Research Utilization and Managing Innovation in Rehabilitation Organizations

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The management of innovation in today's rehabilitation organizations centers on creating highly cost-effective programs, while engaging in effective cutback management strategies that preserve the core of needed services. Research findings can help administrators in developing such innovations. However, in order for research to be utilized effectively in service settings, both researchers and administrators must meet several challenges. The current knowledge base includes some potentially effective strategies for promoting utilization, focusing on both psychological and structural aspects of the change process.

"The art of progress is to preserve order amid change and change amid order." -- Alfred North Whitehead

Arthur D. Little Company, one of America's leading management consulting firms, recently concluded in a report on American industry that "long-term survival is tied to the effective management of innovation" (Backer, 1986 p. 7. New products, new services, and improved ways of utilizing the human, physical, and information resources that organizations have at their disposal represent innovations which have become the keys to continuing organizational success.

In his 1985 book Innovation and Entrepreneurship, Peter Drucker asserted that the rapid changes in today's society, technology, and economy are an even greater threat to public service institutions than to private business. Thus, public service organizations need to be as entrepreneurial and innovative as any business. Yet public sector organizations, such as those in the rehabilitation field, typically find it more difficult to innovate than their private sector counterparts.

Drucker's book was written before the specter of Gramm-Rudman, and before the most recent wave of state and local budget cuts were imposed on public sector organizations throughout the United States. Drucker's (1985) concepts seem to have more urgency now than a few years ago. Public sector organizations need desperately to innovate, despite worsening conditions for the exercise of both individual creativity and the structural facilitation of innovative programs.

Indeed, the very nature of innovation in the public sector has changed drastically in recent years. In the first part of this century, human service agencies were innovative largely because they were new, and were addressing social problems that had not been responded to before by any kind of organized effort. Now, these institutions have "matured" in somewhat the same way that American manufacturing has matured -- there isn't much room for brand new service programs. The fertile ground for innovation, therefore, is in enhancing, rethinking and expanding existing service programs. But the leaders of these organizations often have "matured" along with them, making the tasks of innovation both difficult and psychologically threatening.

And today, enhancement frequently means learning to do more with less. That glib phrase may signal either the salvation or the death of human service programs in rehabilitation, mental health, and related fields. At least for the rest of this century, human service professionals will have to struggle with level or declining resources, mostly the latter. At the same time, the demand for services will increase, and the service environment will become more complex due to consumer participation, technological and labor market developments, legal complications, and changing societal attitudes.

This situation might be seen as a recipe for disaster in the human services. But the current era of tight resources might also be seen as a stimulus for some unique opportunities. Indeed, the central area of innovation for public sector institutions in the 1980's will be in creating highly cost-effective programs and in adopting effective cutback management strategies that preserve the core of needed services. The situation is reminiscent of the Chinese language symbol for crisis -- it contains elements of both "danger" and "opportunity."

Two current programs in Los Angeles are examining the opportunity side in terms of how to manage innovation effectively. One is the Regional Rehabilitation Network, a five-year (funded by the National Institute of Disability and Rehabilitation Research) research project at the Human Interaction Research Institute which is examining how the adoption of innovations in rehabilitation organizations can be facilitated by informal, nonbureaucratic networking processes (Backer, 1985; Backer & Trotter, 1986). The other is a training program for public and private sector executives being developed by the author and his colleagues at the California State University's Northridge campus. This program blends training in leadership and creativity development into the learning of practical skills for innovation management. Both a research and a training perspective underlie the thoughts that follow about how to manage innovation in rehabilitation organizations.

If anything has been learned during 30 years of involvement in research utilization, it is that the world does not automatically "beat a path to the researcher's door" just because he or she has a good idea. 'The application of worthwhile and usable findings from research requires a special, systematic effort from both the innovation developer and the potential user. If findings from a research
program are seen as practically relevant to rehabilitation service organizations that seek opportunities to innovate in an era of cutback management, there will be demand for access to these research results as well as for this program of research to continue.

If it ever existed, the era when researchers could do their work, sit back, and be assured that practical application of their results would be undertaken, is over. The challenge of research utilization is to understand the environment in which application takes place and to invent and carry out systematic strategies that increase the chances for successful innovation transfer. The more researchers appreciate the environment of tight resources and cutback management in which service delivery exists today, the more research and its results can be fitted to the needs of the real world. That is, the more researchers understand and actively participate in utilization strategies, the more the results of their work stand a chance of actually helping to improve the quality of life for persons with disabilities and their families.

The essential challenges of utilization extend beyond rehabilitation, special education, or the human services in general. Successful management of innovations is a challenge that all organizations face. The following section, therefore, presents four challenges that impede the use of innovations and six strategies that can be used to successfully meet these challenges.

Utilization: Four Challenges and Six Strategies to Meet Them

Backer (1986) reduced a substantial body of work into four basic challenges of utilization and six strategies for facilitating utilization in field settings. These principles are already familiar to most managers of rehabilitation organizations; they are not new insights, but a reaffirmation of what is already known.

The four challenges are:

1. Utilization Requires Change, and Change is Hard.

Getting an innovation adopted successfully in any organization means that the people in the organization have to work and live differently than they did before. Thus, change is apt to be threatening to people in both psychological and practical ways. Large-scale organizational change requires dealing with the fears and resistances of many people, in addition to certain structural features of the organizations themselves which tend to resist change.

Efforts to introduce innovations that are not sensitive to the complex psychology of change are likely to fail, no matter how good or how urgently needed is the innovation. In fact, some of the most dangerous situations are those in which everyone agrees that the innovation is wonderful, has few side effects, and is badly needed. Under such conditions implementation ought to be easy, but it often isn't. Take less perfect conditions and the failure rate accelerates.

2. Utilization Requires Resources.

Money, material, and personnel are needed for any significant change, especially if the change takes place within a complex organization. The more the innovation requires people and systems to operate differently than they did before, the more resources are required for a successful change effort.

This does not only mean the resources needed to develop the innovation, but also the resources specifically earmarked for the complex process of getting the innovation transferred into new settings. And the resources for utilization cannot be tiny compared to those required for initially developing the innovation. The more it took to create a new program or practice, the more it will likely take to get it used in new places.

American advertisers and political campaigners know this lesson well; millions are spent to get a governor elected or a new soap into our laundry rooms. Yet human service professionals and policy-makers often seem surprised when their efforts to introduce new programs or practices fail because resources for the implementation effort were too limited.

3. Innovation Adopters Must Be Convinced the Innovation Will Work in Their Organization.

Each component of this statement requires separate analysis. "Innovation adopters' include people at all levels of the organization intending to utilize some new program or practice: not just the key decision-maker, but all those who will have to live with the results of change. "Convinced" means persuaded to believe, which is related to but not the same as making an intellectual or scientific judgment. "Scientific excellence" per se is relevant mostly to convincing other scientists. The endless qualifications, complex terminology, and lack of immediate connection with reality (day-to-day operating problems, budgets), which characterize much scientific research and writing, often get in the way of convincing people to adopt innovations. "Work" means to meet specified needs over time without excessive side effects or unreasonable cost. And the innovation must appear likely to work in the potential adopter's own setting, either as is or with certain adaptations.

4. Innovation Adopters Must Be Aware of the Innovative Program or Practice.

This seems self-evident, yet in many cases worthwhile innovations do not get transferred simply because potential users don't know about the new program or practice. Even in today's global village, with telecommunications bringing the world into close proximity, many good ideas simply don't get noticed.

Yet researchers often continue to believe that good ideas will be used automatically, but program operators often do not have the time to promote transfer of a new field-generated innovation (they are often too busy just making sure their own program survives). So other efforts to build awareness of worthwhile innovations must be made; these efforts precede those designed to promote utilization per se but need to be carefully coordinated with innovation transfer activities.

The four challenges -- the difficulties of change, the need for resources, the need to convince users that an innovation will work for them, and the need to make potential users aware that the innovation is available -- are all relatively simple to state, but difficult to confront. Innovations languish
unused throughout rehabilitation and special education because of these challenges, as is the case in many other fields. Perhaps the most consistent reason these challenges go unnoticed is that innovation developers or change agents either ignore the realities of utilization or seriously underestimate the challenges associated with utilization.

The following six strategies represent the best of what is now known about how to promote the utilization of research or innovations. They come from 30 years of research on the utilization process in many fields, and from the best thinking of those who have been in the developer, adapter and change agent roles where innovation transfer is concerned (these strategies also have been discussed with a special focus on psychiatric rehabilitation in Backer, Liberman & Kuehnel, 1986).

1. **Interpersonal contact.** To get an innovation used in new settings, there needs to be direct, personal contact between staff members of the potential adopter organization and those with direct knowledge about the innovation. Typically the latter includes the innovation's developer, or others who have used it successfully. In the literature on knowledge transfer and organizational change, personal contact is the mechanism most frequently associated with successful utilization.

2. **Planning and conceptual foresight.** A carefully thought out plan for how the innovation will be adopted in a new setting is essential to meet the challenges indicated above. “Innovation management” is the branch of management science that has sprung up to deal with the planning and implementation processes. At the Center for Creative Leadership in North Carolina, a professional association of managers of innovation meets regularly to discuss this subject.

The innovation management process includes systematic planning plus the use of **conceptual foresight** — predicting what will be the likely consequences of taking certain actions and formulating in advance how to best respond to these consequences. For example, most significant innovations have at least some undesirable side effects. Knowing in advance what these side effects are likely to be and planning for how to deal with them will greatly increase the long-term chances of success for the innovation. Essentially, conceptual foresight means acknowledging that some things will go wrong when installing any innovation in a new setting, but that many of the pitfalls can be cushioned, or avoided altogether, by creatively thinking ahead.

A second major aspect of planning is the development of **coordinated, programmatic** efforts to promote utilization, especially when innovation adoption is possible across a wide geographic area. Many of the most successful utilization efforts are those which combine a number of operating components under one comprehensive plan, “getting to critical mass” the energies needed to promote adoption and organizational change.

3. **Outside consultation on the change process.** Organizations don’t change all the time. Most staff are therefore not fully versed in the techniques of effective change. When an innovation is to be adopted, an outside consultant with special expertise in innovation utilization can usually help the organization to plan the change strategy, using experience gained from many other consulting situations. Moreover, the consultant can provide **objectivity** about the innovation itself and the changes that it will introduce into the organization. This fresh point of view can be an important check on the more subjective viewpoints of organizational staff and decision-makers.

4. **User-oriented transformation of information.** What is known about an innovation needs to be translated into language that potential users can understand readily; abbreviated so that attention spans aren’t exceeded; and made to concentrate on the key issues “Does it work?” and “How can I replicate it in my organization?” Transformation has to do both with **what** is said — the translation of content into the words that will most economically and effectively reach the desired audience; and with **how** the message is conveyed. The latter may range from the traditional printed media (reports, journal articles, newsletters) to such innovative communication tools as films and videos, satellite teleconferences, or computer networking.

User-oriented transformation also can include developing centralized repositories of information, so that the information on a number of innovations is conveniently available in one place, in a standard format. In rehabilitation, the National Rehabilitation Information Center is the best known example of this strategy.

5. **Individual and organizational championship.** When an innovation is adopted by an organization, its chances for success are much greater if influential staff members (especially those who are well-respected and well-liked by others) express enthusiasm for its adoption. The organization's leaders also need to do the same, using such formal mechanisms of communication as meetings or memos, as well as informal communication. Statements from the top administrators need to make it clear that the organization supports the innovation, and that cooperation with its successful utilization is expected by all staff.

6. **Potential user involvement.** Everybody who will have to live with the results of an organizational change needs to be involved in planning for its adoption. Whatever the innovation, it will have an impact on the lives of many people in the organization, and those people need to be engaged in the planning process for two reasons. First, they will be likely to think of many suggestions for how the innovation can be more successfully implemented. Second, once involved in the planning process, their resistance to the change is likely to decrease because they can develop a sense of “ownership” in the innovation.

**A Case Example**

To reinforce the point made above, an example of successful utilization that comes from the experiences of a private sector company, rather than from a rehabilitation agency, is presented below. However, much of this case example should sound familiar to those who have managed rehabilitation organizations, and its outcomes reflect closely the main principles for utilization that are applicable to research.

At the Rand Corporation in Santa Monica, California, Tora K. Bikson and her colleagues have been studying the
impact of office computer systems on business organizations (Bikson, Stasz, & Mankin, 1985). They started from the assumption that the wonderful new technology of "office automation" will help companies only with careful conceptualization of how such innovations are installed and what purposes they serve. Without well-founded strategies for implementation, which include dealing with the expected impact on individual workers and work groups, even the most advanced technology may be doomed to failure.

In a recently published case example, the Rand group looked at "Company XYZ's" success in installing an office computer system. XYZ is a computer products manufacturer with some 300 employees in the unit studied. Since introduction of the system, the company has cut total costs per unit output and has moved from fourth to second position among its competitors. Moreover, most of its employees agree that the new tools have enriched their work and increased their speed and quality.

Why did innovation succeed here, when so many other companies have failed to implement office computer systems effectively? To assess this, the researchers looked at characteristics of the organization, of the innovation itself, and of the implementation strategy.

First, XYZ's Chief Executive Officer and top management espoused a policy of "growth through information, experimentation and communication." The company hired high-quality employees, encouraged them to exercise initiative, and rewarded them well for high performance.

Second, XYZ selected and installed a system that was specially adapted to the various needs of its users. The system can be modified even by users who lack technical expertise, and is designed to evolve as users' needs change and as new technologies appear.

Third, unlike many firms, XYZ carefully planned its implementation strategy and committed substantial resources to it - almost half of the total information system's expense. From the very beginning, it developed the system with input not only from top management and outside expert consultants but also from users and user departments, with the result that its employees felt the system was "theirs." The firm recognized that organizational innovation necessarily entails experimentation, risk-taking, and occasional failures - but regarded failures as truly negative only if the organization did not learn from its mistakes. XYZ also understood that implementing advanced information tools must be an open ended process. Thus, the firm has been learning to manage change rather than minimize it.

An Example From Rehabilitation

The XYZ Company's experience shows a successful response to the four challenges, employing all six of the identified utilization strategies. Similar activities are usually at work where successful utilization efforts in rehabilitation are concerned.

Consider, for example, the Georgia Management Control Project (MCP) -- at least 10 state vocational rehabilitation agencies so far have adopted this innovation. The developers of MCP have created a carefully conceived planned change strategy that had considerable federal funding behind it (Chase & Patrick, 1982). Research has been done to document that the MCP approach really works, and results have been packaged for easy consumption by VR agencies. A very high level of collaboration has been developed, with state agencies, the Council of State Administrators of Vocational Rehabilitation, other research and training programs, and professional societies all involved in structuring and supporting the innovation. And the innovation developers have constantly been available to provide technical assistance consultation as needed. often over as long as a two-year period. VR agency directors in states where MCP has been implemented often have been the most able "sales persons," inviting their counterparts in for a "look and see," and offering technical support if needed as well as enthusiastic endorsement. Given all these conditions, the successful spread of this innovation is understandable.

The Final Challenge: Making It Work

It appears that rehabilitation personnel do know how to undertake utilization activities effectively. The question then, is: why does a time lag often occur between development of an innovation from research and its implementation, and why do so many good research-based innovations remain unused?

The answer is reminiscent of a question a man in his studio audience once asked Steve Allen: "Mr. Allen, do they get your programs in Chicago?" Steve Allen replied, "They see it, but they don't get it." That's where the so-called science of utilization is at this point. Considerable knowledge has been developed about how to get innovations utilized, but all too often practitioners don't "get it." Some suggestions follow for both researchers and rehabilitation administrators to consider.

First, researchers must understand and respond to the conditions under which service delivery organizations in rehabilitation are living today. Research agendas must be selected, and choices made about how to package the results, on the basis of what innovations may help organizations to cope with the challenges of cutback management, to remain responsive and provide good service during tight times. For example, both of the subject areas of the Regional Rehabilitation Network were selected in part because they are highly visible, high priority areas of innovation with some unique cost-efficiency features. School-to-work transition programs, the project's first topic area, have been at the forefront of federal priorities for service innovation during the last several years. Such programs are cost-effective because they involve collaboration between existing service programs in rehabilitation, special education and related areas. And they have the potential for reducing disabled person's dependence on public service systems as adults, by increasing their ability to enter competitive employment.

Computer applications, software for management information, and client assessment -- the project's second target area -- are labor-saving devices that free professionals from tedious paper work and enhance efficiency of information storage and processing. These are the kinds of innovations most likely to be welcomed by practitioners, and on which our utilization efforts should focus.
Second, opportunities for utilization of research findings have to be appraised forthrightly against the array of critical conditions just discussed, to make decisions about whether to invest in a utilization effort. Without sufficient resources for utilization activities, for example, utilization probably should not be attempted at all. The lessons that have been learned from many disappointing past efforts in rehabilitation make that clear. Without attention to the human requirements for change, innovations are unlikely to take root in an organization. Even in what is called in the innovation management field, the "subtle sabotage of withheld enthusiasm" has quashed many good innovations. These human requirements have not changed much in the 30 years that they have been studied.

Third, efforts to train rehabilitation professionals in the skills of utilization must be enhanced. This means training for researchers in how to plan for use of findings when designing research studies, how to involve potential users early on, etc. And it means training potential users in how to ask for and benefit from technical assistance to help in implementing innovative programs. Responsive consultees are just as important as good consultants. Training programs in innovation management can be developed locally and perhaps also offered at national conferences in the rehabilitation field.

Fourth, natural opportunities to collaborate on utilization activities need to be identified. For example, at their first meeting, the National Facilities Task Force's number one priority for a future meeting agenda was "dissemination to and use by facilities of information developed in Research and Training Centers and Rehabilitation Engineering Centers." This priority opens a door for researchers in these programs' staff to capitalize on existing energy and enthusiasm.

Fifth, researchers have to look beyond the field of rehabilitation for concepts and strategies of innovation management that can be adapted to their own utilization efforts. The private sector has much to offer here. For example, Drucker (1985) offered five principles for organizations that strive to create a fertile ground for innovation: 1. Carefully analyze possible opportunities for innovation. 2. Go out in the real world and observe (this is similar to Peters and Waterman's (1982) "Management By Wandering Around" presented in In Search of Excellence). This priority opens a door for researchers in these programs' staff to capitalize on existing energy and enthusiasm.

Researchers wanting to get their work utilized can apply these five principles in two ways. One is to examine research in terms of how potential adopter organizations can make use of these principles with specific research-based innovations as the focus. The other is to determine how utilization strategies themselves need to fit these parameters. In particular, analyzing opportunities for innovation by going out into the real world of service delivery may help to implement the utilization principles that now have been solidly established.