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ABSTRACT

The theme running consistently through this speech is that the supportive services to vocational education, to be effective, must be viewed in a sociological context. Further examination of the issue is considered from a social system perspective and from the individual behavior perspective. It is concluded that no problem as complicated as the coordination of supportive services in vocational education can be solved without a considerable amount of work and dedication. The author presents sociological models for dealing with individuals involved in the change process in rural areas. (DB)

It is apparent that there must have been some obvious duplication of efforts, useless conflicts and general inefficiencies in the administration of vocational education programs, or a conference like this would not have been called. The reason I know something of these problems is that I was fortunate enough to be involved in the evaluation of the Concerted Services in Training and Education program which was pilot tested in St. Francis County, Arkansas. No doubt Mr. Gilliland and others will tell you more about this exciting project.

I do not come to you proposing final solutions to the problems of coordinating the efforts of many individuals and agencies with similar goals, but widely varying structures of support and administration. What I hope to do is provide you with a new way to look at old problems, which may be helpful. I propose to cast the problems of coordinating vocational education efforts in abstract terms, that is as problems of human behavior, and thereby make it easier for you to develop correctional strategies. The utilization of a theoretical framework serves to depersonalize problems of program planning and policy formulation, and promotes rational decisions in the light of what might be termed alternative choices.

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The presentation I have prepared draws primarily on models which have become popular in both sociological and management theory. The first is a model of a social system and my approach will be cast in terms of what is known as general

or modern systems theory. This approach is designed to help one understand the relationships which social groups, (such as families or classes), and complex organization, (such as government agencies and schools) have to one another. The second model is known as a behavioral or interactional model. It is designed to explain the behavior of individual actors, in their capacities as members of groups and organizations. The other models I will treat are designed to help understand the process of induced social change.

Before I elaborate on these models, I wish to state that my further remarks are made with some trepidation. On the one hand, there is a certain hazard in attempting to present the technical concepts and terms of a disciplinary field in an over simplified fashion. On the second hand, I am approaching a topic on which I could use considerably more briefing. Frankly, I did not have the time to make an exhaustive study of the number and types of services which are supportive of vocational education programs in rural areas. However, I think I have a general picture in mind, and I feel that my discussion will be appropriate to your aims and goals.

The Social System Perspective: A Macro Framework for Understanding and Coordinating Supportive Services

The sociologist begins with the assumption that there is a degree of order in human behavior which can be determined through study and research and used for predictive purposes. Obviously the ramifications of this order can be so involved

as to present analytical problems which are beyond solution at the present state of his methodological art. However, there is available a growing body of conceptual tools, which are finding increasing applicability in this pragmatically oriented world of ours. In this regard, certain mechanisms which have been worked out can be employed with good results on such problems as coordinating services.

One of the most popular approaches in sociology considers that humans behave within the context of what is called social systems. A system of any kind is "...a set of components interacting with each other and a boundary which possesses the property of filtering both the kind and rate of flow of inputs and outputs to and from the system."¹ All systems are function or task oriented, which fact provides a focus for the interaction of their component parts. A social system is a special type of system and can be defined as "...two or more people in interaction directed toward attaining a goal and guided by patterns of structured and shared symbols and expectations."² The smallest social system identifiable is the social group previously mentioned. Groups are linked together to make larger

¹F. Kenneth Berrien, General and Social Systems (New Brunswick, N. J.: Rutgers University Press, 1968), pp. 14-15.

²Alvin L. Bertrand, Basic Sociology (New York: Appleton-Century-Crofts, 1967), p. 25.

systems, already identified as complex organizations. It is within these larger types of systems that bureaucratic structures emerge. Complex organizations in turn, make up communities and societal systems. An understanding of the characteristics of social systems has relevance for the coordination of supportive services in vocational education in ways which I hope to make clear.

The first understanding necessary is that each agency which performs a service is a separate social system. All such systems must then be seen as loosely allied through a system of role linkages in the interest of a mutual concern, vocational education. The purpose of this conference and of others like it, is to tighten the linkages or social structures which bond these separate systems together into what may be seen as an overall system of vocational education. The function of the latter obviously would be to coordinate all activity related to vocational education, and thus to improve this process in given communities. I maintain this goal can be achieved if attention is given to changing the features of the systems which now exist. Let us take a look at the features of all systems and see how changes might be made.³ Every social system has:

1. System Inputs: Social systems have to have two types of inputs to survive. The first is generally referred to as a "signal" type of input, and represents the raw

³See Berrien, *op. cit.*, and Walter Buckley, Sociological and Modern Systems Theory (Englewood Cliffs, N. J.: Prentice-Hall, Inc., 1967).

materials which the system accepts for processing. In other words, signal inputs represent work for the system, something which has to be taken in one state and transformed into another. In systems concerned with vocational educational goals, this type of input would be the students which are available and need vocational training.

The second type of input which a system must have is for maintenance of the system. It is what "energizes" the system and makes it capable of work. All vocational agencies need money. They also need space, equipment, books, etc. Each of these items represents a type of maintenance input.

It can readily be seen that one agency will vary widely from another in its input needs. Our thesis is that trouble begins when the many supportive agencies of vocational education tend to compete for both signal and maintenance type of inputs. We will address ourselves to solutions to these problems in the concluding part of this discussion. However, at this point, it can be noted that both the number of students needing training in a community and the resources available to train them are limited. It is thus careful planning must be done.

2. System Outputs: All systems justify their existence by an output of some type. The most obvious output of vocational educational system is, of course, a graduated student. System outputs must have a "market value" in the greater societal system within which they exist and function, such as their communities and state, else their continued

existence will be jeopardized. Put in terms of the subject at hand, those agencies supporting vocational education must contribute at a respectable level to the production of a finished product, a student with skills which can be used in the outside world. A student with the wrong kind of skills or with too little skill is not considered a satisfactory output.

Again, I feel this is a place where there is need for a careful study of vocational agencies. Some of the feedback which has been received from studies, such as that done by Concerted Services, indicates a rather frequent mismatch between what is being taught and skills needed by employers. Unless attention is given such problems, our state and national societal systems will cancel their orders for vocational education outputs, that is cease to provide the necessary maintenance inputs of money and other resources.

3. **Steady state:** Social systems function most efficiently when they achieve what is termed a steady state. This is a way of saying that a constancy or balance between inputs and outputs has been reached. When a system has reached a steady state it is not in a static condition, it is simply able to reconcile itself to variations in inputs and outputs. A vocational education department's steady state would be seen when it receives, processes and exports students within a community in a generally acceptable fashion, although the number of students might change from year to year. The goal of

well coordinated supportive services must be a steady state of operation, which sees each agency contributing to a total effort to produce a high-level product.

4. **Boundary maintenance:** Every system has a boundary of some sort which separates it from other systems. This is simply to say that the members of a system have ways of determining who belongs and who does not. It is not difficult to imagine that each system must protect its boundaries in order to maintain a separate existence. My feeling is that some of the difficulties in the coordination of supportive services are traceable to such activities. No agency wants to give up control of some or all of its resources or identity, even though it may in actual fact be duplicating services of other agencies. The crucial nature of boundary maintenance is seen in the fact that it is at their boundaries that two or more systems must be coupled in the interest of a common goal. In other words, the links between groups are accomplished by representatives of one group establishing a satisfactory liaison with representatives of a second group. When each such representative presents a competitive rather than a cooperative spirit, a coordination of activities is difficult if not impossible to achieve.

5. **Variability and adaptation:** System variability is manifest in the sense that there will be differences between two systems with similar structures and goals. For example, the graduates of one department of vocational education will be better trained than the products of a second department. Vari-

ability is also seen in that some operations are set up quite differently from others. One vocational educational department will be nearly autonomous, another will be part of a secondary school system, and a third part of a trade and technical school operation. The point here is that the types of operations which have advantages or which function more efficiently should be stressed.

Adaptation refers to a system's ability to survive within its environment. Social systems have the ability to prolong their lives, by responding to "feedback" which comes to them from the outside world. When something is being done wrong insofar as the community is concerned, the word will get back to the system, and change will be in order. Schools whose operations become unpopular for one reason or another, and who don't change their ways, (adapt) will lose their support. It is probable that conferences such as this are called because of negative feedback. Somewhere, someone has noticed duplicatory and inefficient efforts, and set in motion forces of change.

6. Tension as a normal structural condition: All systems include some type of stress in their make-up. System theorists relate undue stresses to a poor structural design. What they mean is that individuals are put into situations where there is more than the usual chance of developing conflict. One classic example is not to have a straight-forward and well recognized line of authority. When workers do not know whom to take orders from, and two supervisors can't agree on one

another's jurisdiction, then there will be trouble. Tension also comes about because of ignorance of the goals and purposes of what should be cooperating individuals and agencies. When motives are misconstrued as competitive or in conflict, rather than cooperative, stress tends to run high. Those wishing to plan for the coordination of supporting services will have to be careful that their activities minimize rather than maximize the stress already present in the respective agencies they work with.

7. Purposes, objectives and functional unity: Goals and purposes are characteristic of all systems, as mentioned, and are the basis for their unity. However, it is often true that there is a discrepancy between formally stated objectives and actual goals. Said another way, a supportive service to vocational education may be so in word only. Its major work may readily be determined to be directed at some other goal. It is also true that actors in a system are not always too clear on what ultimate aim they should be contributing to. In either of the above cases, one can see implications for supportive services in vocational education. However, the more profound implication is that many variant groups will have to be brought together and made to contribute fully to a generally accepted goal.

In concluding this brief rundown of system features, it is apropos to point out that quite a few other social system characteristics have been recognized and could have been named.

The ones presented here were chosen because of their especial relevance for the task at hand.

The Individual Behavior Perspective: A Micro Framework for Understanding and Coordinating Supportive Services

The social system features just presented were designed to help place the overall problem of coordinating independent agencies and groups in some sort of theoretical perspective. However, social interaction is usually accomplished at the level of individual behavior. It is, thus, important that an understanding of what causes an actor to behave in a certain way be derived.. Sociologists turn to what is called a behavioral or interactional model for such an explanation.⁴ This model includes three structural elements in its make-up, and is designed to provide a theoretical framework for analyzing deviant as well as nondeviant behavior.

The first variable or element in the behavioral model is the cultural structure. This is simply a reference to the pre-conditioning which the actor has received for his behavior. It is derived from participation in the greater societal culture and in more limited subcultures. It is in this way that one develops a notion of what is right and wrong in behavior. In other words, the cultural structure provides each actor with a "blue print" for behaving, that is an ideal way. In a vocational education department, instructors would derive their pattern and knowledge of how and what to teach from their professional sub-culture.

⁴Bertrand, op. cit., pp. 232-235.

The second variable in behavior is the personality element. Each person inserts his personality into an interactional experience. This means that the biological and psychological attributes of persons, such as their race, sex, age, capacities, drives, and self-conceptions, consciously or unconsciously, play a part in behavior. In this regard, there is no doubt that an educational program is more than a body of rules. These rules must be translated through personalities, who may or may not implement them as they should be. In another example, coordinating groups achieve success to the extent their individual members agree.

The third and final element in behavior is made up of all the situational factors over which the individual has no control. These factors range over a wide variety of conditions related to the economic, political, geographic, religious, and family aspects of life. The important thing here is that each actor interprets each interactional situation in a given way, which has significance for his actions. One acts differently in home situations than he does in church or school situations, even though the action may be directed toward the same individual.

When two or more persons come together to interact in the interest of some purpose, each develops a cognitive framework or mental picture, which is the product of his culture, personality and the situation. In other words the action taken is the result of a mental process which determines what is considered to be the right way by that person. When behavior

is deemed to exceed permissive ranges, and to be unacceptable it is termed deviant and said to cause disorganization.

The implications of the above model for coordinating supportive services is that it helps explain why some goals, which seem so rational and logical, are so difficult to accomplish. Each actor assigned to work on a cooperative agreement is likely to think first of his own group's aims and goals and to defend it's boundaries vigorously. This leads to the final part of my talk which is designed to show how the models described can be used to work out strategies for coordinating supportive services to vocational education in rural areas.

Strategies for Planning in the Interest of Coordinating Supportive Services

First, let me suggest that no problem as complicated as the coordination of supportive services in vocational education can be solved without a considerable amount of work and dedication. In this vein, it seems to me that the first task in the grand strategy which must be worked out, is a matter of stock taking. In any community or state there are discernable quantities of needs and resources. There are also agencies assigned the use of resources in efforts to meet needs. In vocational education, needs are represented by the number of clients who can profit by training in certain skills. The determination of this number cannot be a matter of speculation, realistic planning must be based on hard evidence. Vocational education resources in a community are represented by the number and quality of facilities available, actual and potential budge-

tary sources, and availability of needed personnel. Reliable answers can also be obtained to questions of this nature if one is willing to do the necessary research. The nature and kinds of supportive services available, and the type of sponsorship these services have, must also be determined. This is not as easy a task as it may sound. Over 40 different organizations were identified by the planners for the CSTE program.

Information of the above type will provide insight into the inputs (signal and maintenance) which are available for a comprehensive vocational education plan. It may be found that there are too many potential students for the resources locally available or it may be that resources are so plentiful they are being used unwisely. In either case there is a need for coordinative effort in the interest of working out a balanced program. It is at this point that it pays to be aware of problems which can arise within and between systems such as boundary maintenance, a lack of adaptability, high tension levels, and misdirected objectives.

Obviously, some sort of social mechanism must be developed for the purpose of coordination. In sociological parlance, a coordinative interstitial group must be formed, so that the necessary liaison between the various groups and organizations involved can be established. The formation of such a group is the second step in coordinating support services. An interstitial group is one which is formed by bringing representatives of all interest groups and organizations together--for the purpose of coordinating and controlling their activity. I do not

have a specific recommendation for the procedure which should be followed in the formation of a coordinative interstitial group for supportive services in vocational education. However, it appears that the method used in St. Francis County, where a project coordinator was selected by local leaders, is worth looking into. In the formation of a coordinative group, planners for vocational education should take care to get every supportive agency represented by the most powerful man in that agency, one who can and does make decisions and can initiate action.

The goal of an interstitial coordinative group is, of course, to bring about the most efficient match between resources and needs which can be achieved. Here is where a knowledge of the behavioral model previously outlined comes into its own. Obviously, those who wish to bring about coordination should be well briefed on the organizations potentially involved and on the personalities of their key representatives. Situations should be structured so as to provide the best possible climate for rational, cooperative planning.

At this point it may help to borrow from management theory, which provides us with the idea that a coordinative interstitial group is a coalition bringing together individual members of organizations with potentially widely varying preferences. Management theory further points out that the objectives of interstitial groups must be reached by a bargaining process, that is, some compromises must be made by the representatives of the various agencies until a goal can be agreed upon.

At the time agreements are reached, the interstitial group becomes the new vehicle through which decisions affecting all groups are made, and it no longer represents a body of competing individuals but an organization with a single purpose.⁵

How can the problems of coordinating vocational education programs be fitted into the above scheme? It seems to me a third type of strategy--that related to induced social change must be employed.

Sociologists have worked out two models which have relevance here. The first is related to what has been termed the stages of social action.⁶ Those of you who will have an active part in programs designed to bring about coordination of supportive services, might think in these terms. The first stage in social action is the careful analysis of existing systems or what is termed the prior social situation. After this is done, the second job is building interest in the program to be proposed. At this point several sets of actors must be recruited. An initiator set must try to involve persons whose names and positions are meaningful, that is, they represent power in the community. This second group is known as the "legitimizing set" and their role is to lend the weight and prestige which is necessary to put over the program pro-

⁵Mason Haire, Modern Organization Theory (New York: John Wiley & Sons, Inc., 1967), p. 79.

⁶Increasing Knowledge in Social Science Among Agricultural Educators (Washington, D.C., U. S. Dept. of Health, Education, and Welfare, Office of Education Bureau of Research, 1968), Chap. VII.

posed. After legitimizers have been obtained, there is need of a "diffuser set" of individuals. These are persons who will do the leg work necessary to get the message out to all persons and agencies who must be involved. The latter are said to represent the "target group." Once the "word" has been spread and a favorable reaction received, then the time is ripe to call for the formation of an interstitial group.

In the work which must be done with individuals, in supportive agencies, in the community, and in coordinative interstitial groups, it will be found that each individual will go through a mental process before accepting a new idea. This process is known as the diffusion process, and is characterized by five stages, as follows:

An Awareness Stage - When the individual becomes aware of some new idea such as coordinating supportive services.

An Interest Stage - When the individual wants more information about the idea or product.

An Evaluation Stage - When the individual makes a mental trial of the idea. He asks himself, "Can it be done and will it be better than what is being done now?"

A Trial Stage - When the individual decides that the idea has possibilities, he will try it, if possible. Apparently individuals need to test a new idea even though they have thought about it for a long time.

An Adoption Stage - The final stage in this mental process is the adoption stage. This is characterized by large-scale, continued use of the idea, and most of all, by satisfaction with the idea.

It is helpful, when one is attempting to bring about change, to understand the diffusion process. There is, however, one additional model which completes the theoretical underpinning needed to approach a problem such as the promotion of a coordinated program of vocational education. This is the model known as the adoption process, which explains the differences among individuals in the rate at which they adopt new ideas. Five classes of adopters are recognized--innovators--or the first few to buy a new notion; the early adopters--or those who are quick to see and take advantage of new ideas; the early majority--or those who move to new ideas slightly ahead of the mass of people, who are the majority--or the remainder who will eventually adopt the idea. Nonadopters make up the final category in the adoption model.

I hope that my presentation will be of some use to you, as you move toward the planning of coordinated supportive services for vocational education. My aim was to provide a sort of theoretical foundation for the strategies which will have to be worked out. I extend my sincerest wishes for success as you embark on this worthy endeavor.