agencies focus on the support factor.

Components of Powerful Programs

In contrast to these single-factor approaches to a problem, the planning of a powerful program calls for a more comprehensive diagnosis of the problem involved and a multifaceted program

package based on that diagnosis. Several components contribute to creating a powerful program:

1. A comprehensive diagnosis of the most frequent cluster of factors favoring the action given by adopters from highly successful programs.
2. A comprehensive diagnosis of the most frequent cluster of factors for opposing the change given by nonadopters from low-success programs.
3. A series of program inputs designed specifically to generate in the client system the kinds of reasons most favoring adoption. The diagnosis may point to the use of program inputs not included even in successful programs.
4. A series of program inputs designed to eliminate or neutralize the kinds of reasons given by most nonadopters in low-success programs.
5. A double check on the relevance of each program input to the reasons it is designed either to generate or to counteract.
6. The utilization of implementation methods shown to be highly productive in generating change.

When combined, the above components constitute a powerful program for change. Programs lacking some of the six factors will be comparatively weaker, the degree of weakness depending on

the number lacking. Table 1 presents a format for designing 5 of the 6 components that compose a powerful program.

Diagnosis of Two Most Frequent Clusters

The foundation for planning a powerful program rests firmly on the diagnosis of the most frequent cluster of reasons favoring the proposed change or action in successful programs. It also rests on the diagnosis of the most frequent cluster of factors (reasons) for nonadoption or inaction in low-success programs.

Each state has many counties, each with an Extension program. On any specific program, these counties can be placed in rank order on their success with participation or rate of adoption. Take the top five counties as the most successful programs and the bottom five counties as the least successful programs.

Interview 10 adopters from each of the 5 high counties and 10 nonadopters who had considered the change from each of the 5 low counties, using the problem diagnosis instrument presented in Part I in the Spring issue of the *Journal of Extension*. Hidden factors, as well as the more obvious reasons, will be elicited.

Following the instructions given in Part I, determine the most frequent cluster, or those reasons mentioned by 15 percent or more of your respondents.

Table I. Chart for program design.

THE PROPOSED CHANGE OR ACTION IS:		
<p>Most Frequent Clusters of Factors (Reasons)</p> <p>I. <i>Most frequent cluster of factors (reasons) favoring the change or action by persons or organizations who decided to make the proposed change or take the proposed action.</i></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> <p>8. _____</p> <p>9. _____</p>	<p>V. <i>Direction* and Weight† of influence predicted</i></p>	<p>Proposed Program Inputs</p> <p>III. <i>Proposed program inputs designed to generate the factors most frequently mentioned as favoring the proposed change.</i></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> <p>8. _____</p> <p>9. _____</p>
<p>II. <i>Most frequent cluster of factors (reasons) opposing the change or action by persons or organizations who have considered but who have not yet made the change or taken the proposed action.</i></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> <p>8. _____</p> <p>9. _____</p>		<p>IV. <i>Proposed program inputs designed to counteract the factors most frequently mentioned as opposing the proposed change.</i></p> <p>1. _____</p> <p>2. _____</p> <p>3. _____</p> <p>4. _____</p> <p>5. _____</p> <p>6. _____</p> <p>7. _____</p> <p>8. _____</p> <p>9. _____</p>

* Direction indicated by drawing arrow from program input to factor or factors it is designed to influence.

† Weight of input on factor it is designed to influence is estimated by program designed on a scale of 1-10.

Enter this most frequent cluster of reasons for adopting the program in the space provided in Component I, Table 1. Similarly, enter in Component II, Table 1, the most frequent reasons for nonadoption given by respondents from the 5 least successful programs.

By using several counties instead of one, focus on the personality is reduced and the emphasis on factors contributing to low and high successes increased.

The strength of the diagnosis rests on the use of the diagnostic tool to "dig out" the hidden as well as the more obvious factors. It also rests on the fact that the informants are people who have themselves confronted the situation, made a decision, and acted on it.

In instances where time doesn't permit interviewing 10 adopters from each of the 5 most successful counties and 10 nonadopters in each of the 5 least successful counties, other sets of respondents may be available.

A second, but less adequate, source would be a group of adopters and a group of nonadopters who don't necessarily come from the high- and low-success counties. A third possible source is Extension staff members and executive committee members who are well acquainted with many adopters and nonadopters.

The same diagnostic tools and procedures can be used with each of these groups and will turn

up many otherwise hidden factors. Whenever possible, however, people who have faced the problem, have decided about it, and acted on their decision should be used as respondents. Staff and executive committee members who haven't faced the problem themselves are usually only guessing. On some issues they lack the knowledge that would make them good key informants.

Program Inputs for Planning a Powerful Program

Before turning to specific examples of program inputs, consider the kinds of inputs that exist for the various kinds of programs. Table 2 presents 12 general types of widely used program inputs. The reader will think of many specific examples under each category.

At certain times, the change agent need not plug many factors into his program because the major components for success are already present in the situation. For example, a salesman or program chairman can find out what his client system already strongly want. He can then provide the opportunity to obtain these ends through his program or facilities. With such an approach, the change agent is taking advantage of the powerful components already present in the situation; he simply fills in the missing parts necessary to obtain the desired responses.

Table 2. Some examples of program inputs.

1. Education	<p>Knowledge: characteristics, properties, relationships, history, belief and disbelief systems.</p> <p>Skills: processes and procedures, methodology.</p>
2. Information and orientation	News, announcements, policies and procedures, structure, and interrelationships.
3. Motivation	Sales, advertising, promotion, rewards.
4. Technical assistance	Skilled manpower, equipment, research.
5. Grants	Salaries, fellowships, scholarships, program support, price supports, project supports, taxes, contributions, tax relief, construction, capital improvements, land grants, military aid, and side benefits such as insurance, retirement benefits, educational benefits for children, vacation with pay.
6. Requirements	Laws, rules, regulations, policies.
7. Intervention	Military, police, strike, boycott, march, sit-in.
8. Inventions	New tools, new processes, new products, new concepts.
9. Fabrication	Tool production, product production.
10. Organization	Creation of new organizations, reorganization of old organizations.
11. Position and role analysis	Job analysis, job specification.
12. Rationalization	Theory construction, rationale formulation, justification.

Success Stories

One of the success stories of the Extension Service is dairy herd improvement, a story with a long history. The Babcock Tester made it possible to measure butterfat production per cow. As increased information on weight and pounds of butterfat per cow became available, the concept of proven sires emerged. Progress was slow but steady.

The introduction of artificial insemination presented new potentials, but at the same time new complications. Extension as an organization wasn't equipped to develop the potentials of this program. Recognizing the need for innovation, Extension promoted the creation of new independent organizations in the form of artificial breeders cooperatives.

Furthermore, these organizations had technical manpower, organizational structures, and linkages specifically designed to facilitate dairy herd improvement. The cooperatives provided the services and the support needed to participate in the program. Many pieces were included in the program: the cooperative's pool of proven sires, a transportation system, trained technologists at convenient places, and a payment system in which the cost was carried by the beneficiary at a price lower than that of existing alternatives.

Other powerful, multifaceted Extension programs have resulted

in increased crop production through the combination of soil testing, fertilization, and the use of insecticides; controlled atmospheric storage of apples and other products; and the development of hybrid corn and chickens. In the international arena, miracle rice and miracle wheat achieved their potential with the use of many other supporting inputs.

The achievement of an adequate technical solution to a problem is often easier than achieving its adoption; it's the Extension agent who's largely responsible for this difficult task.

Most of these multifaceted programs evolved over a considerable period of time, which under certain circumstances Extension agents don't have. What we are demonstrating in this article is a method using theory and procedures that enable the development of powerful programs in a shorter time and with less waste in resources.

Steps in Selecting Inputs

There are four essential steps in selecting inputs in the designing of a powerful program.

Step 1. The first step is to use a long advocated Extension method—observe the successes and failures in the programs that have been tried and see what works.

During World War II, we interviewed men from low-morale companies and from high-morale companies who were performing the same kind of work. We found

that the leadership patterns (program inputs) in the high morale units were very different from the leadership patterns in the low morale units. From these results, we generated a unit officer's guide to morale control.

This same principle can be applied by Extension agents to the problem of adoption of a particular practice. While interviewing the participants (adopters) from each of the five high counties and nonadopters from the five low counties, the Extension agent can ask an additional question to find out what things were done by the staff members, specialists, or others to influence their decision.

Step 2. In the second step, the focus is on successful and unsuccessful program inputs in other programs such as educational programs or sales programs. Many successful program inputs have been borrowed from other systems, particularly from those within the same culture and the same society.

Step 3. The third step is to study the most frequent cluster of reasons given for adoption by high adopters and for nonadoption by nonadopters, which in turn will generate new program inputs.

Even a highly successful program might have been more successful if close attention were paid to this step. The program designer is now in a position to be creative in building a program

with inputs that cover reasons not accounted for in other programs.

For example, a board given a powerful set of data by their administrative officer decided on a course of action based on these data. A group of members seeing another alternative as more beneficial assembled a strong set of data presenting that position.

To overcome the board's complete confidence to pursue Alternative A based on the data presented by its administrators each board member was taken individually to see and compare two examples depicting the issues involved. After these visits, the board carefully reviewed the new data, reevaluated the situation, and chose Alternative B.

An added bonus of the third step is that the program planner will learn why the inputs of successful county programs were able to generate that success.

The program inputs from Steps 1, 2, and 3 should be entered in Components III and IV of Table 1.

Step 4. In the fourth step, the program planner checks the validity of each input to the success of the program. This check can be done quickly and easily by drawing arrows from each proposed input to each reason that it's designed to influence, assuring its relevance.

Furthermore, the planner should estimate the weight he thinks each input will have on that factor on a scale of 1-10.

The weight can be indicated on the shaft of the arrow. The planner will then be able to see what reasons haven't been covered or haven't been covered in strength. He can then consider additional program inputs to account for inadequately covered factors.

Having completed Step 4, the planner has the strongest set of program inputs he can design for that problem at that time.

Interchangeability of Factors

Most change agents don't have available all of the ideal program inputs with which to design their program. Research findings indicate that the factors entering into the decisions of individual decision makers are interchangeable. For example, inputs that beam on expectations, ability, and support can achieve at times the same results that can be achieved by rewards or negative sanctions.

This fact opens the door for the program planner to become a creative inventor of powerful programs using those resources available to him together with those he can generate. It allows for the development of various combinations to be built into a program design.

Once a change agent understands the idea of the interchangeability of factors, he's in a position to ask himself what inputs might be perceived as support, as an expectation, a force, an oppor-

tunity, a gain, or a loss by the decision makers faced with a particular problem. If he then explores program inputs that can generate a particular belief or disbelief in the mind of the decision maker, he begins to see inputs not previously considered.

Having considered the five components of planning powerful programs included in Table 1, we now turn to the selection of methods by which program components are implemented.

Most Extension agents are relatively sophisticated in their knowledge of methods. One aspect of methodology to which our research findings make a major contribution, however, is the dimension of consistency discussed in Part I of the series.

It was found that with very few exceptions, each person who takes a stand adopts a set of opinions, sentiments, beliefs, disbeliefs, and behavioral responses consistent with that stand.

An individual's beliefs become his facts, and everything he feels, believes, and does becomes mutually reinforcing. Given this consistency of beliefs and actions, in most instances, it will take a powerful program to generate a change. A weak program has little chance of success.

The data support the conclusion that beliefs and disbeliefs influence and direct actions. Furthermore, research data have emphatically demonstrated the conclusion that actions influence and

shape beliefs and disbeliefs and future actions. As a man believes, so he acts; but as a man acts, so he also comes to believe. The net result is a spiral effect in which beliefs and actions mutually reinforce each other, usually in the same direction.

When, on those rare occasions, beliefs and actions are moving in opposite directions, their comparative power and influence on each other are emphasized. Evidence indicates that action, which usually involves a greater commitment of the self, can be more powerful than beliefs under circumstances involving conflict of beliefs and actions.

Potency of Source of New Data

Knowledge based on personal observation and experience is probably the most potent source of data, and the most difficult to disbelieve. On-site inspections, process and result demonstrations, experienced comparisons, and discovery learning fall in this category.

Knowledge based on the personal observation and experience of another person is also potent unless the claims are interpreted as deliberate fraud or delusion, in which case the statements are relatively easy to disbelieve. Thus, the personal experiences of a trusted source are a powerful source of data.

Beliefs claiming Deity as their source are potent for believers, but lack potency for those who don't believe in Deity. In the history of religion, miraculous events attributed to Deity have provided powerful rallying points and therefore a powerful directive for believers.

Knowledge or beliefs based on careful scientific research are potent for those who have faith in science. In Western society, science is a trusted source of information. An expert's opinion on a subject will have special potency for those who accept the authority of the source. In the absence of recognized authority, the symbols of authority will still be acceptable by many.

Knowledge from one's own reference groups will tend to be accepted. Not only will this new knowledge tend to be consistent with previous beliefs, but also the sources will be considered trustworthy.

Some sources claim or are claimed to have special power in a specified field. If one keeps this fact in mind when selecting a communicator to address a particular audience, the level of acceptance of the new information can be greatly influenced.

Furthermore, it should be noted that negative reference groups may also be a powerful source, for the actor may be inclined to interpret their beliefs and practices as his own disbeliefs.

Actions of any actor function as a powerful commitment of "the self." When the actions of an actor are inconsistent with pre-existing beliefs or disbeliefs, they'll operate as a potent force to change those beliefs and disbeliefs, thus enabling the actor to regain a feeling of consistency.

Thus, participation and involvement in the action—particularly in leadership roles—unleashes potent forces in generating change.

The combined influence of a powerful cluster of the above methods, is, of course, more powerful than any single method by itself.

Conclusion

The U.S. Extension Service is a large organization requiring the time and effort of many people. Like all organizations, its value lies in its accomplishments, in the desired changes it effects or to which it contributes. While Extension's record of achievements has been good over the years, every agent knows of the many programs that failed to meet objectives, or succeeded only at an unacceptably high cost. Every change agent seeks to implement programs that achieve desired results with minimum time and resources.

Most individuals in client systems with whom Extension agents must deal have a stereotyped, consistent image of any

given problem; their beliefs, sentiments, opinions, and nonverbal behaviors reinforce each other, making any change difficult. Thus, programs that are to succeed must usually be powerful multifaceted programs.

Each problem has a unique cluster of factors related to it and therefore requires a unique program. No one standard program will be successful with all or most problems. On the other hand, trial-and-error approaches waste valuable time and resources.

The procedures and tools presented in this article facilitate an inexpensive, yet comprehensive diagnosis of any given problem. Previously hidden as well as more obvious reasons for a particular decision and action are revealed by individuals, and the small cluster of 10 to 15 factors most frequently entering into that decision and action for the client system is determined.

We next presented procedures and tools for organizing program inputs specifically designed to bear directly on each of the factors in the decision-making cluster and to check that all factors are adequately covered. This pin-point planning generates a multifaceted program for a specific problem and eliminates waste that can accompany generalized or trial-and-error approaches.

The planning of powerful programs also calls for determining the best method of imple-

menting each program input. Recognizing that actions are powerful components in changing beliefs, disbeliefs, and future actions, large components of client system participation and involvement are recommended, especially in leadership roles involving the promotion of the desired change.

Since most people have difficulty thinking deductively, inductive approaches with examples, procedures, and tools for application must supplement general deductive presentations.

Experience has shown that application does take place when a combined inductive-deductive approach with sample illustrations from the field of experience of the client system is used.

The combination of comprehensiveness in diagnosis, powerful program planning, and economy of time and resources is possible through the application of a general theoretical frame of reference derived from a 25-year research program on why people and organizations decide and act as they do.

The application of the theoretical frame of reference to numerous problems support that often-quoted, but not always believed, statement: "There is nothing more practical than a good theory."

However, practical theories don't apply themselves. This two-article series makes these applications available to change agents in the field.