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ABSTRACT

The following considerations are of major importance to the persons who act as technical assisters for the Long Range Plan for School Improvement (LRPSI) in Pennsylvania: (1) long-range planning should be viewed as a deliberative and participative process; its steps should not be considered in isolation from each other; (2) comprehensive needs assessment strategies should reflect current developments and provide an ordered sequence of assessment in both curriculum and instruction; (3) although Section I of the LRPSI emphasizes the development of strategies for curriculum development, there is a pressing need also for strategies concerning instructional improvement; (4) technical assisters should prepare implementation and evaluation guidelines to make up for the lack of such guidelines in the LRPSI; and (5) technical assistance should continue throughout the 5 years of the LRPSI. Although the knowledge base available to technical assisters is greater than ever before, the set of problems they have to face has also increased in complexity due to cutbacks in school personnel and funding. Technical assisters can best maintain and build their collective capacity to help bring about school improvement by encouraging collaborative problem solving, promising no more than they can deliver, and striving for continuity of services despite cutbacks. (JBM)

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SCHOOL IMPROVEMENT IN PENNSYLVANIA--CURRICULUM
AND INSTRUCTION ISSUES FOR THE TECHNICAL ASSISTANT

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"Would you tell me, please, which way I ought to go
from here?" "That depends a good deal on where you
want to get to," said the Cat. "I don't much care
where--so long as I get somewhere," Alice added as
an explanation. "Oh, you're sure to do that," said
the Cat, "if you only walk long enough."

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Alice's Adventures in Wonderland
Lewis Carroll

The purpose of this paper is to clarify and discuss some of the major
issues involving curriculum and instruction and how these issues impact on the
persons who act as technical assisters for the Long Range Plan for School Im-
provement. Throughout the aforementioned seminar series, numerous concerns
and ideas were raised. We have classified these concerns and ideas into the
five issues presented in this paper. We realize that these five are not in-
clusive of all issues that could be raised and are not mutually exclusive, but
are quite interdependent.

The first issue acts as a conceptual framework for the entire long-range
planning process, while issues two through four focus specifically on Section I
of the Long Range Plan for School Improvement. The final issue--continuity of
technical assistance--acts as a capstone for the preceding four, especially in
its implications for technical assisters. The discussions are intended to pro-
voke questions and provide some direction to persons who are just entering the
partnership of technical assistance to school districts.

Issue 1

Long range planning should be viewed as a deliberative and participative
process whose steps should not be considered in isolation of each other.

Discussion

Based on observations by the authors and conversations with others who

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have had an opportunity to observe the planning processes used by school districts of Wave I and II of school improvement, we feel that many school districts tend to view the long range planning process as a set of unconnected or only slightly connected steps in a process. Our contention is that administrators involved in developing the Long Range Plan for School Improvement need to see the whole of the planning process and the resultant product before they can reasonably develop an effective long range plan. To attempt to do any section of the plan in isolation from the other sections is possible, but likely to be somewhat less than highly effective.

We contend that what is needed is the development and implementation of a deliberative process involving discussions with faculty, administrative staff, and representatives from intermediate units, institutions of higher education and the community at the front end of the planning process. Considerable time needs to be spent in examining and establishing goals, defining desired outcomes, identifying, clarifying and questioning the underlying assumptions and exploring reasonable alternatives for the long range planning process. These typify many of the crucial early elements in generic problem solving and planning processes found throughout the literature. Banathy (1968) has indicated that

Schools exist to meet the educational needs of the society. They accomplish this through a continuous interaction with their environment. The key aspect of this interaction is information exchange. Information upon which the school is to operate is generated both externally and internally. It comprises the main input to planning, programming, and managing education.

In his book entitled Educational System Planning, Kaufman (1972) notes that an overall educational management process model may be conceived of being constituted of the following elements:

1. Identify a problem (based on documented needs).

2. Identify solution requirements and solution alternatives.
3. Select solution strategies (from among the alternatives).
4. Implement selected strategies (to achieve the required outcomes).
5. Determine performance effectiveness.
6. Revise as required any step in the process

The first five of these six steps can be classified into two major components-- problem identification (steps one and two), and problem resolution (steps three, four, and five). The sixth step is used as both problem identification and problem solution (Kaufman 1972). His notion is that considerable time and energy should be spent in order to establish the proper identification of needs before anything else is considered. Our thinking and experiences are congruent with Kaufman's in that districts which have rushed into Long Range Planning for School Improvement have often encountered severe problems later in the planning process because they did not take the time to conceptualize the entire process and to develop and internalize the relationships among its constituent elements. Without such a percolation period, school districts might race to premature conclusions, choices of inappropriate action plans, and hastily conceived staff development programs. As much as three or four months might be needed in order to develop good working relationships, mediating the political process in the district, identifying and setting reasonable expectations, and defining a comprehensive needs assessment strategy.

Implications

One possible solution would be for the Department of Education to develop a document which would be an idealized process manual. However, it appears to us that what is needed is for the Department of Education, institutions of higher education, and intermediate units to orchestrate a process which will encourage districts to remember the old adage that "haste makes waste" and to spend

what may seem to many, an inordinate amount of time in developing a high quality administrative plan for the Long Range Planning process for School Improvement.

Issue 2

Comprehensive needs assessment strategies are needed which reflect both current developments and an ordered sequence in curriculum and instruction.

Discussion

Rosenshine's quotable summary statement on time--"You get what you teach for"--has a corollary in the results of needs assessments--"You get what you assess for." This is the issue under consideration:

- a. What scope of the needs assessment does the Long Range Plan for School Improvement (LRPSI) suggest?
- b. What kind of data and direction does the LRPSI needs assessment process tend to lead us?
- c. What are the implications for the technical assistants?

The LRPSI Resource Guide 3: Programs and Services Needs Assessment specifies that the major outcomes, in analyzing building/district programs and services strengths and needs, is:

...the determination of the primary areas of student strength and weaknesses on a building basis, and the assignment of priorities to the needs identified. To achieve the above outcome, districts confirm their programs and services goals; analyze the relationship among school courses, student achievements and the Twelve Goals of Quality Education; and analyze student growth on a variety of achievement and attitude measures (Pennsylvania Department of Education, 1981, p.5).

The reporting requirements specify the listing of the districts' programs and services goals and relating them to the Twelve Goals of Quality Education. The "districts' educational goals will vary in number, content and level of specificity. Districts will also vary in the degree to which their goals are systematically related to the schools' real curriculum, instruction and testing program" (Ibid). Finally, in response to a later question which asks whether the

Twelve Goals of Quality Education should be adopted, the response is "The Twelve Goals of Quality Education are strongly recommended, but are not required...What is asked is that districts relate their goals to the Goals of Quality Education" (Ibid).

As one considers the needs assessment examples provided in the LRPSI Resource Guide 3, the conclusion that the direction suggested is more specific to the Twelve Quality Goals and written curriculum is not difficult to reach. While needs assessments are "often defined as a systematic process for examining the relationship between ideal or intended conditions (goals/objectives... WHAT SHOULD BE) and real conditions (program, test and/or opinion data--WHAT IS)" (Ibid), the needs assessment process guides do not tend to lead to comprehensive examinations of both curriculum and instruction, nor does the suggestion of a "systematic process" emerge. What does emerge is a thorough examination of a district's written curriculum, planned courses, and the Twelve Quality Goals. By requirement, the relation of all district goals to the Twelve Goals tends to prevent the framing of goals in areas which significantly impact on curriculum and instruction such as classroom management, leadership, or instructional monitoring.

As a more systematic decision-making strategy (Coffing and Huchison, 1974), needs are basic criteria for designing and for evaluating educational programs and services. To date, however, there are no definitive needs strategies which comprehensively measure Pennsylvania's unique goals and curriculum and the important instructional issues which emerge from the effective classrooms/schools literature. Certainly, Pennsylvania's EQA (Educational Quality Assessment) is most comprehensive for the Commonwealth's unique goal structure and is most useful and used in the development and assessment of the written curriculum. Since the seldom used condition variables do contain key instructional elements such

as time and expectations (parents and teachers), this known resource might be the most logical vehicle for both a comprehensive and ordered sequence of assessment for Section I of LRPSI. Some EQA field representatives already use these data for a preliminary action planning step called program analysis. Further, both the sequence and comprehensive range suggested in this issue were originally planned for EQA, but abandoned due to diminishing resources and increased demands.

Implications

Five key questions might be posed by the technical assister asked to assist a school district to systematically examine the relationship between ideal and real conditions in a district:

- a. What should be the scope of the needs assessment?
- b. On whose needs will you focus and at what level?
- c. What kind and amounts of data should be collected for your purpose?
- d. What sources and methods might you use?
- f. What existing assessment products interface with your purposes?

The needs assessment phase of Section I, in our opinion, tends to focus on the assessment and development of the written curriculum. The technical assister should be aware that the answers to the above questions might lead to the consideration of important instructional questions. If this does occur, the technical assister will be required by necessity to go beyond standard LRPSI guidelines and resources.

Issue 3

Alternatives other than curriculum development should be considered for the development of action plans in Section I of the Long Range Plan.

Discussion

School districts involved in Waves I and II of School Improvement have

tended to put a considerable amount of time and effort into developing action plans which focus on the development and articulation of curriculum in reference to the high priority goals for those districts. This is quite understandable given the highly visible emphasis on the development of the planned course by the Pennsylvania Department of Education and the release of its document entitled "The Planned Course: Guidelines" (PDE, 1981). The process of developing planned courses is a relatively safe one for school districts to pursue. Planned course documents which contain the four critical variables (objectives, content used to reach objectives, expected levels of achievement and evaluation procedures) are highly visible and their production forces a task orientation on administrative and instructional staffs of school districts. However, one must question development of planned courses and K-12 curriculum articulation as the only (or most important) way to improve the quality of education in the schools as one might infer from the "action plan" portion of Section I of the Long Range Plan for School Improvement.

It appears that the improvement of instruction is rarely established as a priority goal for school districts. This is perhaps because the instructional area is more difficult to deal with than is the curriculum area. Instructional improvement involves a broad range of technical and interpersonal competencies on the part of supervisors, administrators, and technical assistants in reference to instructional programming. Unfortunately, the focus on such areas is not traditionally a part of the education and training they receive in graduate school programs in administration; nor do administrative staffs of school districts usually undertake systematic efforts for their own continuing professional education. Their tendency is to plan for others--the teachers and aides in the district. The typical school district has a staff development program consisting of sporadic released days addressing an assortment of concerns, an evaluation program consisting of biannual teacher ratings using the DEBE 333, and a

supervision program most teachers cannot distinguish from the evaluation program (Goldsberry, 1982). It appears that missions for staff development, for instructional supervision and for educational evaluation overlap extensively and all tend to focus on improvement of instruction. At the district and intermediate unit level there appears to be a need to orchestrate instructional improvement efforts that will offer school leaders a structured and interactive forum for developing site specific plans for a concerted program in school and instructional improvement (Goldsberry, 1982).

Implications

In developing action plans, one might do well to consider the immediacy of results. While curriculum development and planned course development activities may be helpful over the long term, many parents and teachers are concerned about "what can happen tomorrow" in the schools. Nicely (1977) has shown how an instructional management plan can be integrated with a curriculum plan over both the short term and the long term in an attempt to improve instruction in mathematics using the principles of diagnostic prescriptive teaching and mastery learning. In his book, Instructional Design, Kemp (1971) illustrates plans for unit and course development that include both instructional and curricular aspects. The overriding notion is that curriculum development as an isolated activity is probably inadequate for successful action planning as part of the long range plan for school improvement. Creative, logical and interactive processes involving both curriculum and instruction need to be developed for both short term and long term effectiveness.

Issue 4

Guidelines for implementation and evaluation should be essential elements of action plans.

Discussion

This issue has both historical and research roots. The past history of

long range planning in Pennsylvania includes examples of long range plans developed but not implemented and submitted but not committed to. Two decades of attempts to improve practice have taught educators and researchers that "successful implementation is the critical factor...to improved practice" (Northwest Regional Educational Laboratory, 1980). Holmquist (1976) found that while great attention was given to the initial stage of problem articulation and making the decision choice, little attention was given to the subsequent stages of decision implementation and evaluation. Despite an extensive literature on implementation and our much improved understanding, key issues have not been presented and guidelines have not been developed to assist districts with this critical factor. Why do we need them and how might they help action planning?

A number of social and political characteristics pervade our school settings as we strive for school improvement. Managing under conditions of decline have required all educators to do more (or as much) with less. Superintendents and middle managers, with less job security, are reluctant to risk major change efforts. School boards change rapidly (and will change very dramatically in the next two years) and long term efforts may not receive continuous support. Many school districts already face deficits that make extended efforts more difficult. None of these have prevented the development of Long Range Plans, but any might affect the implementation. Perhaps even more important are the districts who do not fully perceive the implications for or consequences of framing ambitious and extensive goals, only to find themselves frustrated by the reality of impossible implementation conditions in their districts. The writers have seen several examples where conditions changed after the action plan was written made implementation impossible...and the long range plan had not even reached the submission stage! Implementation and evaluation guidelines might have helped action planning. Let us consider how.

Berman and McLaughlin (1976), citing the well known Rand Studies, have indicated that implementation "depends almost exclusively on conditions in the local environment: on leadership, appropriate staff training, and in the relation of the innovation to current problems. The absence of any of these factors can be viewed as a real impediment to improved practice."

Harriott and Gross (1979) identify other factors that can block change efforts: failure to diagnose problems properly; inability to anticipate implementation problems; absence of effective monitoring and feedback; and minimal teacher participation.

In the course of our discussion of this issue, many noted that the lack of preparation of administrators in areas such as instructional supervision and the capacity of both administrative staff and technical assistants to deal with instructional analysis are serious impediments to implementation. The Northwest Regional Laboratory (1980),...in their review of implementation, indicated that:

The critical factors seem to be: appropriate information that addresses the real and perceived problems of practitioners, acquisition of new personal skills to carry out the implementation, and the availability of skilled technical assistance to deal with the political realities associated with a change effort. Beyond this, one may agree that schools need to adopt 'a process, at the heart of which is staff dialogue, by means of which (the school) becomes responsive to its needs and to ways of fulfilling them better.' (Goodlad, 1979)

A recent summary by Loucks and Crandall (1982) indicated that the primary impact of technical assistants was at the school or district level. Classroom impact "only occurs when activities of external facilitators focus on specific implementation issues (e.g. planning, scheduling, problem solving, follow up); otherwise, external assistance works against classroom change." The reason for this finding may be explained by Neale, Bailey and Ross (1981):

...Some concepts of planned change emphasize the need to try out or pilot new practices, often on a small scale,

before widespread use. During a trial phase the new practices and procedures may be altered to fit the local setting. Also, personnel may need a development phase in which they can acquire the skills needed to install a new practice. Because educational innovations are usually complex and people-oriented, the local school organization itself may need to change in order to accommodate a new practice or procedure. Thus, the implementation stage may be viewed as a stage of mutual adaptation, in which a new practice and the existing school organization both change.

Evaluation also plays a critical role in the school improvement process during the implementation of action plans. On-going evaluation, including structured feedback, is most important to the process of mutual adaptation, in which the school as an organization and a new program or practice are both changing. There is a continuous need to monitor new programs and practices, to identify problems or needed adjustments, and to alter conditions or implementation elements if necessary.

Implications

Technical assisters should be aware of the absence of implementation guidelines in the LRPSI process. Further, they should understand the key implementation issues that have emerged from the past two decades of research on change and utilize that knowledge both in providing the most effective technical assistance and in helping districts to anticipate implementation consequences. Finally, districts should be encouraged to monitor implementation, either through standard formative evaluation procedures or through such developed approaches as the Stages of Concern or Levels of Use (Hall, et al, 1978).

Issue 5

The continuity of technical assistance (via the partnership) should exist throughout the five years of the Long Range Plan for School Improvement (LRPSI).

Discussion

In their book, Strategies for School Improvement, Neale, Bailey and Ross

(1981) maintain that "despite reductions in school staffs and education budgets, resources are still available for school improvement....Opportunities to mobilize these resources for school improvement exist in the formation of local partnerships for school improvement, consisting of representatives of local school administration, the teaching staff, the state education department, and an institution of higher education." Will this continue to be true in the years of school improvement ahead? Are there potential barriers to the likelihood of continuity? Let's begin by looking at why continuity makes sense.

Karen Seashore Louis (1981), in reflecting on implementation and the improvement of school practice, stressed support for the development and use of "complex" or "hard to use" products and information. She explained...

Research suggests that the more complex a program is and the more change is required, the less likely a school is to adopt it. But it also suggests that programs requiring little change provide little improvement. The more complex programs will give greater results and thus, more effective schools will be the outcome.

Crandall (1977) states that "most authors continue to agree that carefully planned and structured interorganizational efforts offer one of the most effective methods of identifying and implementing programs that are more comprehensive and inclusive in scope..." Comprehensive program implementation takes time. If technical assistance is involved, continuity is essential, especially at the early political stages of the process and for on-going problem solving. Lippitt (1969) contends that most significant adoption of new educational practices requires major changes in values, beliefs, and patterns of behavior--all of which require more personal involvement, more careful adaptation, and more feedback. The complexity inherent in this effort would also require greater continuity if technical assistance was involved.

Despite the likelihood that more continuity might be required of technical

assisters under different circumstances, many factors loom as potential barriers. From our discussions, they tend to fall into two categories: credibility and cutbacks.

The credibility issue emerges despite the fact that school improvement conditions are excellent for technical assistance. Brickell (1980) has identified the classic one-two punch of a champion disseminator as a stinging mandate followed up by a powerful technical assist. Many potential barriers have been identified:

- a. The tendency to be overly ambitious and promise more than can be delivered (Gross, 1977).
- b. The underestimation of the time and energy needed to make a project or a collaboration work (Parrucci, 1977).
- c. The absence of effective and thorough planning (Gross, 1977).
- d. The role limitations of technical assisters and the unclear agent-of-State vs. agent-of-district status.
- e. The varying abilities of technical assisters to help.

Since credibility is based on trust and experience, both must have time to be developed. If the conditions of developing it are fragile, quality control of service delivery becomes an important issue.

Cutbacks are affecting all technical assisters. Districts are losing instructional and supervisory leadership; service personnel are the first to go in higher education; and Intermediate Units have seen numerous programs and key staff disappear. The first year linkages to current Wave school districts, while manageable, become less so as concern for and involvement in implementation becomes a reality. Will our own internal organizational demands for downsizing and upgrading (as we manage under conditions of decline) present great conflicts in the future? Will commitments and partnerships entered into for the planning year become more complex and demanding during implementation? How will we meet service requests which may come from several Waves of school

districts undergoing implementation simultaneously? Continuity may be less possible under such complex circumstances.

Implications

Technical assisters face a complex set of conditions which tend to tug and pull at our natural inclination to want to do more in School Improvement. While there is need to strengthen technical assistance services and to engage in partnerships with broader scope and greater impact, cutbacks constrain the realization of full potential and may increase our credibility problems over time. The ethics of any service relationship requires that commitments made be fulfilled. While it becomes increasingly more difficult and costly to make long term commitments, even shorter term relationships require effective planning may be overly ambitious for the institutional support provided. Continuity may jeopardize the very credibility that technical assisters are seeking to improve. This is certainly an area which will require greater intra- and inter-organizational attention in the years ahead. Creative and lasting relationships between technical assisters themselves may help in building collective capacity-- both in service delivery and in more efficient and effective divisions of labor.

Conclusion

A man's learning usually passes through three stages. In the beginning he learns the right answers. In the second stage he learns the right questions. In the third and final stage, he learns which questions are worth asking.

Unknown Author

In conclusion, we realize that our discussions of the major issues probably have raised many more questions than they have provided answers. Our intent in looking at the long range planning in general and specifically at Section I of LRPSI was to help frame curriculum and instruction issues that have implications for technical assisters in Pennsylvania. As we consider those discussions, we

do find that there are some specific suggestions that emerge for the technical assister. In summary, we would advise the technical assister to:

1. Be prepared to make a commitment to the process, realizing that reciprocal commitments by school districts to involve technical assisters do not always occur.
2. Plan to spend considerable time "up front" in helping school districts to see the whole of the planning process.
3. Foster a deliberate and participative process which involves key staff and groups and recognizes the interdependence among the parts of the long range plan.
4. Develop a high quality administrative plan.
5. Realize that the LRPSI needs assessment process tends to focus on the assessment and development of written curricula and to address important instructional areas, one will be required to go beyond standard LRPSI guidelines.
6. Consider planning simultaneously for curriculum and planned course development and instructional management.
7. Anticipate implementation and evaluation issues and address them in action planning.
8. Recognize the conflicts inherent in your technical assistance role and:
 - a. Don't promise more than you can deliver.
 - b. Fulfill all commitments made.
 - c. Realize the real (overt and hidden) cost to you and your organization.
 - d. Build capacity and develop divisions of labor through partnerships with other technical assistants.
 - e. Protect your credibility and strive for continuity of specified services to school districts despite cutbacks.

While the knowledge base helpful to technical assisters has increased, so also have the complex set of problems which we face. We strongly support the continuation of dialogues between technical assisters such as those which occurred in these seminars. Further, we believe that more collaborative problem solving in the future may build our collective capacity to provide the most effective technical assistance and contribute as important partners in the process of School Improvement.

- Banathy, Bela H. Instructional Systems, Belmont, CA: Fearon Publishers/Lear Siegler, Inc., 1968.
- Berman, P. and McLaughlin, M. Federal Programs Supporting Educational Change, Vol. IV: The Findings in Review, U.S. Office of Education, Department of Health, Education and Welfare, 1975.
- Berman, Paul and McLaughlin, Milbrey. Federal Programs Supporting Educational Change, Vol. VIII: Implementing and Sustaining Innovations, Santa Monica, CA: The Rand Corporation, 1978.
- Berman, Paul; McLaughlin, Milbrey, Wallen and William. "Implementation of Educational Innovation," Educational Forum, Vol. 4, No. 3, March, 1976.
- Brickell, Henry M. "Back to Basics in Educational Dissemination" in Inter-organizational Arrangements for Collaboration Efforts: Commissioned Papers, Portland, Oregon: Northwest Regional Educational Laboratory for the National Institute of Education, 1980.
- Coffing, Richard T. and Huchison, Thomas E. Needs Analysis Methodology: A Prescriptive Set of Rules and Procedures for Identifying, Defining, and Measuring Needs, Chicago: American Educational Research Associates Annual Meeting, 1974.
- Crandall, David P. "An Executive Director's Struggle to Actualize his Commitment to Collaboration," Applied Behavioral Science, Vol. 13, November 3, 1977.
- Fullan and Pomfret, Alan. "Research on Curriculum and Instruction Implementation," Review of Educational Research, Vol. 47, No. 1, 1977, pp.335-397.
- Goldsberry, Lee F. "School Improvement Leadership Collaborative," A Continuing Education Brochure #2-400. University Park, PA: The Pennsylvania State University, 1982.
- Goodlad, John I. The Dynamics of Educational Change. New York: McGraw-Hill Book Company, 1975.
- Gross, Neal and Mojrowski, Charles, "Interorganizational Relations Problems in the Design and Implementation of the Research and Development Exchange," Information Dissemination and Exchanges for Educational Innovation: Conceptual and Implementation Issues of a Regionally Based Nationwide System, December, 1977.
- Hall, Gene E, and Loucks, Susan F, "Innovation Configurations: Analyzing the Adaptations of Innovation," Paper presented at the annual meeting of the American Educational Research Association, Toronto, 1978,
- Havelock, R.G, et al, Planning for Innovation Through the Dissemination and Utilization of Knowledge, Ann Arbor, MI: Institute for Social Research, Center for Research on Utilization of Scientific Knowledge, 1969.
- Harriott, R. and Gross, N. The Dynamics of Planned Educational Change: Case Studies and Analyses, Berkeley, CA: McCutchan Publishing Co., 1979.

- Holmquist, A.M. A Definitional Field Study of Decision Making in IGE/MUS-E Schools, Technical Report No. 377, Madison: Wisconsin Research and Development Center for Cognitive Learning, 1976.
- Kaufman, Roger A. Educational System Planning, Englewood Cliffs, NJ: Prentice-Hall, Inc., 1972.
- Kemp, Jerrold E. Instructional Design, Belmont, CA: Fearon Publishers/ Lear Siegler, Inc., 1971.
- Lipham, James. Change Agency and School Improvement: The Principal's Role, Paper for Northwest Regional Educational Laboratory, November, 1979.
- Lippitt, Ronald. "The Use of Social Research to Improve Social Practice," Concepts for Social Change, Washington, D.C.: National Training Laboratories, 1969.
- Loucks, Susan F. And Crandall, David P. "Influences on School Improvement: Findings From Research," Presentation at the Pennsylvania Educational Research Association Conference, Philadelphia, PA, 1982.
- Loucks, Susan F. and Hall, Gene E. "Implementing Innovations in Schools: A Concerns-Based Approach," Paper presented at annual meeting of American Educational Research Association, San Francisco, CA, 1979.
- Louis, Karen Seashore. "Implementing Research and Development in Schools: State-of-the-Art" in Improving School Practice: Summary and Proceedings of the 1981 AEL Regional Forum, Charleston, WV: Appalachia Educational Laboratory, 1981.
- Neale, Daniel C., Bailey, William J. and Ross, Billy E. Strategies for School Improvement: Cooperative Planning and Organization Development, Boston: Allyn and Bacon, Inc., 1981.
- Nicely, Robert F. Jr. "Organizing Goal-Referenced Instructional Units" in Organizing for Mathematics Instruction, Yearbook of the National Council of Teachers of Mathematics, 1977.
- Northwest Regional Educational Laboratory (Dissemination Program) for the National Institute of Education (Program for Dissemination and Improvement of Practice). Interorganizational Arrangements for Collaborative Efforts: Literature Review, Portland, OR, 1980.
- Parrucci, Dennis J. "Planned Change in the Mon Valley: Implementing Services Integration at the Programmatic Level," Evaluation and Change, Vol. 4, 1977.
- Pennsylvania Department of Education. LRPSI Resource Guide 3: Programs and Services Needs Assessment, Compiled and Edited by James W. Blair and Ethelyn O. Brewster, Harrisburg, PA: Bureau of School Improvement, 1981.
- Pennsylvania Department of Education. The Planned Course: Guidelines, Prepared by Kennard Bowman and Frederica Haas, Harrisburg, PA: Bureau of Curriculum Services, 1981.

Shepardson, M. and Wilkin, R.P. A Needs Assessment Guidebook and Product Locator, OR: University of Oregon Center for Educational Policy and Management, March, 1978.

Zaltmann, Gerald and Duncan, Robert. Strategies for Planned Change, New York: John Wiley and Sons, 1977.