The Strategies for Change and Knowledge Project is a concrete attempt to apply the Lindage model to eight colleges and universities. It is completing its third year of on-campus task force action to stimulate academic reform, of linking agent, survey feedback, workshop and consultant aid to those problem-solving efforts, and of external research regarding the innovation process as well as the intervention itself. This essay describes the strategies used to combine process consultation and linkage to external knowledge resources, and it evaluates those strategies in a preliminary, impressionistic fashion. (MJM)
Havelock's "Linkage" synthesis of knowledge utilization research suggests two major roles for the external change agent. One is the psychologically based role of the human relations interventionist who serves as a diagnostician, catalyst, and process helper for the user's own problem-solving cycle. The other is the sociologically focused role of the agricultural extension agent, a link between the user and new knowledge or innovations which may improve the user's functions. In both cases, the external agent must be able to establish personal rapport and acceptance as a consultant to the user. But in the first, "Problem-Solver," model, the primary thrust of the agent is to help the user improve his or its internal problem-solving process; while in the second, "Social-Interaction," model, the principle goal of the agent is to build a solid social influence network between the user and external resources.

Just as sociology and psychology have a hard time getting together (though they must be given credit for trying), so is it unusual for the roles of extension agent and process consultant to be combined. But, if user problem-solving is not to be myopic and if external knowledge is to be
relevantly connected to user need, it makes sense to combine those change agent roles. The question is, are they "combinable"? Can one person or agency be competent both at human relations consultation and at linkage to advances in knowledge and technology? And are both roles important to effective need-reduction in the user?

These questions and others are the focus of the Strategies for Change and Knowledge Utilization Project. Project staff are in the midst of analyzing data from the first three years, 1971-74. Research conclusions are therefore premature. There have been, however, a number of Linkage agent activities in those three years. This essay describes the strategies used to combine process consultation and linkage to external knowledge resources, and it evaluates those strategies in a preliminary, impressionistic fashion.

The Strategies Project

The SFCKU Project is a four-year action-research study of undergraduate innovation in six liberal arts colleges and two universities spread across the country. The research focuses both on diffusion of specific innovations and on the intervention of self-study data as a catalyst to reform. The action includes a small, external, Linkage and research staff; a national advisory board of experts in planned change and postsecondary education; a task force and institutional representative on each campus; a series of both off and on-campus workshops focused on self-study and action planning; and a small consultant budget. Among Project-related innovations which have been implemented in the first three years are two kinds of freshman programs, a three year/modular calendar, a 4-1-3 calendar, contract-learning program, a bachelor of general studies, and a new course and teacher evaluation. Project-related adaptive sub-systems which have been developed
Include an academic planning council, an educational development office, and an institutional research committee.

**Simulation of User Need-Reduction Cycle**

Wavelock accepts the first tenet of the human relations tradition: knowledge utilization begins with a felt need within the user system. One Linkage agent task, therefore, is "simulate or recapitulate the need-reduction cycle of the user: they should be able to (1) simulate the user's need; (2) simulate the search activity that the user has gone through; and (3) simulate the solution-application procedure that the user has gone through or will go through." (Havelock, 11-15). That is essentially the function of Organizational Development diagnosis.

In effect, the entire research component of the Strategies Project is an attempt to simulate student and faculty behaviors in the educational need-reduction process (resolution of need for learning, degrees, promotions) as well as faculty-administration-student-trustee behaviors in organizational decision-making. Survey instruments and opinion-leader/decision-maker interviews were administered in the fall and winter of 1971-72 to provide base-line data on student educational experiences and faculty-administrator-student perceptions of educational and organizational problems. In addition, each institution designated an academic innovation idea which was just beginning to surface on campus. This idea was then followed by participant observation and staff interviews. It also was assisted by Project task forces, workshops, staff Linkage activities, and expert consultants. The notion was to study and to help improve institutional problem-solving in both the context of general self-study and a specific innovation attempt. In essence, the OD model was combined with the change agent team approach. Two kinds of action and research then could be compared and complemented.
4. What did the data reveal? In one private university, the evidence indicated that students and faculty were not having much interaction, that the growth of public institutions and the slowing of postsecondary enrollment increases were forcing the institution to establish a unique appeal, that problem-solving was suffering from a disease called "terminal committee," and that many campus members felt the administration should take more initiative. In a public university, the data revealed little faculty concern for undergraduate education and a desire by faculty to increase their say in university affairs. At one liberal arts college, the educational problem appeared to be that authoritarian faculty and a dependent student body did not produce independent learners, while the problem-solving difficulty described by interviewees was a dominant administration and rapid, unevaluated change. In another liberal arts college, students reported little scholarly press in the environment. At the organizational level, faculty and administration were poles apart on whether the college should keep its traditional curriculum and teaching (the senior faculty's position) or should develop a highly individualized program (the executive administration's view). Another liberal arts college had a high drop-out rate and faculty feeling both that faculty should be more involved in campus governance and that more effective administrative leadership was needed.

The specific educational and organizational problems varied from institution to institution, but common themes were present at both levels in all institutions. At the educational level, campus members found each institution to be inadequately meeting the learning needs of its average student. At the organizational level, faculty and administration had not worked out a decision-making system satisfactory to both parties. Also,
although three-quarters of the faculty respondents in the universities and half those in small colleges were well-linked to external knowledge resources concerning their disciplines, only about one-third of the faculty respondents in either kind of institution was well-connected to external sources of knowledge regarding improvements in undergraduate teaching and learning, the focus of their educational problems.

These three general problems are hardly unique to Strategies institutions. But their solution would be. A college which successfully teaches the majority of its students, which discovers an effective way for faculty and administration to identify and solve institutional problems, and which makes faculty as knowledgeable and skilled in teaching as they are in disciplinary scholarship would be remarkable indeed.

User-Resource System Interaction

The Linkage agent's diagnosis of the user's need and need-reduction process is only the first step toward solution. Havelock stresses that the user system and the external resource system must reciprocally interact:

"It is not a one-way relationship: the resource and the user have to be conditioned to each other. The resource system recapitulates the problem-solving cycle of the user, and at the same time the resource system must interact with the user in the development of solutions." (Havelock, 11-15).

While data were being gathered, as well as during its feedback, Strategies Linkage staff were directly interacting with campus members concerning on-campus problem-solving. This interaction occurred in a series of stages with the help of several structures.

Early on, two-and-one-half day, inter-institutional Strategies workshops were conducted. Their purpose was to provide campus task forces and institutional leaders time free from routine to develop action plans regarding their specified innovation, to share ideas and experiences with
colleagues in other institutions, and to learn something about the knowledge utilization process. Following these workshops, staff wrote reactions to the plans and conducted conference telephone calls with teams to further share ideas and to clarify the action responsibilities of the teams and the staff. In the course of visiting campuses for interviews, staff again interacted with teams and campus leaders regarding problem-solving actions. In all these exchanges, staff acted both as process consultants and extension agents, offering perspective on internal actions while pointing out possible external resources.

In six of the eight institutions, this action-planning and training was followed by concrete action follow-up. In one college, the team helped implement and evaluate a core freshman experience. In another, the task force collected and fed to other institutional groups a variety of information pertinent to admissions and retention. In a third, the team itself conducted a study of innovation process and produced a report. In a fourth, the I.R. organized an informal group which helped obtain institutional approval for a bachelor of general studies degree. Another task force developed, got approved, and helped evaluate an intensive term. Yet another has spent three years studying the "value added" to college experience by that liberal arts college. In the two which did not accomplish successful workshop follow-up, one could generate no time or support at the top, while the other focused its Project energies on self-study instead of the designated innovation.

At the end of the first Strategies year, in the summer of 1972, interaction regarding Project diagnostic data began. Staff members prepared loose-leaf "Self-Study Packets" for each team attending that July's Inter-Institutional workshop. Data were presented in simple forms with minimal
analysis or structure. The notion was that this format would permit teams to "own" the analysis, a factor strongly emphasized in the "Problem-Solver" change mode. Teams included institutional representatives, task force members, and executive officers so that resulting plans would enjoy both "support at the top" and a carrying structure.

All institutions had some sort of campus dissemination of the data, including introduction of the evidence into a faculty workshop or retreat. In three institutions, the data on current conditions stimulated efforts to clarify what conditions should be by use of a goals survey and follow-up. In one, efforts by the academic divisions to strengthen the scholarly climate emerged from the study. In another, the task force attempted to improve what the data indicated were weak faculty-student relationships by revamping academic advising. In a third, the self-study resulted in passage of an "Individualized Education Program," a contract-learning approach intended eventually to replace the entire degree structure. In yet another college, a number of faculty interviewees reported that they had altered their own teaching styles on the basis of problems of inflexibility clarified by the data.

A second data feedback interaction occurred midway through the 1972-73 academic year. Staff interviewed task force members and institutional leaders concerning not only the selected innovation but also their perceptions of major educational and organizational problems. Responses regarding problems were summarized and mailed back to each interviewee as an "Interim Report." The educational problems corresponded with those identified in the earlier "Self-Study Packets." Several interviewees later said this redundancy strengthened institutional resolve to tackle such problems as infrequent informal interaction between faculty and students. In one
Institution, discussion of this problem in a campus workshop led to the establishment of faculty-student lounges in all arts and sciences departments. The main impact of the Interim Reports, however, came in the area of organizational problems. Staff reported without commentary the criticisms of campus members regarding the way decisions were made. In some instances, that brought to the surface previously hidden issues. Because criticism in most of these cases focused on administration, faculty tended to support the findings while administrators displayed some irritation. In one instance, considerable discussion and changes in governance were partially attributed to the report by interviewees. In another, after further study by a private consulting firm, criticized administrators left office.

Two additional data feedbacks have been scheduled in a continuing simulation interaction by staff and institutions. One is feedback from a survey on faculty behaviors toward innovation. The other is feedback of a post-test of all the 1971 survey instruments plus case analyses of the three-year history of specific innovation attempts. The staff assumption is that this repeated but varied data collection and feedback, "synergy" Havelock calls it, is the strongest way to establish self-study as an ongoing institutional function.

**The Linkage Agent's Resource System**

Havelock observes that "linkage is not simply a two person interaction process however; the resource person, in turn, must have access to more remote and more expert resources than himself." (Havelock, 11-17). In the Strategies Project, the National Advisory Board serves in part as that more remote and more expert resource system. Ronald Havelock, Goodwin Watson, and David Bushnell have provided workshop participants and on-campus groups expert presentations and assistance regarding change process. Benjamin Barger,
Arthur Chickering, Harold Hodgkinson, Warren Martin, Royce Pitkin, and Roger Voskuyl offer similar aid concerning postsecondary education. The Linkage agent's role has been to connect these experts and others with appropriate institutional groups. One connection which has been rated on participant evaluation questionnaires as the most effective part of every Strategies workshop has been the opportunity to work directly with an Advisory Board member in the development of action plans.

In addition to consultant linkage, staff connected task forces to pertinent literature, other campuses attempting similar innovations, and higher education conferences. One Institutional Representative summarized the usefulness of this Linkage function for his institution.

"During the course of our activities this past year I believe we have made more use of research, examples elsewhere, first-hand experiences, etc., than is usually done in similar studies at College... The key to obtaining pertinent knowledge seems to be to talk to the right persons. At least this was our experience, and I believe it is the experience of many of those involved in planned change. Since talking to the right people is so important we found the contact made through the workshops and the project staff in general to be exceedingly valuable." (I.R. Annual Report, 1972)

Establishing a Stable Social Influence Network

To return to the model we're examining once again, Havelock observes that "the development of reciprocating relationships goes beyond the point of improving individual problem-solving processes toward the creating of a stable and long-lasting social influence network" (Havelock, 11-17). The Strategies Project is a temporary Linkage system. Part of its mission is to leave behind the skills, institutional subsystems, and internal-external interactions which can provide continuous institutional self-renewal. The attached schematic overview describes the stages of that transfer process.

The establishment of a stable self-renewal system is in effect an innovation being introduced into participating institutions by the Strategies
One device toward this end is encouragement of an institutional research committee and self-study efforts. Another approach has been several staff inputs—essays, workshop presentations, personal exchanges—which seek to increase on-campus awareness of and interest in the self-renewal concept. Also, workshops have been held in conjunction with national higher education conferences to stimulate ongoing attendance at those events by campus teams. We estimate that the Project is still some distance from establishing such permanent social influence networks on most campuses with two exceptions: 1) a member university which has added an academic planning committee and associate provost, a major goals study and follow-up, an educational development office, and several faculty development projects; and 2) a liberal arts college which has established an institutional research committee and office, a faculty associate who is conducting additional self-study, a teaching seminar, and a faculty development project.

Summary of Linkage Roles and Impacts

The Linkage staff of the Strategies Project attempted four change agent functions in the first three years of their involvement in the academic change activities of six liberal arts colleges and two universities. Two of the roles are analogous to those of the Organizational Development interventionist. Linkage agents gathered data to simulate the environment of each institution, then interacted with campus teams and leaders as they identified improvement needs, searched out solutions, made decisions, and attempted to implement and evaluate solutions. The other two roles are analogous to those of the agricultural extension agent. Linkage agents connected users with external knowledge resources and encouraged establishment of stable social influence networks among users and between users and external resources.
If these strategies worked, participating institutions would increase their use of both internal and external knowledge resources pertinent to academic change; they would develop an openly collaborative problem-solving process; and both the problem-solving and knowledge utilization improvements would become permanent components of institutional functioning.

Did Linkage work? The brief sketch given above certainly indicated that both the linkage to knowledge resources and agent-campus interaction stimulated institutional problem-solving actions. Evidence of behavioral or attitudinal change throughout these institutions must await post-test analyses.

Are both the psychological and sociological Linkage roles important? It is the staff’s impression at this juncture that the strong orientation of professors toward reason and evidence necessitates the agents’ placing at least as much emphasis on use of systematically derived information as on interpersonal process. Every institution did have difficulties in the problem-solving area, particularly conflicts between faculty and administration; but each also had weak links to knowledge about internal functions and external knowledge resources. Perhaps this summary by one Institutional Representative of the first year’s action illustrates the value of meshing knowledge linkage and collaborative process:

"The major strategy that our committee used was to attempt a 'community arrived at' proposal and decision. This was in contrast to, for example, the General Education study in 1967 in which a committee worked for several weeks in the summer and brought a finished proposal to the faculty in the fall. For the calendar study we attempted to disseminate as much knowledge as possible and to have rather wide discussions before the committee even worked on a proposal. We therefore conducted the November workshop on campus with JB Lon Hefferlin. We had both faculty and student forums and we circulated a questionnaire to all faculty before the committee attempted to arrive at a proposal. The major method of obtaining information was through outside resource persons. This general procedure has been instrumental in stimulating many new ideas among our faculty. I believe it has also been crucial in the passage of the calendar revision."

(Institutional Representative's Annual Report, 1972, p. 18)
REFERENCES


4. The Strategies for Change and Knowledge Utilization Project is sponsored by the Union for Experimenting Colleges and Universities through a grant from the National Institute for Mental Health (#21010 JP).


6. Full research reports are forthcoming and can be obtained by writing the Project at 605 North Broadway, Saratoga Springs, New York 12866.


8. Survey Instruments used in the Project include The Experience of College Questionnaire (Arthur Chickering), the Faculty and Institutional Self-Renewal Questionnaire (Stannard and Lindquist), the Institutional Functioning Inventory, College and University Environment Scales, and Institutional Goals Inventory, the latter three all from Educational Testing Service, Princeton.
The diagrams delineate five overlapping phases of the Project. As the three year relationship among colleges and with staff develops, Knowledge Utilization in Planned Change moves into the institution and expands in its inclusion of all relevant sub-groups. Staff serves as a link to the World of Theory and Research about planned change, organizations, and higher education. Other SFC institutions, through workshops and direct contact, join that collaboration. Rigid boundaries between faculty, students, and administration are permeated by increasing communication and shared problem-solving. By the Project's conclusion, institutions are firmly connected with the World of Theory and Research and have developed ongoing systems for Knowledge Utilization in Planned Change.

The goals of the SFC Project are three: 1) to assist colleges and universities in carrying through specific change studies or attempts; 2) to assist member institutions in developing procedures and structures for ongoing knowledge utilization in systematic planning; and 3) to monitor the change process and self-renewal attempts so as to contribute to the knowledge of planned change in complex organizations.

PHASE I: Preliminary Contacts - Spring and Summer, 1971. Project and Research Plan discussed with Presidents by letter and telephone. Administrative commitments to the Plan in May Workshop. Specific project focus delineated with institutional representatives in July Workshop. Institutional representatives select task forces and participants. Project staff begin to share knowledge concerning higher education and planned change with task forces.
PHASE II: Task Force Training Workshop and Staff Visits - Fall and Winter, 1971-72.
Task forces develop action plans incorporating knowledge of effective planned change and of their academic topics. Staff visits campuses to make initial interviews and observations and to begin to contact broader institutional membership. Preliminary observations and reactions to plans are fed back to task forces. Knowledge Utilization in Planned Change (self-renewal) primarily centered in task force, but awareness and interest begin to spread into the faculty and administration.

PHASE III: Planning Second Year, Broadening Involvement, Developing Knowledge Utilization in Planned Change - Summer and Fall, 1972. Task forces continue action or change project, broaden participation, and begin to develop ongoing procedures and structures for Knowledge Utilization in Planned Change. President and major academic governance bodies join effort. Staff feeds back evidence on self-renewal, member perceptions, and student behavior. Campus workshops and retreats focus on this data and problems of systematic planning and knowledge utilization. Staff collects additional data. Two-way communication between staff and faculty, administration, and students increases.
PHASE IV: Establishing Systematic Planning, Linking to World of Theory and Research and Fuller Involvement - Winter and Summer, 1973. Task force continues specific project (implementation and evaluation); institution incorporates procedures and structures to institutionalize and support continuing self-renewal processes; students become more fully involved: all groups become more collaborative; direct links to World of Theory and Research are strengthened; staff feeds back additional data on change process and self-renewal.

PHASE V: Implementation and Evaluation - Fall and Winter 1973-74. On-campus procedures and structures for Action and Research firmly incorporated into Institutional life-space. College or University solidly linked to World of Theory and Research, Internal campus groups well-linked to one another with barriers between groups less firm. Staff re-evaluates capacity to self-renew and feeds back information to institution. Staff and institutions present evidence of attempt to develop procedures and structures for ongoing Knowledge Utilization in Planned Change.