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ABSTRACT

This paper describes one component of the Study of Dissemination Efforts Supporting School Improvement, which focused on the role that external facilitators play in helping schools implement new educational practices. The first part describes the external facilitator sample (95 respondents) and delineates the major formal role groups of external facilitators included in the sample: state facilitators, developer/demonstrators, and Title I developer/demonstrators, all from the National Diffusion Network; school-based developer/demonstrators engaged in locally developed projects (with ESEA Title IV-C funding); and state-administered developer/demonstrators. A brief discussion ensues concerning respondents' perceptions of their initial contact with schools. This is followed by a description of the kinds of assistance external facilitators gave to the schools, categorized according to the five stages of the adoption/implementation process: (1) intiating relationships, (2) assisting clients in deciding on new practices, (3) assisting clients in preparing for adoption, (4) assisting clients in implementing practices, and (5) followup activities. The last section concerns the effects of external agent assistance on local site outcomes in individually focused and school-focused models developed in the study. (TE)

EXTERNAL FACILITATORS AND THEIR ROLE IN THE IMPROVEMENT OF PRACTICE

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A Study of Dissemination Efforts Supporting School Improvement

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External Facilitators and Their Role in the Improvement of Practice

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The question of whether human interaction is important in the utilization of new knowledge for the improvement of practice in schools has finally been laid to rest. Yes, linkers are crucial to the process. This "finding" appeared at the beginning of our Study of Dissemination Efforts Supporting School Improvement when we attempted to locate local schools which were actively using practices diffused through the Bureau of Education for the Handicapped (BEH) Marketing Program. The marketing program is a federal dissemination strategy that is not predicated on interpersonal contact but instead relies primarily on mail-order and other commercial distribution methods. We exhausted our pool of nominated sites and found only 17 which were using the practices in any way. No linkers, no use of practice.

But as so often is the case, the answering of one question raises several others. We have wanted to know what exactly humans do to help schools and the role that assistance plays in the process of practice improvement. We have sought to clarify who these helpers are, where they work, and what their job experiences have been. One component of the Study focused on such issues as these through a study of the individuals who were called upon to assist in some capacity by local schools seeking to make changes in established practice.

The individuals nominated by local schools for our sample had in common at the outset only the fact that they were outsiders to the school districts they had helped -- hence, they have been labelled "external facilitators" to distinguish them from assisters who were part of the school district staff. The latter we have called "local facilitators," and a companion paper (Loucks and Cox, 1982) in this series on findings from the Dissemination Study focuses on their very important contributions. It should be noted that all assistance -- external and local -- was innovation specific, that is, it was centered on the adoption or development and implementation of a particular practice in the Study sample.

The research referred to in this paper was conducted under contract with the U.S. Department of Education, the Office of Planning, Budget and Evaluation. The opinions expressed are those of the authors and do not necessarily reflect the position or policy of the Department of Education, and no endorsement by the Department should be inferred.

It was our task to fill in the picture from this point, uncovering differences and similarities within the sample, teasing out traits or structures that had significant impact on local site change efforts.

The first part of this paper describes the external facilitator sample and delineates the major formal role groups of external facilitators included in the sample. Then we focus briefly on the point of initial contact between respondents and schools before turning to a discussion of the kinds of assistance external facilitators gave to schools. In the last sections of the paper, we look at the effects of external agent assistance on local site outcomes in individually-focused and school-focused models developed in the Study.

The External Facilitator Sample

The external facilitator sample consists of 95 respondents, from whom we collected data using four different instruments: a questionnaire and interview concerning general aspects of their work as external facilitators; and a questionnaire and interview focusing on assistance given to particular sites in the Study. Eight-nine respondents completed general interviews and 87 completed general questionnaires concerning their ongoing work roles. Eighty respondents participated in a total of 132 site-specific interviews and filled out 132 site-specific questionnaires about assistance to local schools in the Study sample. The number of sites per respondent ranges from 1 to 5; the average per respondent is 1.6 (we typically interviewed no more than two respondents per site). Fifteen of the 95 respondents had not worked with any site in our Study. In all, we have 72 complete sets of external facilitator data, consisting of one general interview and questionnaire and at least one site-specific interview and questionnaire.

Table 1 presents a breakdown for the four federal programs in the Study: the number of sites for which external facilitators were identified, the number of sites for which respondents were interviewed, as well as the number of sites for which we have no data, either because no agents were identified or because data could not be collected. (For example, respondents were not asked to give information about more than three sites in the Study to alleviate respondent burden; some external facilitators refused to be interviewed or could not be traced; and some were identified too late in the data collection period to be interviewed.)

Table 1

Number of Sites For Which External Agents Were Identified For Four Federal Programs

	Total # of Sites in Study	Total # Sites With EA Respondents	Total # Sites With No EA ID'D	Total # Sites With No EA Data
National Diffusion Network	63	57	0	6
National Diffusion Network: Title I	11	11	0	0
Locally-Developed Projects (ESEA-Title IV-C)	24	9	14	1
State-Administered Dissemination Programs	31	20	3	8
Bureau of Education for the Handicapped Marketing Program	17	0	16	1
	146	97	33	16

One finding revealed by this table is that local school personnel remember and can identify external assistance they have received, in many cases years after the help was given. If one excludes the BEH Marketing Program -- which by design does not employ external facilitators as part of its strategy -- from the totals, external facilitators were identified for all but 16, or 12.4%, of the 146 local sites in the Study sample.

The Major Role Groups

Most of the external facilitators in our sample had formal assistance roles within two federally-sponsored dissemination programs: there were the State Facilitators, Developer/Demonstrators, and Title I Developer/Demonstrators of the National Diffusion Network (NDN); and the Developer/Demonstrators of state-administered programs. The sample also includes assistance-givers who became associated on an individual basis with ESEA Title IV-C locally-developed projects (see Table 2).

Table 2

Number of External Facilitators by Major Role Groups in Three Federal Programs

External Facilitators	Number Interviewed
National Diffusion Network: State Facilitators	15
National Diffusion Network: Developer/Demonstrators	42
National Diffusion Network: Title I Developer/ Demonstrators and others	9
Locally Developed Projects (ESEA-Title IV-C)	12
State-Administered Developer/Demonstrators and others	17
TOTAL NUMBER	95

The NDN State Facilitators and Developer/Demonstrators perform different but complementary roles. State Facilitators tend to be generalists with regard to practices, Developer/Demonstrators are specialists with intimate knowledge of their innovations. Acting as a broker or arranger, each State Facilitator works with schools in a particular state, helping them to select among practices created (often with ESEA Title IV-C funding) by Developer/ Demonstrators, who are themselves usually school-based practitioners. All practices available through the NDN have been validated in a federal review process as having demonstrable impact on student achievement or similar outcomes. One of the goals of the NDN is to facilitate dissemination of practices across state boundaries, so Developer/Demonstrators work with State Facilitators and schools across the country. This interstate focus seems to be having an effect: the external facilitators who worked with schools in the ten states of the sample came from twenty different states.

Some of the states in the Study operate dissemination programs that are similar to the NDN but oriented to the identification and diffusion of exemplary practices within state boundaries. Personnel in the state departments of education or intermediate service units serve as brokers or facilitators for state Developer/Demonstrators. Many states have their own validation process to assure quality control. Because many of these

dissemination systems began rather recently, the full impact of state efforts was not evident in the Study, which concentrated on practices implemented in schools prior to the end of calendar year 1978. However, three intermediate service unit personnel who assisted in Title I adoptions and two intermediate service unit staff who helped with state-administered adoptions (i.e., performing State-Facilitator-like functions) are included in this part of our sample along with state Developer/Demonstrators.

The fact that no other types of external facilitators were identified for the NDN and state-administered programs suggests the compactness of these assistance strategies: schools are able to search for and obtain both practices and assistance in a coordinated sequence, obviating the need for seeking out assistance from a variety of different sources, a self-contracting approach which can be rewarding but is a complicated, time-consuming process.

Schools located the external facilitators for the Title IV-C locally-developed projects through the self-contracting method. The assisters varied greatly in the nature and scope of their assistance: some participated only in the design of one segment, others helped school staff intensively, working with them in a problem-solving capacity over several years' time. One site had called in ten different consultants to help with various aspects of the development/implementation process; others had done nearly everything themselves.

The Initial Connection

Our story begins with the respondents' perceptions of how contact with the local schools was established. In the 125 cases for which we have data on this point -- representing about 97 sites (as we noted, some sites had more than one external agent) -- external facilitators initiated contact about one-third of the time. The local schools made overtures nearly twice as often, indicating an active knowledge-seeking stance. Teachers and district staff we have identified as local facilitators were most often involved in these scouting efforts.

As Table 3 indicates, the two parties most often met at awareness conferences; this category accounted for more than a third of the cases. School districts called respondents directly in over a fifth of the cases; the respondent called the district directly in more than a tenth of the cases. In just under a tenth of the cases, another external agent made the introduction directly without an awareness conference or other group medium.

Sometimes external agents, particularly those who worked as part of a team of assisters, did not know precisely how the contact was established: in just over a tenth of the cases, respondents first met schools when they went to the local site to give training. Finally, an "other" category accounts for the final tenth of the introductions and includes such varied points of contact as, "met in a college course I gave as the practice developer" or, "met at a conference and started talking about a common interest" (mostly Title IV-C respondents).

Table 3

How Contact was Initiated Between Schools and External Facilitators

	Number of Responses	Percent
Awareness Conference	44	34.6%
School District Called Directly	27	21.3
Respondent Called Directly	17	13.4
Another External Agent Introduced, No Awareness	12	9.5
Went to Site for Training	14	11.0
Other	13	10.2
N =	127	100.0%

How External Facilitators Assisted Schools

Before describing the assistance external facilitators gave, it is important to explain the manner in which they were likely to work. The National Diffusion Network and many state-administered dissemination programs are precisely that -- dissemination programs. Because their primary aims have been to spread exemplary practices, they have emphasized extensive services over intensive. While State Facilitators help with arrangements for adoption, and Developer/Demonstrators provide training in the practice and some support, the fitting of the innovation in the host district is left largely to the locals. Considerable assistance is given away from the actual implementation site, in group training sessions or, in the case of follow-up help, through telephone conversations. The picture of the Title IV-C assisters is more varied, as we have explained: some of these consultants worked on a long-term basis with a site through the whole planning implementation process; others provided components of practices without much involvement in the site; still others worked intermittently through the planning/implementation process, contributing heavily at the evaluation phase.

So one should not assume that assistance means help rendered on the site, face-to-face, or continuously. Therefore, knowing the federal strategies we were studying, we expected that while many external agents worked with local district or school personnel to facilitate the implementation of a new practice, relatively few of them would have intimate knowledge of the innovation in place in the classroom. This proved to be the case. The question respondents answered was, "Are you familiar with (the practice) at (the school building)?"

In 48 of the 132 cases of assistance, respondents said they were familiar with the practice at the site; in 84 of the cases, they reported they were not.

The picture of practice-related assistance becomes more complicated when the responders to this question are sorted by role groups. Table 4 displays the distribution of the five major role groups on the question of familiarity with the practice at the site. The analysis of variance performed with these two variables was significant ($p < .01$). State Facilitators of the NDN as a group were the most familiar with the practice at the school site -- but they are not specialists in the content of the practice!

Table 4

Familiarity with the Practice at the Site
by Five Role Groups ($p < .01$)

(1 = yes; 2 = no)	Mean
NDN State Facilitators	.87
Title IV-C	1.25
State-administered	1.40
NDN Developer/Demonstrators	1.46
Title I D/Ds	1.89
Sample mean	1.37

We will come back to the familiarity variable at a later point.

As one means of gathering information about assistance, we created an activities questionnaire containing items originally compiled at the Belmont Conference on Linking Functions (Havelock, 1979). All respondents completed an activities questionnaire concerning their general work with client schools: those who had worked with one or more of the particular sites in the Study sample were asked to complete an additional activities list for each one. This section on external facilititator behavior is based on analysis of data from these instruments.

The sample as a whole spent a little more than half their work-time interacting with clients. The other half of their time was spent on routine maintenance tasks associated with their roles (administration, professional development, travel, and in-house product development).

The activities were grouped into five categories representing different stages of an adoption/implementation process. Table 5 presents the distribution of the sample's time with clients among these categories.

Table 5

Five Categories of External Facilitator Assistance

		Percent of Time Spent on Activity (sample mean) N=80
1.	Initiating relationships (e.g., holding awareness conferences, distributing flyers)	25%
2.	Assisting clients in deciding on new practices (e.g., persuading teachers, seeking support, assessing needs)	16
3.	Assisting clients in preparing for adoption (e.g., training users, securing materials)	26
4.	Assisting clients in implementing practices (e.g., planning implementation schedules, "putting out fires")	19
5.	Follow-up activities (e.g., collecting impact data, assisting in local site evaluation)	15
	Total time dealing with clients:	101%
	(50% of total work time)	

The respondents as a group distributed their time fairly evenly across the five categories of assistance. Over half their client time was spent initiating relationships and assisting schools in adoption preparation, with the other half of their field-oriented time devoted to helping with practice selection, implementation, and follow-up. Let us now take a closer look at each of these categories.

Table 6 is a display of all the items on the activities list with the mean scores for the sample of external facilitator respondents. Respondents were asked to indicate the amount of time they spent on each activity, ranging from 0 (never) to 5 (more than once a day).

Table 6

General Assistance Activities of
External Facilitators

Activity	Amount of Time Spent on Activity* (sample mean)
1. Initiating Relationships	
a. Arranging or participating in awareness conferences	2.1
b. Distributing general information (e.g., flyers, newsletters)	2.4
c. Hosting visits to review materials	1.6
d. Holding demonstration visits	1.7
e. Contacting new clients by mail, telephone, or in person	2.8
2. Assisting Clients in Deciding New Practices	
a. Seeking commitment from school administrators	2.0
b. Seeking commitment from teachers	1.9
c. Seeking support from local school boards	0.8
d. Preparing a "case" for the decision to adopt	1.3
e. Assessing needs	1.7
f. Building support among school personnel	2.0
g. Making library and computer search for materials	0.4
3. Assisting Clients in Preparing for Adoption	
a. Arranging training	2.0
b. Training the users	1.8
c. Providing detailed information	2.7
d. Securing materials or other required resources	2.1
e. Working with administrators	2.4
f. Working with site contactee	2.3
g. Allocating financial resources	1.6
h. Maintaining support among school personnel	1.9
4. Assisting Clients in Implementation	
a. Planning implementation schedules	1.9
b. Providing technical assistance or follow-up training.	2.2
c. Assisting teachers in working out procedural details	1.8
d. "Putting out fires"	1.6
e. Maintaining support among school personnel	1.8
5. Follow-up Activities	
a. Collecting impact data	1.4
b. Analyzing impact data	1.3
c. Assisting local site conduct evaluation of new practice	1.3
d. Developing plan to support continuation of new practice	1.3
e. Developing additional new users at site	1.2

* 0 = never
1 = about once a year
2 = about one a month
3 = about one a week
4 = about once a day
5 = more than once a day

Not surprisingly, the two most frequently performed behaviors fell within the two categories of activity on which respondents spent the largest chunks of their time: contacting new clients by mail, telephone, or in-person as part of initiating relationships; providing detailed information as an aspect of assisting schools in adoption preparation.

We wanted to understand whether these five categories of assistance reflected the way these activities would be organized empirically; so the items in the activities list were factor-analyzed for commonalities. The resulting factors correspond quite closely to the five logically-grouped categories, but the assistance sequence is further broken down into seven components. Table 7 displays the seven empirically-derived activity clusters.

Table 7

External Facilitator Assistance Factors

- Awareness Initiation: arranging or participating in awareness conferences; distributing general information (e.g., flyers, newsletters); hosting visits to review materials; holding demonstration visits; contacting new clients by mail, telephone, or in-person;

- Administrator Adoption Preparation: seeking commitment from school administration; seeking support from local school boards; preparing a "case" for the decision to adopt; working with administrators; allocating financial resources;

- Support of Teachers: seeking commitment; building support among school personnel; maintaining support among school personnel;

- Teacher Adoption Preparation: arranging training; training the users; providing detailed information; securing materials or other required resources;

- Implementation Specifics: planning implementation schedules; providing technical assistance or follow-up training; assisting teachers in working out procedural details;

- Evaluation: collecting impact data; analyzing impact data; assisting local site conduct evaluation of new practice;

- Continuation/Diffusion: developing plan to support continuation; developing additional new users at site.

The percentage of time spent dealing with clients correlated very highly with the amount of time spent on each of the assistance factors; the more time one spent on field activities the more assistance was rendered at each step of the improvement effort.

Three assistance items were outliers: they did not belong naturally to any one of the factors. One of them, "making library and computer searches for materials," not only was one of the two least often performed activities but also was rated most unimportant by a significant number of respondents.

Another outlier item -- "fighting fires" -- was rated "most disliked" by a large proportion of the sample. That item and "assessing needs," the third odd item, correlated in different ways with the assistance factors. "Assessing needs" was quite strongly associated with Support of Teachers (R^2 = .46, $p < .001$); Administrator Adoption Preparation (R^2 = .48, $p < .001$); Implementation Specifics (.37, $p < .001$); and Continuation/ Diffusion activities (.33, $p < .001$). It was correlated to a lesser, but still significant, degree with the three remaining factors.

In contrast, "fighting fires" was quite strongly associated with four activity clusters (implementation specifics, administrators adoption preparation, evaluation and continuation/diffusion), but not at all with the other factors. One can conclude from this that external agents become involved with crises and politics more at certain stages of the improvement process than at others, but that needs assessment is important at every step of the process.

Do External Facilitators with Different Roles Emphasize Different Aspects of Assistance?

In an attempt to understand the range of external facilitator assistance, we looked at role groups to see if there were differences in emphasis in school improvement assistance. Taking the general assistance factors, we recalculated the mean scores for each role group to be comparable across the assistance factors, and then ranked the activity clusters for each role group from most to least frequently performed (7 was most frequently performed; 1 was least frequently performed). Table 8 presents this information: Read across the row for each role group.

The most frequently performed activity cluster for NDN State Facilitators was Teacher Adoption Preparation; for NDN Developer/Demonstrators (D/Ds) it was Awareness, with Teacher Adoption Preparation a close second; for Title I D/Ds, it was Teacher Adoption Preparation; for Title IV-C External Facilitators, Implementation Specifics was the most often performed activity cluster; and for State-Administered D/Ds, Awareness ranked highest.

For NDN State Facilitators and Developer/Demonstrators, continuation/diffusion activities were the least frequently performed; for Title I D/Ds and State-Administered D/Ds, evaluation activities ranked lowest; and for Title IV-C consultants, awareness was at the bottom of the list.

Table 8

Emphases of Assistance (Frequency of Performance)
for Each of Five Role Groups

	Awareness	Administrator Adoption Preparation	Support of Teachers	Teacher Adoption Preparation	Implementation Specifics	Evaluation	Continuation/ Diffusion
NDN-State Facilitators	6	4	5	7	3	2	1
NDN-Developer/ Demonstrators	7	3	4	6	5	2	1
Title I Developer/ Demonstrators	6	4	5	7	3	1	2
Title IV-C	1	3	4	5	7	6	2
State-Administered Developer/ Demonstrators	7	3	4	6	5	1	2

1 = least frequently performed (lowest adjusted mean score)
7 = most frequently performed (highest adjusted mean score)

We also rank-ordered the mean scores of the five role groups for each activity cluster. Table 9 displays the rankings. The differences among the means are significant for three of the seven factors. NDN D/Ds had the highest mean scores for two of the activity clusters: implementation specifics and awareness; Title I D/Ds were highest on administrator adoption preparation and continuation/diffusion activities; NDN State Facilitators were at the top of the list on support of teachers and teacher adoption preparation; Title IV-C external facilitators were highest on evaluation. State-administered D/Ds did not have the highest mean on any of the activity clusters. (See Table 9).

Looking at the sample of external facilitators as a whole, if one looks at adjusted sample means for each of the activity clusters (Table 10), Teacher Adoption Preparation activities were the most often performed, followed by Awareness, Implementation Specifics, Support of Teachers, and Administrator Adoption Preparation. The least performed activity clusters were Evaluation and Continuation/ Diffusion.

This description of the emphases of assistance should give the reader a sense of how the external facilitator sample as a whole, and in major role groups, allocated assistance time. Now, in the last two sections of this paper, we want to discuss the impact of external facilitator assistance on the schools and teachers to which it was given.

What is the Impact of External Facilitator Assistance on the School Improvement Process?

As explained in the Crandall, et al paper (1982), we constructed and tested two causal models to help us understand what variables influenced the outcomes of school improvement efforts. One is an individually-focused model and results in outcomes for individual teachers; the other is school-focused and results in outcomes at the organizational level.

Let us look first at the school-focused model (Figure 1) where the positive impact of external facilitator help can clearly be seen.

The total of the assistance factor scores for each respondent who worked with a local site was used as the measure of external facilitator help in this model. External Facilitator Help had a significant positive effect (β = .0183 SE = .0067) on Organizational Change, defined as those benefits (reported by principals) which had impact on aspects of school life other than individual teachers or students.

These included (in order of frequency of mention) instructional methods, staff socio-emotional state, external communication, staff skills, materials, planning/scheduling, organizing, staff communication, increased number of staff, and assessment.

Table 9

General Assistance Factors by Frequency of Performance for Five Role Groups

	Awareness ($p < .001$)	Administrator Adoption Preparation ($p < .15$)	Support of Teachers ($p < .31$)	Teacher Adoption Preparation ($p < .015$)	Imple-mentation Specifics ($p < .16$)	Evaluation ($p < .09$)	Continuation/ Diffusion ($p < .84$)
NDN-State Facilitators	4	4	5	5	1	3	3
NDN-Developer/ Demonstrators	5	3	3	3	5	4	4
Title I Developer/ Demonstrators	2	5	4	4	2	2	5
Title IV-C	1	1	1	1	3	5	2
State Administered Developer/ Demonstrators	3	2	2	2	4	1	1

1 = least frequently performed (lowest adjusted mean score)
7 = most frequently performed (highest adjusted mean score)

Table 10

Rank-ordering of General Assistance Factors
by Frequency of Performance

	Awareness	Administrator Adoption Preparation	Support of Teachers	Teacher Adoption Preparation	Implementation Specifics	Evaluation	Continuation/ Diffusion
Rank (1=low, 7 = high)	6	3	4	7	5	2	1
Sample Mean	2.11	1.64	1.87	2.19	1.97	1.37	1.25

Organizational Change turns out to be the only variable which has a positive effect that is at all significant on our most important school-focused outcome measure -- Institutionalization -- defined as the degree to which the practice has become a regular aspect of school life which is not dependent upon present personnel.

The school-wide benefits which make up the Organizational Change measure closely resemble the type of changes external facilitators indicated many of the schools had to make in order to adopt new practices. Table 11 displays data about benefits reported by principals side-by-side with information about necessary school changes given by external facilitators.

Table 11

Comparison of Aspects of Organizational Change (Benefits) as Reported by Principals with Required Changes as Reported by External Facilitators

Changes in benefits reported by principals (N = 104)		Changes districts had to make to implement practice reported by external facilitators (N = 100 cases)		
Instructional methods	29%	Follow programmed instructions (content)	25%	29%
		Follow specified sequence (process)	4%	
External communication	18%	Communicate with external audiences	6%	
Staff socio-emotional state	22%	Attitudes/values	20%	21%
		Develop staff/student relationships	1%	
Staff skills	16%	Training/In-servicing	7%	
Materials	11%	Use of specified materials	10%	
Plans/Schedule/ Organize	10%	Teacher Plan/Schedule/ Preparation	29%	
Staff communication	9%	Communicate with staff	6%	
Increased staff	8%	Personnel/staff (hired or organized)	16%	
Assessment	7%	Testing/Screening	10%	

This comparison can only be suggestive, because we do not know whether the site information given by principals matches one-for-one the case data given by external facilitators. Nevertheless, the kinds of items mentioned are very similar and indicate at the very least a shared reality of what school-focused change is about.

There is another item to be added here. External facilitators reported two additional changes that were not matched by any benefit cited by principals: resources, mentioned by 23% of the sample; and administrative management/coordination, listed by 32% -- in fact, the most often mentioned. The first because of its nature -- oriented to expenditure of funds, setting up of facilities, etc. -- is not likely to be reported as a benefit; the second, which concerns changes involving principals' roles in setting schedules and general coordination is not likely to be perceived as a benefit by the very people affected.

We perceive it, nonetheless, as another aspect of organizational change, perhaps the most important if one considers the salience of the building administrator's role in the process (See Figure 1). Because external facilitators know that shifts such as these are a part of all but the most modest change efforts, it is likely that they target their assistance toward helping schools accomplish those modifications which affect more than individual teachers. The resultant impact is what we have called organizational change.

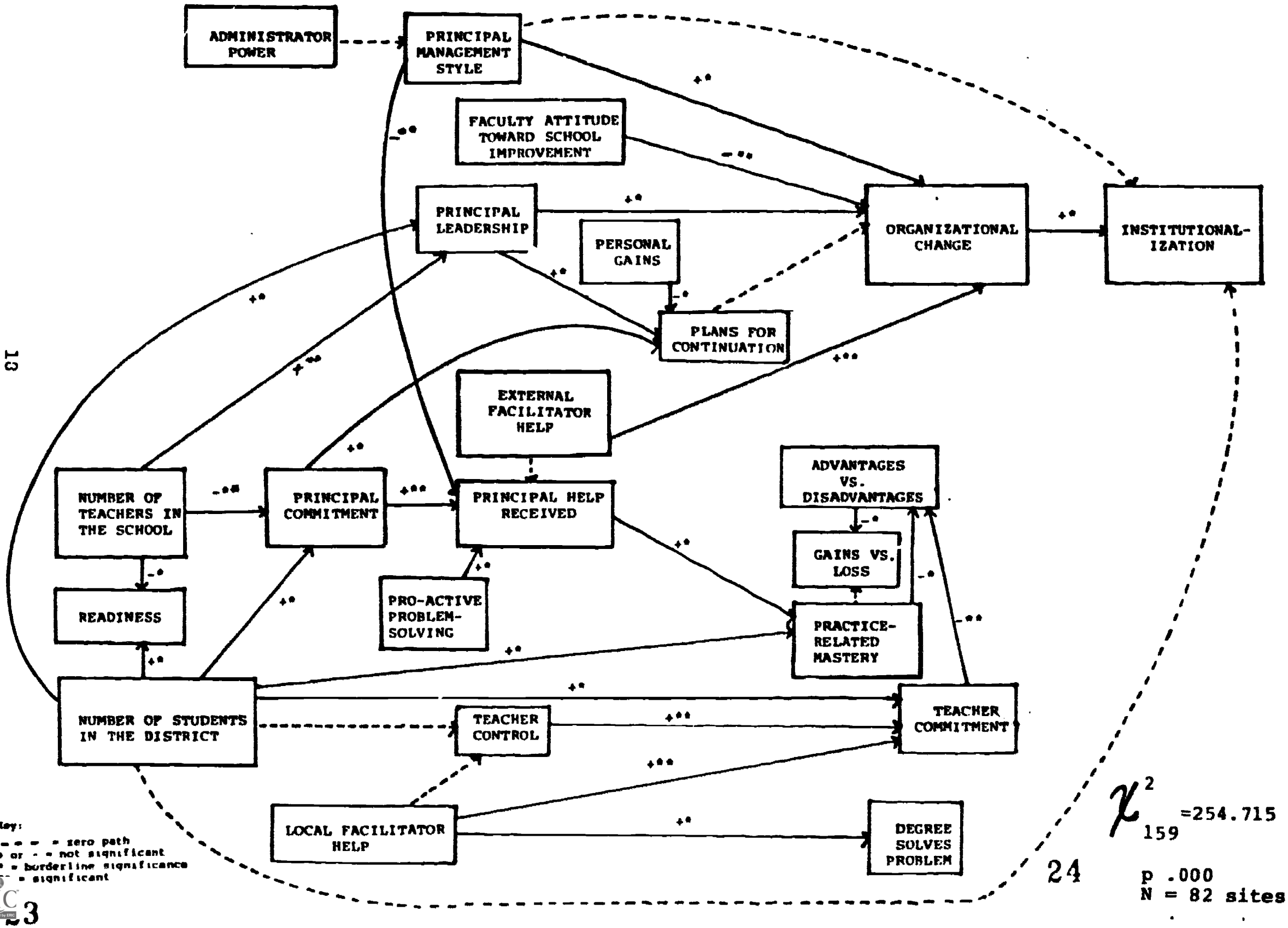
We shall return to this issue after a look at the role of external assistance in the individually-focused model of school improvement (Figure 2). As explained in Crandall, et al (1982), it was not until we divided the individual users into two groups -- those for whom the practice required a major change and those for whom the practice required only a small change -- that we began to get significant models of change.

We know that many external facilitators worked primarily with administrators at the district level and so would have been less visible to principals and staff at the school. Given this reality, what can be said about the impact of external assistance on individual teachers? Did assistance have an influence on individually-focused outcomes?

External Facilitator Help has little impact on the least-change group except that, in a secondary analysis, the assistance factor called Teacher Adoption Preparation (which includes training) is positively related to the time in training spent by teachers, which one would certainly hope.

The picture for the most-change group is more complicated. In the primary analysis of the most-change group, External Facilitator Help had a significant influence on one outcome variable, that of Change in Practice. The impact is negative, but that is not entirely unexpected, given the substantial proportion

Figure 1: Relationships Among Factors Influencing School-Focused Outcomes



of our sample who were either State Facilitators or Developer/ Demonstrators, working at the district level. This may well explain the lack of significant impact of external facilitator assistance on other outcome variables of the individually-focused model.

These relationships can be further illuminated if we examine a set of intervening variables that proved to have critical impact on outcomes. These concern the amounts of time spent by teachers on different practice-associated activities: Time Spent Using the Practice in the Classroom, Materials, raining, Evaluation, and Secondary Dissemination/Communication. Unbundling the External Facilitator Help measure in secondary analysis revealed several effects of borderline significance ($.05 < p < .10$). Some, like the impact of the external assistance factor, Implementation Specifics on Teacher Time Spent Using the Practice in the Classroom, lead to a positive effect on Change in Practice. Another positive effect (borderline significance) -- that of the external assistance factor Awareness on the Teacher Time Spent on Materials -- has a negative impact on Change in Practice.

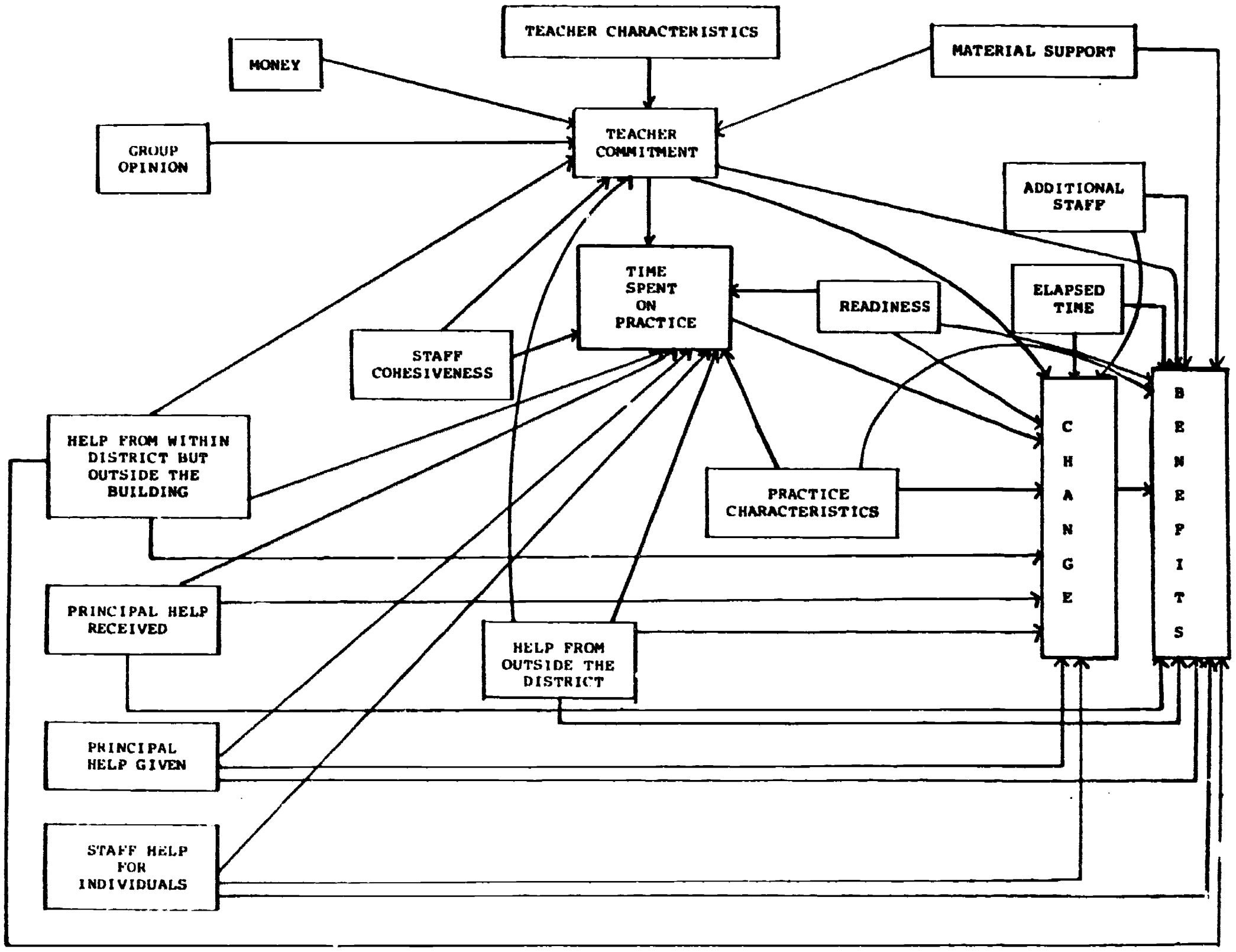
In another secondary analysis, the external assistance factor Continuation/Diffusion has a positive effect of borderline significance on Teacher Commitment, another critical intervening variable in the individually-focused model. We can see, in sum, that while different external facilitator assistance activities have positive effects of some significance on crucial intervening variables, in combination their net influence on individually-focused outcome variables either is not significant or is negative. The message seems to be that for external facilitators to have impact on the behavior of individual teachers, they have to work through the processes of the practice with those teachers. This strong statement is supported by an analysis of variance looking at the relationship between the external facilitator assistance factors and a variable we have already introduced, Familiarity with the Practice at the Local Site.

Three of the seven factors correlate positively and significantly with the familiarity variable: Implementation Specifics ($R^2 = .38$, $p < .01$); Evaluation ($R^2 = .48$, $p < .001$); and Continuation/Diffusion ($r^2 = .27$, $p < .01$).

Two of these three, Implementation Specifics and Continuation/ Diffusion are the only external assistance measures which directly or indirectly have a positive, significant impact on individually-focused outcome measures.

Both factors include items that concentrate on fitting or maintaining a practice in its new environment: planning implementation schedules; providing technical assistance or follow-up training; assisting teachers in working out procedural details; developing plans to support continuation; and developing additional new users at the site. Clearly, the more assistance given to teachers in working through the processes of the practice in its local context, the more impact external facilitators are likely to have.

Figure 2: Relationships Among Variables in the Individually-Focused Model



But there is another way of viewing the inverse relationship between external facilitator help and teachers' change in practice, and it is one we are currently exploring. The key here is the role of the local facilitator in the assistance process. We reported in a companion paper (Loucks and Cox, 1982) that there seemed to be a pattern of external facilitator/local facilitator assistance when both of them were present on a site, whereby external assisters spent less time on most assistance activities, and local facilitators spent more time. This could mean either that a site just may not require as much external aid or that external facilitators are able to target assistance more efficiently when there is a local facilitator actively involved in the local change effort. Therefore, it may just be that low external assistance, when given in conjunction with local assistance -- which we know to be critical -- can cause a change in teachers' practice.

What does all this mean? The conclusion of the Study's ethnographic analysis of 12 school sites offers some insights at this point.

Huberman and Miles (1982) concluded after an exhaustive review of all assistance given to 12 sites -- internal and external, ongoing and event-focused -- that assistance made more of an impact in local sites seeking to implement large-scale innovations. High assistance, -- involving both external and local facilitators -- sustained through later implementation, had the following outcomes: stabilization of practice, increasing cohesiveness/trust, reduction of isolation, building an implementation "team" and building an assistance infrastructure, coordination, and collaboration. The researchers conclude, "The message here is that a high assistance presence moves its client systems away from loose coupling as a way of life (p. 152)."

In the recently completed study of the R & D Utilization Program, Louis, et al (1981) also found that external assistance was significant for schools engaging in a broad knowledge utilization activity and, moreover, that there was a connection between large-scale practice implementation and a more generalized organizational change outcome. In their model of school improvement/capacity building, organization and staff development as outcomes were affected by 1) the amount of training received by the staff in the sites and 2) the complexity of the innovation. Another form of external assistance, field agent-principal contact, significantly influenced organizational development but not staff development. The authors conclude:

> The combination of these two variables reinforces the conviction . . . that the process of implementing a significant curriculum change program is a major route for improvement organizational and staff capacity . . . . Typically most schools that implemented less complex innovations also sought less external training, and thus, did not benefit from the stimulation and the opportunity to learn and/or reinforce new skills (p. 238).

The differentiation of large-scale and small-scale innovations in the two studies just mentioned relates directly to the distinction made in our Study's individually-focused model between users for whom the innovation required a large change and users for whom only a small shift was necessary to implement the practice. Big, complex, innovations usually require would-be implementers to make greater modifications in current practice than is the case with more modest, less demanding practices.

Given parallel observations from the ethnographic research and the RDU study about the minimal impact of external assistance on what might be called low-change-seeking sites, we can conclude that assistance may just not be as critical in small efforts which can often be implemented smoothly and operated without major problems. For these schools, external assistance might well be profitably restricted to awareness and a small amount of training.

If external facilitators can successfully differentiate between small-change and large-change-seeking schools and personnel, then assistance can be tailored to the different needs of the two groups, making it more practicable to offer sustained help to sites making major modifications in establishing practice. And finally, if the external facilitator/local facilitator pair offer us an example of a synergistic division of labor, one having impact on change at the organizational level, the other on change in teachers' practice, then we are beginning to understand with a little more inflection how this school improvement business really works.

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