ABSTRACT
            The capacity of the North Central Association
Commission on Secondary Schools self-study and team-visit program to
effect change in member secondary schools was studied. Change is
defined as the rate of implementation of recommendations. As many
relevant variables as possible were identified and their
interrelationship was investigated. A systems analysis framework was
employed to identify and define these variables. They were organized
into three categories: recommendation attributes, existing
characteristics of schools, and process variables. Data gathered from
a representative sample of 57 schools was analyzed. Factor analysis
revealed a fourth category of variables, faculty and community
attitudes toward and action taken on recommendations. The correlation
coefficient achieved (.84) indicated that some of the system of
variables related to change as measured by the implementation of
recommendations had been determined. The multiple regression equation
a allowed an enumeration of the most important variables affecting
implementation. The practical implications of this study for the
evaluation process are discussed in some detail. (PP)

ACCREDITATION EVALUATION

AND INSTITUTIONAL CHANGE

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ACCREDITATION EVALUATION AND INSTITUTIONAL CHANGE [1]

The objective of this study was to determine the effectiveness
of the required North Central Association self study and team visit
program in bringing about change in member secondary schools. Change
was defined as the rate of implementation of recommendations. As
many variables as possible were identified which are presumed to be
related to the implementation of recommendations. The interrelation-
ship of these variables was also investigated.

The Evaluation Process

The North Central Association Commission on Secondary Schools
requires each member secondary school to conduct a program of self
evaluation every seven years. The self study program involves the
appointment of faculty committees which over the course of as much as
a year's time evaluate the existing school program and make recommenda-
tions for improvements in the future. The culmination of this
activity is a visitation of usually three days by a team of "experts"
who build on the self evaluation and produce a document which outlines
strengths and weaknesses of the school and also makes recommendations
for school improvement. [2]

Questions to be Answered

The aim of this study was to determine the total system of
variables related to the implementation of recommendations. It was

assumed that change in the member schools, as defined by the percent of implementation of the recommendations, would be the result of many factors.

The test of this assumption required the identification and measurement of all possible variables related to implementation of recommendations. The first key question to be answered, therefore, was, "What variables are related to implementation of recommendations?"

Utilizing a systems analysis framework, the research team members attempted cooperatively to identify and define the related variables.[3] The procedure employed was based on our (1) general knowledge of social systems and change (2) experimental knowledge of the evaluation process, and (3) study of related research on the evaluation process.

It was also possible to logically organize the variables into three categories. These were: (1) recommendation attributes, (2) existing characteristics of the schools, and (3) process variables. "Recommendation attributes" included such items as the cost of implementing a recommendation , and the origin of the recommendation. "Existing characteristics of schools" included the relatively fixed characteristics of the schools over which North Central Association has little or no control, such as per pupil expenditure. "Process variables" included aspects of the evaluation process, such as duration of the self study, as well as attitudes of staff members toward the evaluation process.

With these categories in mind, the second question to be answered was, "Will the relationship between the rate of implementation

of recommendations and given variables within a category persist after
accounting for the effects of other categories of variables?" As an
example, after analysis of the data it should be possible to say:
(1) the evaluation process is most or least effective in bringing
about change in schools with certain characteristics, e.g., in schools
with high or low per pupil expenditures; (2) the process is most or
least effective in schools where the evaluation process embodies certain
characteristics, e.g., where the self study took place over a short
versus a longer period of time; (3) the percent of implementation of
recommendations of a given type was greater than for other types, e.g.,
costly recommendations were implemented less often than less costly
ones, and; (4) after accounting for the effects of one or two categories
of variables, a given relationship still holds. For instance, after
accounting for the effect of fixed characteristics, such as per pupil
expenditure, and after accounting for the effect of attributes of
the recommendations, such as cost of implementing the recommendations,
process variables, such as duration of the self study, are signifi-
cantly related to the percent of implementation of recommendations in
the schools.

Statement of Hypotheses

Although a number of variables were investigated, two major
hypotheses were tested. The variables used may be thought of as sub-
hypotheses under each category of the second major hypothesis. The
major hypotheses were:

H.1   A model of the system of variables associated with implementation
of recommendations can be established and some indication of the rela-
tive importance of variables can be determined.

H.2   The implementation of recommendations is related to several
variables. When the variables are assigned to categories, the
relationship of given variables to implementation will persist in-
dependently of the effects of other categories of variables. The
categories of variables are:

        1.   Recommendation attributes

        2.   Existing characteristics of schools

        3.   Process variables

    The categories into which the variables we.e placed are not
only of importance conceptually. Of equal importance are statistical
considerations. If categories of variables, or representative
variables for these categories, are to be used as "controls" in
partial correlations it is important to know the relationships of
these variables and categories. Ideally the categories should be
substantially orthogonal. At the same time the variables within the
categories should be fairly highly intercorrelated if the category is
to be economically represented by some representative variables.
To meet these criteria, the variables were factor analyzed to check
the content of the categories which had been conceptualized logically.

    The total of the variables available for factor analysis
resulted from the administration of questionnaires to the faculties
of the 57 schools in the sample and from the collection of various

data about these schools. These sources yielded a pool of 186 variables.
However, since the number of variables should be less than the
number of subjects in factor analysis, only those variables which
correlated at .20 or higher with implementation of recommendations
were used. This offered a means of selection of the most important
variables and reduced the number used to 49.

In general, the factors identified were not in serious discord
with the definitions of categories previously established. The factor
analysis did result in the realignment of some variables within
categories. However, the main result was the addition of another
category of variables having to do with faculty and community attitudes
toward and actions taken on individual recommendations. These attitudes
were clearly different from the generalized attitudes toward the self
study or team visit. Temporally, they have to do with events after
the self study and team visit were completed. Also, because of the
location of these items on the questionnaire they were somewhat suspect
of an interpretation of causality. For example, a person having just
indicated that a recommendation had been implemented, would be
inclined to infer, even if he did not know, that the principal, for
instance, had supported the recommendation. For these reasons, and in
order to be able to handle this set of variables separately, a new
category was established. This fourth category was titled "Attitude
Toward and Action on Recommendations."

Procedures

The sample consisted of 57 schools which had conducted the self study about two years prior to this investigation. These schools were as representative as possible of the North Central Association membership. 4

Because the implementation of recommendations was investigated quite closely, not all of the recommendations made for a school could be investigated. All of the recommendations made for each school were divided into categories of (1) Articulation and Coordination, (2) Curriculum, (3) Facilities, and (4) Personnel. A category of (5) Innovations was also used, though this category was not independent of the first four. Those recommendations selected for investigation were the four most important recommendations from each category, in the judgment of two members of the research team. The percent of implementation of recommendations for each school was defined as those recommendations selected in the first four categories which were either completely or partially implemented.

The data were collected as follows: First, a research team member called on each school in the sample during which he interviewed the principal and other faculty members, examined documentary evidence pertaining to implementation, administered a questionnaire to the superintendent, principal, and 10 teachers, and recorded information from the Evaluative Criteria and the North Central Association Annual Report. Next, other available data regarding schools and states were extracted from several studies which had been conducted previously.

The data were analyzed in two ways using: (1) each recommend-
ation as the unit of analysis, and (2) each school as the unit of
analysis. The first analysis utilized chi square tests of significance
to compare rates of implementation for various types of recommendations.
The second analysis utilized primarily multiple regression. Repre-
sentative variab'es were selected for each category of variable through
a stepwise multiple regression procedure. These representative
variables were used in the equation to determine whether a given
relationship of variables persisted independently of the effects of
variables in other cateogires. These partial correlations, zero order
correlations, and the multiple regression equation were used to
determine relationships constituting the total system relating to
implementation of recommendations.

Results

With respect to the recommendations selected for each school,
when implementation consisted of both complete and partial implemen-
tation, the percentages of implementation by categories were:
Articulation and Coordination, 61.5 percent; Curriculum, 53.6 percent;
Facilities, 41.8 percent; Personnel, 57.8 percent; Total for the above,
53.6 percent; Innovation (not an independent category), 44.6 percent.
The mean number of recommendations per category per school was as
follows: Articulation and Coordination, 14.5; Curriculum, 52.6;
Facilities, 38.0; Personnel, 13.3; Innovations, 1.8; Total 116.5.

The dependent or criterion variable consisted of the percent
of selected recommendations implemented in each school. As indicated
above, the mean percentage of these recommendations implemented was

53.6. The range of the dependent variable was from 25 to 86, the standard deviation was 15.2, and a probit analysis indicated no departure from normality.

Two multiple regression equations were determined. Both utilized a forward step wise procedure to select the variables in the equation. The first equation was determined using all 49 variables which correlated at .20 or higher with the criterion as the possible independent variables. The second equation was determined using the 12 representative variables as the possible independent variables. In both equations the same five variables were selected first. These five variables explained about 70 percent of the criterion variance (multiple correlation of .84). The predictive model was therefore achieved as stated in the first major hypothesis. [5]

In the analysis by schools, the characteristics of the recommendations for each school were either averaged or percent scores determined as appropriate. Thus the same information was available, by and large, for this analysis and the analysis of recommendations. In only one case did the analysis by recommendations reveal a relationship that was not shown in the analysis by schools. The individual recommendation analysis showed that recommendations which originated with the visiting team were less likely to be implemented than were those which arose previous to the team visit. However, the percent of recommendations which originated with the visiting team when determined for each school failed to correlate significantly with the total percent of implementation for the school. The probable explanation is that this is a real relationship which was masked or

randomized in the school by school analysis.

The second major hypothesis was also borne out. Using the categories established for the variables, representative variables were entered into the equation and partial correlations were determined for the remaining variables, enabling relationships to be established which could be determined to persist even after accounting for the effects of other categories of variables. Findings will be enumerated below. The order of presentation, insofar as possible, follows the order of importance established by the multiple regression equation.

1. Attitude toward and support of individual recommendations on the part of all of the faculty and particularly the principal is very important in the implementation of recommendations. Positive support by some part of the faculty is necessary for implementation. Those recommendations which are not implemented are not often resisted. Instead, it would seem they are not implemented because nobody pushes for them.

2. Teacher and principal attitudes toward and perceptions of the total evaluation process are related to the percent of recommendations implemented. While principals focus on both the team visit and the self study, the teacher attitudes and perceptions concerning the team

visit are more important in relationship to total implementation. Other variables which show a positive relationship to implementation are teacher satisfaction with the self study instrument and teacher perception of the presence of a formal follow-up program.

3. The cost of implementing recommendations is inversely related to the rate of implementation. Those recommendations which cost more will be implemented less often.

4. The kind of school is important in the success of the evaluation process as measured by the implementation of recommendations. There will be greater implementation of recommendations in schools which are less "sophisticated" as indicated by (1) the lack of a professional negotiation agreement with teachers' groups, particularly the AFT, (2) a principal who has fewer semester hours in administration, and (3) a greater percentage of students intending to go to a post secondary school other than college or junior college.

5. There is greater implementation of those recommendations which originated previous to the team visit rather than with the visiting team.

There is also greater implementation of those
recommendations which originated with the self
study than of those which were is existence
previous to the self study.

6. There is greater implementation of recommendations
in those schools in which greater importance was
attributed to the role of the evaluation process
in achieving implementation of those recommenda-
tions implemented.

Concluding Remarks

The multiple correlation coefficient achieved (.84) gives in-
dication that some of the system of variables related to change as
measured by the implementation of recommendations has been determined.
The same statistic indicates that all related variables have not been
identified. Future research should be able to identify more related
variables. In this study, process variables were not well identified
because of the time lag. Research in which the process would be
studied as it takes place should be able to better identify these
variables.

This study also seems to have practical implications for the
evaluation process. Some of these points follow:

The importance of support of recommendations by the faculty
in the implementation of recommendations may be noted. If the team

visit is to be effective in bringing about change, the team members should be concerned with support that they can enlist for recommendations and strategies for enlisting this support. Even more important, if a recommendation can be introduced at the level of the self study, it will have greater chances of success. All of this is in line with the concept of the importance of self determination and participation which underlies the whole evaluation process. The average number of innovative recommendations per school (1.8) indicates that the evaluation process has done little to introduce innovations. Rather, it would seem that many recommendations are a sort of bringing-up-to-standards type. If the evaluation process is used in the future as a vehicle to introduce new ideas and methods, the above considerations will become especially important.

The role of the visiting team and the importance of the perception of teachers concerning the visiting team is important. Whether in those schools with higher percentages of implementation the visiting team performed more adequately or the teachers simply had less stringent or more realistic expectations cannot be determined from these data. Very likely both could be true to some extent. It would seem that North Central Association should deal with this important aspect of the evaluation process by: (1) clarifying the role of the visiting team, especially as it concerns the classroom teacher, (2) working toward helping the faculty of the school understand this role and the relative importance of the self study and (3) helping in the selection and training of team members to enable them to do a more adequate job.

The importance of a follow-up program within the school has been indicated; one that gets across to teachers. The responses of principals to the interview also showed that most principals would welcome a follow up small scale visit if this did not include the mandatory implementation of recommendations. The findings here would indicate that such a program should not be restricted to interaction with the administration.

Finally, the finding that the evaluation process has greatest impact on the least sophisticated schools should be a matter of some concern, for the converse of this is that it has least impact on the more sophisticated schools. It may be argued either that the former need more help or that the latter are more impervious to the evaluation process. Probably both statements are true to some extent. Perhaps one factor limiting impact in big city and larger school districts is the lack of any district wide approach which would coordinate the results of the individual school evaluations. While the lack of impact may result in part from a generalized attitude concerning North Central Association, thought should be given to making the evaluation process more meaningful for these more sophisticated schools.

FOOTNOTES

1. This paper is based on the author's unpublished doctoral dissertation, "Accreditation Evaluation and Institutional Change: A study of the Implementation of Recommendations in Selected North Central Association Secondary Schools," Northwestern University, 1969.

2. In the schools studied this process was based on the use of Evaluative Criteria, 1960 Edition, National Study of Secondary School Evaluation (Washington, D.C. 1960), and the High School Evaluation Guide, North Central Association of Colleges and Secondary Schools (Chicago, Illinois, 1965).

3. The research team, consisted of: Gordon Cawelti, Executive Secretary of the North Central Association Secondary School Commission; Larry Master, Indiana University; and Glen Meredith, University of Wisconsin; and the author. The present study was one part of a larger study. Larry Master and Glen Meredith collected some of the data used in the present study and conducted related studies on attitude about the evaluation process and teacher perceptions of changes resulting from the evaluation process.

4. Some of the less populous states were under-represented, as were suburbs and small towns, and the average enrollment of the sample schools was higher than that of member schools. On the other hand, the proportion of schools under 500 enrollment and the proportion of public and non-public schools was the same for the sample and the membership. The distribution and characteristics of the schools in the sample are shown in a table on the next page.

DISTRIBUTION AND CHARACTERISTICS OF SCHOOLS IN THE SAMPLE

State	No.	Area					No. Non-Public	Avg. no. Students
		1	2	3	4	5		
Arkansas	3		3					1002
Illinois	9	3	1	2	1	2		1559
Indiana	6	2	3			1	1	1190
Iowa	3		2			1	1	1167
Kansas	3			1	1	1	1	1026
Michigan	5	1	2	1	1			1156
Minnesota	4		1		2	1		672
Missouri	3	1	2					1585
Ohio	6	1	1	2	1	1		1147
Oklahoma	3	1	2					1205
West Virginia	3		1		1	1	1	578
Wisconsin	9	1	4		3	1	1	850
Total	57	10	22	6	10	9	6	1126

Note: Area numbers indicate
1. City over 400,000 residents
2. Community of 5,000-399,000 (not suburban)
3. Suburban - within close proximity to city of over 100,000
4. Small town of under 5,000
5. Rural

5. The equation is shown in the following table:

FINAL MULTIPLE REGRESSION EQUATION WITH TOTAL IMPLEMENTATION OF RECOMMENDATIONS AS CRITERION

Regression Coefficient	Variable	After Each Step R	R^2
151.19	(constant)		
+19.70	Principal's action on recommendations	.569	.324
-12.32	Cost of recommendations	.701	.492
+13.07	Teacher's rating, evaluation process obtains support for needs	.786	.618
+ .46	Percent students intending post secondary school other than college	.816	.666
-5.17	Presence of professional negotiation agreement	.836	.698

The selection of predictor variables which correlate highly with the criterion variable from a number of independent variables is bound to capitalize on chance. If this same equation were employed on a new sample or on the total population, where different or no change factors were operating, the present change inflation of R2 would result in "shrinkage" of R^2 when applied to the new sample.