CREATING NEW REALITIES: PROGRAM DEVELOPMENT AND DISSEMINATION

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Program development and dissemination in human services present challenges and opportunities for social scientists. Over the past 27 years the Teaching-Family Model of group home treatment has moved from prototype development to widespread dissemination across North America. Reviewing concepts in industry related to product development and dissemination, the application of these concepts to a human services delivery system, and program replication and dissemination data offer information about how innovative human services can be widely adapted and adopted.

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The spring of 1968, when the first issue of the *Journal of Applied Behavior Analysis (JABA)* was published, was a time of great promise and a wonderful belief in the value of an empirical approach to the problems of human existence, all reflected in that first issue of *JABA*. In many ways *JABA* and the Teaching-Family Model share a history. In 1968, when Achievement Place was 1 year old, the *JABA* secretary shared space with the Achievement Place Research Project in the Bureau of Child Research and the Department of Human Development and Family Life at the University of Kansas. Mont Wolf was the Editor of *JABA*, a research associate in the bureau, a professor in the department, a consultant to the community board that initiated the group home for delinquents called Achievement Place, director of several applied research projects, a cocreator of the field of applied

behavior analysis, and a cocreator of the Teaching-Family Model.

Within this empirical and behavior-analytic approach, our team of researchers and program developers has had the opportunity over the past 27 years to create, research, revise, and widely disseminate a treatment model to provide services for delinquent, abused, and emotionally disturbed children and youth. The evolution and dissemination of the Teaching-Family Model provide the opportunity to examine the successes and failures in this evolutionary process. By looking at this example as a case study, perhaps we can begin to extract some program development and dissemination principles that may facilitate the development and large-scale replication of other treatment services and approaches. Perhaps we can approach an answer to the question posed by Stolz in a 1981 issue of *JABA*: "Does anybody care" enough to assure the widespread adoption of innovative technologies?

As reflected in the articles published in *JABA* over the past 25 years, in the human services we carefully conduct research to assess the impact of our services for other people and we work hard to create effective programs. Then, we struggle as we attempt to make use of each other's successful procedures or attempt to replicate whole programs. Meanwhile, business abounds with products and services that are routinely developed and reliably provided to satisfied customers through well-defined and often sophisticated delivery systems. And,

when products successfully meet a market need, industry creates or uses existing marketing approaches and distribution infrastructures necessary to deliver the product or service on a grand scale.

In this paper we will review some of the examples from industrial innovation and dissemination, provide some data on replications of the Achievement Place/Teaching-Family Model over 20 years, and try to share some of the philosophical, practical, and technological guidelines we have come to accept. Our hope is to contribute to the beginnings of the development of a technology for program dissemination that is itself replicable and capable of dissemination across treatment/service models.

In our efforts to develop and disseminate the Teaching-Family Model, we have come to share Sandra Scarr's "constructivist" view of reality:

> All the world's a stage . . . each of us has our own reality of which we try to persuade others. Facts do not have independent existence. Rather, facts are created within theoretical systems that guide the selection of observations and the invention of reality. . . . The advantage of this view is that we can make more modest claims about the ultimate truth, which leaves us less embarrassed when other theories replace out favorite view. A second and more important advantage is that we can modify our ineffective attempts to change others' behaviors more easily, because we recognize that we may have constructed the problem inappropriately for the time and space. It makes easier the invention of other questions and other approaches to a perceived problem. . . . A constructivist view frees us to think the unthinkable, because our view of "reality" is constrained only by imagination and a few precious rules of the scientific game. (1985, pp. 499 and 512)

Jacobo Varella, a "social engineer" from South America, states it a bit differently. He says that, "If you wish to make an improved product, you must already be engaged in making an inferior one" (Varella, 1977, p. 914). Varella is telling us that we have to get started and then let the realities of the effort teach us how to do it better. This is a complex process involving false starts, spurts of growth, and lots of opportunities for failure. But, "Thought is born of failure. Only when the human organism fails to achieve an adequate response to its situation is there material for the process of thought, and the greater the failure the more searching they become" (Whyte, 1948, p. 1). So this business of creating new realities for program development and dissemination begins to take shape for us. We need to begin working in the real world on the program we want to make better, we need to value failure as our friend and teacher, and we need to take a more flexible, constructivist view of reality. And, where does all this lead? It leads on and on. The task is never done, because our jobs of creating new realities are conducted in the human arena where nothing stays the same. Ronald McDonald has a 700-page manual on how to set up a kitchen and put the pickles on the bun. It says nothing about what to do when the pickles run away or the buns refuse to be pickled that day. The problem just hasn't come up yet.

Examples from Industry

It's not just Ronald McDonald—there are other people who create new realities that affect our society. We have much to learn from industry on the subject of creating realities. Tom Lalley (1976) of the National Institute of Mental Health (NIMH) reported that American industry spends about $10 to $20 on research utilization for each dollar spent on research. Outside of industry, for every dollar spent on research about 1 cent is spent on utilization. Of course, the $10 to $20 spent by industry is private money spent for private purposes, and their procedures typically are not shared publicly. We know a lot more about the penny's worth spent mostly by scientists using federal funds.

How does industry create new realities? Butler, an executive with Proctor and Gamble in 1976 tells us this:

> The corporation wants and hopes for the occasional brilliant technology breakthrough which creates whole new businesses, but usu-

ally achieves its goals through the continuing professional, well-organized, effective search for a slightly better way. The result is that for many of us the effective pursuit of appropriate corporate goals may mean a lot of unglamorous, even monotonous, testing and retesting, polishing and repolishing, going over the same ground again and again. The simple fact is that many of the vitally important objectives of research and development are not very glamorous. We are, for example, engaged in a constant search for changes in any aspect of our products that will somehow improve their value to the consumer. We are always searching for ways to produce a product that performs a little bit more effectively, a little more conveniently, a little more pleasantly, or at a slightly lower cost. (Butler, 1976, p. 7)

The research goals at Proctor and Gamble are made clear by Butler. They want research to create products that perform more effectively, are more convenient, are more pleasant, cost less, and make life nicer for a lot of people. Proctor and Gamble learned a long time ago that "the purpose of business is to create and keep a customer" (Levitt, 1983, p. 1), so companies that wish to maintain their position as the leader in a very competitive business gear their research to usefulness and customer satisfaction.

Thus, we find that research on new products and product refinements is an initial step toward creating new realities. But, is having a good product sufficient? Levitt (1983, p. 1) tells us that "People buy solutions to problems, not things." In business there is the story about a survey of people who bought quarter-inch drill bits. They found that those people did not want quarter-inch drill bits, they wanted quarter-inch holes! So you need not just good products, but good products that work to help people.

Even then, the going may be tough. Robert Haavind, Editor of *High Technology* magazine, discussed the difficulties of automating a factory:

Automating a plant is a complex process,

involving much more than sticking a box full of circuits here and a robot there. . . . Advanced technology promises a revolution in manufacturing, yet these advances are only slowly moving into U.S. factories. Those in high tech industries can't put all the blame on rigid attitudes and unsophisticated buyers. In order to truly help manufacturers improve operations, the developers of new systems need a solid feel for factories, how they are organized, and what equipment must be linked to their new offerings. Bright-eyed wizards may do miracles with a board full of chips, but that doesn't mean the resulting products will solve real problems in real factories. In fact, the managers they must ultimately convince may be prone to view new technology as more a problem than a solution. (1985, p. 4)

This sentiment is echoed by Leonard-Barton and Kraus, who reviewed the problems of implementing new technologies in manufacturing and concluded that

Many implementation efforts fail because someone underestimated the scope or importance of . . . preparation. Indeed, the organizational hills are full of managers who believe that an innovation's technical superiority and strategic importance will guarantee acceptance (1985, p. 103)

Perhaps a more complete view of the process of creating new realities is offered by Federico Faggin, who created and marketed the microprocessor, the silicon gate, and a new computer phone in 15 years (1985, p. 14). Faggin described a seven-step process:

1. The "aha" phase: "Out of the soup of uncommitted forms come the conceptual blueprints of the new product or process."

2. Reduction to practice: "The tremendous effort . . . of creating something that really works."

3. Contestation phase: "When the pioneers get arrows in their backs, and some of the wounds are fatal."

4. Endorsement phase: "The emergence of a few 'champions' who help the pioneers by lending credibility to the new product . . . customers . . . begin to report satisfaction."

5. Acknowledgment phase: "The product is broadly used. A star is born."

6. Invisibility phase: "The product is incorporated into the fabric of society."

7. Disappearance: "Merged into something bigger or it just plain dies."

Faggin reminds us that "it is difficult to communicate a new idea, something that is outside the listener's experience." He tells the story about a farmer's son who was working for a company in 1920 that had developed a new electric motor. On a visit back to the farm, the young man showed the motor to his father and described its many potential uses. He pointed to the washboard and said, "We'll even create a washing machine to replace that old washboard!" Whereupon the old man looked at him and said, "That's impossible! That motor won't fit inside that washboard!"

It is this difficulty in communicating new ideas that adds to the problems encountered in the contestation phase. Faggin (1985, pp. 14–15) spells out some of the issues for us:

1. The real world is the stage: The product comes out of a somewhat protected creative environment into a world where "competitors, customers, and other outside observers all have a shot at you."

2. A threat to established, comfortable ways: No one likes change, no matter how beneficial the results may be.

3. Reactions are generally hostile: Why do you want to change things? Why can't you leave things alone so I can just do my job and not worry about all this?

4. First response is to protect existing turf: Shrug off and criticize the new product, deny its viability.

5. Requires self-confidence, persistence, pragmatism, honesty, and willingness to change: All these are needed to weather the storm and respond to well-founded criticism.

6. Gain visibility: Go where there is less competition and fewer preconceived ideas.

7. Build credibility: Demonstrate the worth of the product over and over.

8. Develop customer satisfaction: Modify the product as needed to better suit the customers' needs and their unanticipated uses of the product.

9. The process often takes 5 years or more: "Most people begin to realize that an idea's time has come only long after it has arrived. . . . And, while that time is coming, the going is rough."

It is clear from these examples that creating new realities is not easy: We need research to develop good prototype products, we need products that help people solve their problems, we must expect to work hard in the public arena to win acceptance of our products, and we need to continue to do research to refine our products and adapt to change.

The Social Sciences

In the social sciences, we are accustomed to doing research to develop procedures and programs that are effective in helping people. We have become skilled at refining our procedures to make them more effective, more efficient, and less costly. We do these things well and share the results with our colleagues to the benefit of individuals in our care. What we need to attend to more completely is how to gain acceptance and general use of our technologies for helping people.

In the human services, our technologies are based on human interaction—not hardware or consumables—and therefore are much more complex than the examples we have discussed so far. To gain acceptance for a new product, industry uses advertising and salespeople to convince folks to try it and use it. And, if the customer finds the product more effective, more convenient, more pleasant, or less costly, factories are ready and waiting to churn out an ample supply of computer chips or potato chips. As Faggin said, this is a difficult and time-consuming process but, as Peters and Waterman (1982) found, there are many excellent companies organized specifically to encourage innovation and customer satisfaction. Creating new realities is an industrial way of life.

In the social sciences, developmentally we are

back where industry was in the early 1900s with the highly trained specialists in mathematics and engineering who could get a large room full of very expensive equipment to run for an average of 7 min at a time doing simple addition problems. They called the thing a "computer," not so much for what it could do but for what they hoped it could do. We are back in the late 1800s when touch typing was invented. This system made the typewriter useful, created a need for instruction in the method (first by specialists, then in colleges, then in secondary schools), and created a market for business machines that has yet to run its course. It also took 42 years to go from the systematic production of typewriters (the industrial capability) to the routine preparation of touch typists (the human capability) (Green, 1980).

Touch typing and computer programming get us out of the hardware area and into the software area that involves more human interaction: people teaching people how to use machines. But, this is still not where we live as social scientists and applied behavior analysts. We teach people how to teach people to work with people in important ways. This takes us beyond hardware and software into what Leo Collins (personal communication, 1980) calls "wet-ware"—thinking, reasoning, planning, decision making, and so forth, and careful observation *about* thinking, reasoning, planning, decision making, and so forth.

For behavior analysts, this means figuring out procedures to teach a youngster new ways to behave to help solve current problems or to prevent future ones. Then, using some of the methods Trevor Stokes and Don Baer pointed out in 1977, actively working out the procedures to generalize the new behavior to important environments outside the original treatment setting. We must not only teach the child how to behave differently, but we must also teach the child's parents, peers, and teachers how to behave differently with the child to maintain and expand the new repertoire of appropriate behavior. Clearly, creating new realities is not easy, but as innovators and program developers—and "wet-ware" specialists—it is our task to see that it

is done. Bauman, Stein, and Ireys (1991) noted that

"It is rare that a program developer considers the ease or difficulty of program transfer at the design, implementation, or revision stage. It is also rare that intensive efforts are made to disseminate the program to others. But dissemination of programs needs to be attacked aggressively, because of the widespread resistance of institutions and individuals to change. (p. 631)

Program dissemination is critical if we are to translate well-researched programs into common practices that help people. Paine, Bellamy, and Wilcox (1984) summarized current program-dissemination strategies by saying they are "like attempting to recreate a well-known hamburger franchise by selling cookbooks on burger preparation" (p. 10). Stolz (1981) stated that our "technologies mostly lie unnoticed in our ever-proliferating professional journals" (p. 492). Shadish (1984) made a similar point after reviewing the progress toward deinstitutionalization in mental health systems. He found that well-researched and effective models for community-based treatment exist but have had little impact. Shadish concluded that

social science solutions . . . often have been constructed with little concern for compatibility with extant social systems. When an attempt is made to implement those solutions, powerful social networks are activated whose interests have been ignored and who are, therefore, often hostile to implementing the solution. (p. 727)

Years ago, Saleem Shah at NIMH recommended that we read Saul Alinsky (1971) to learn more about how to deal with community entry problems and how to organize for social change. It is a very helpful book for any program disseminator. Yet, even Saul Alinsky, who excelled personally as a social change agent, despaired at the possibilities of teaching others to be effective radicals with a cause. After reviewing his attempts to educate new

organizers, he said, "As I look back over the results of those years, they seem to be a potpourri, with, I would judge, more failures than successes. . . . The overall record has been unpromising" (1971, p. 65).

THE TEACHING-FAMILY PROGRAM

The history of Achievement Place and the Teaching-Family Model is well documented (cf. Blase & Fixsen, 1987; Braukmann & Fixsen, 1975; Fixsen, Phillips, & Wolf, 1973; Phillips, 1968; Phillips, Phillips, Fixsen, & Wolf, 1971). Basically, Achievement Place is a group home that opened in 1967 and provided a setting for over 27 years of research on effective treatment components for delinquent, abused, and emotionally disturbed children. With experience, those treatment components were built into an overall program called the Teaching-Family Model (Phillips, Phillips, Fixsen, & Wolf, 1974). The Teaching-Family Model has been replicated in group homes across the United States and Canada (Bernfeld, Blase, & Fixsen, 1990; Blase, Fixsen, & Phillips, 1984) and extended into treatment foster homes (Jaeger et al., 1992) and home-based treatment (Fixsen, Olivier, & Blase, 1990). Thus, from 1967 to 1993, the program grew from 6 children in Achievement Place to over 1,500 children at a time being served in over 250 Teaching-Family group homes and more than 240 additional children being served on any given day in treatment foster care or home-based treatment settings. It is estimated that nearly 3,000 different children each year receive treatment in these Teaching-Family programs (see Wolf, Ramp, Fixsen, Blase, & Braukmann, in press, for a more detailed and personal account).

By 1975, there were four separate organizations in different parts of the country operated by PhD graduates of the University of Kansas who had participated in the development of Achievement Place and the Teaching-Family Model. At this point, we started meeting a couple of times a year to develop structures to evaluate and certify Teaching-Parents, assure the quality of Teaching-Family

homes at each site, and communicate new developments.

In 1977, the Teaching-Family Association was officially initiated, and by 1979 the first organization-level quality assurance evaluations had been completed. This is the mechanism by which we have chosen to remain accountable for programs that are created through dissemination. Over the years, the structures within the Teaching-Family Association have evolved and now include the treatment foster care and home-based treatment programs as well as group home treatment. To become a member of the Teaching-Family Association, a new organization must be formally affiliated with an already certified site (usually for 3 years or more) and receive systematic help in developing Teaching-Family programs (see below), then undergo a rigorous organization-level and treatment-level evaluation and meet all criteria regarding treatment, staff selection, training, consultation, and evaluation; program evaluation; and facilitative administration. The site certification is repeated annually, although the on-site review component is repeated only every third year. No individual treatment program (e.g., a group home) or person (e.g., Teaching-Parent) can claim to be involved in providing Teaching-Family treatment unless they are employed by or contractually affiliated with a certified site. Thus, the Teaching-Family Association provides a mechanism for assuring the consistency and quality of the implementations of the Teaching-Family Model internationally.

Developing a Dissemination System

Dissemination requires something to disseminate as well as means to share it. Ideas are something to disseminate, and professional journals, professional meetings and conventions, book publishing companies, classrooms, and so on have been established over the years as a means to share those ideas with many thousands of people. There are lots of ideas, there are many people as the audience, any use of the ideas is up to each individual, and the creators of the ideas are not accountable for the uses of those ideas by others. The dissemination of programs designed to help people is at the other

end of the continuum. At this end of the continuum, there are few model treatment programs, the audience of potential users is fairly small, and implementation of the program is done purposefully in each organization. There are even fewer examples in which the program creators and disseminators hold themselves accountable for the outcomes at each replication site. For example, the publication of an idea (with or without data) in a professional journal might mean that 5,000 people read a 10-page discourse. On the other hand, dissemination of a treatment program to one organization might mean that 10 people are trained over 2 years using 5,000 pages of training and program operations materials under terms of a contract that specifies time-lines, costs, and measurable outcomes monitored by the host organization's board of directors, resulting in a rigorous evaluation by an international certifying organization.

From a program developer's point of view, a dissemination program comes out of a process of doing a job, figuring out what is important about the doing of the job, teaching one or two others to do the job and working closely with them to help solve implementation problems, and then establishing a full training, consultation, evaluation, and administration support system to continually prepare new people to do the job. Establishing this integrated system of discovery, training, consultation, evaluation, and administrative support is key to effective program dissemination and maintenance. Although content varies depending on what is being disseminated, the integrated system is the key to both fidelity and adaptation over time.

Training for clinical staff is a critical part of a dissemination program, and it was at this most fundamental level of dissemination that we discovered the importance of systems integration. When we first tried to train new Teaching-Parents for new group homes, the four originators of the program were the trainers (three held doctoral degrees and one held a master's degree). It took a couple of years for the program developers to establish a workable format (e.g., a 6-day preservice workshop with brief lectures and extended behavior rehearsals) and useful content. We then began to teach

others how to present sections of the workshop and be behavior-rehearsal leaders and confederates. We found that one of us had to be there to provide continuity, give realistic examples, and answer challenging questions. We also discovered that the content tended to become more conceptual and less specific and practical when the trainer had not been a Teaching-Parent.

It took about 8 years, but finally we established a system for selecting trainers and then training, consulting, evaluating, and administratively supporting trainers so that new people could fairly quickly become reasonably proficient trainers in new organizations of group homes. The same process has been used to develop systems for preparing and supporting treatment consultants/supervisors, evaluators, and administrators for new organizations.

Why go to so much trouble? Because when we did not do those things, our replication attempts succeeded only once in a while, and children, families, and adults with special needs were not receiving the treatment they needed. Our goals from the beginning have been to develop a program that is humane and respectful in its approach, effective in helping people deal with their problems, satisfactory to the clients and consumers of the program, cost efficient and affordable, and specified well enough to be teachable to others. To accomplish these goals, the first thing was to adopt or discover effective *treatment procedures*. This is what makes a program effective and humane. Without effective and humane treatment procedures, there is no need to proceed with program development or dissemination. Once effective treatment procedures have been identified and tested, the task is to find a way of delivering those treatment procedures to clients. Examples of *service delivery systems* include group homes, foster homes, family homes, and clinic offices. Each service delivery system has its inherent advantages and disadvantages, and the treatment procedures may be more or less adaptable to each delivery system.

For program developers, it is important to know that the treatment procedures and the service delivery systems are separate. Therefore, variables as-

sociated with each are open to discussion, selection, and modification. Once the treatment procedures and the service delivery system have been selected, the task is to organize the overall program so that the treatment procedures can be effectively and routinely provided to clients who flow through the service delivery system. This is a highly interactive and contextual task, with a constant interplay between providing treatment and maintaining the treatment program. For example, maintaining the treatment program in a group home includes cooking, cleaning, transportation, household repairs, yard work, monitoring whereabouts, scheduling, and so on. Any treatment procedure that requires spending extended time alone each day with each youth probably will not fare well under these conditions unless special staffing, training, and monitoring are built into the system. On the other hand, treatment procedures that can fit into any activity, including cooking and transporting, likely will flourish.

After the treatment program has been designed and tested, the task is to *replicate* that treatment unit so that the treatment procedures can be made available to benefit more clients. This usually involves start-up politics, approvals, and capital funding; staff selection, training, supervision, and evaluation; program evaluation; and administration that facilitates client flow, funding, program operations, and treatment. The goal is *not* the creation of more treatment units. The goal is to bring more clients into contact with the effective and humane treatment procedures. Having "more" of a program does not matter. Actually "helping" more people does matter. Creating more treatment units through replication is merely the means to that end. At this point, it is incumbent upon the program developers to create a *dissemination program* that helps to prepare organizational staff to do treatment unit start-up; staff selection, training, supervision, and evaluation; program evaluation; and facilitative administration.

Fidelity

Paine et al. (1984) define fidelity as the "consistent implementation of critical features across users" (p. 24). We would add, "with similar re-

sults." Thus, a program developer must figure out over time what the "critical features" are that are sufficient to replicate the desirable outcomes found in the prototype program. This is a tricky business that involves years of experience and evaluation of planned and unplanned variations and maybe even research (if funds can be found). But, if there are to be planned and unplanned variations, there have to be standards of some kind from which to vary. The original standards for a new program model probably will be based on some data, some intuition, and some optimistic goals for what the developers hope can be accomplished. The early standards almost certainly will be inaccurate and incomplete in their details when viewed from some point in the future. For those who worry that fidelity may inhibit creativity and innovation at a replication site, we agree with Steinbeck that "only through imitation do we develop toward originality" (1961, p. 138).

Nevertheless, program standards are critical to the model development endeavor. Without them, the developers cannot separate out the problems at each attempted replication site. These problems fall into two categories: implementation problems and effectiveness problems. *Implementation* problems are those that relate to the ability of the users to actually put into place the critical features (standards) of the program model. Implementation problems lead to a reexamination of the replication and dissemination technology. *Effectiveness* problems are those related to the poor outcomes of the program model even though it has been implemented fully. Effectiveness problems lead to a reexamination of components of the model itself. Even though this appears to be a simple dichotomy, it is not. Although "effectiveness" and "implementation" are not mutually exclusive, standards help discriminate and define problem areas so that the "real" problem receives attention.

From a research, evaluation, and dissemination viewpoint, it is critical to realize that each independent variable is also a dependent variable and, therefore, the subject of effectiveness and implementation concerns. For example, the proper use of a treatment component with a child depends

upon adequate training and consultation being in place for the clinical staff person, which in turn depends upon skilled trainers and consultants being in place and able to provide such services in a timely manner, which in turn depends upon the availability and skills of the model program disseminators, which in turn depends upon the program developers and researchers. Implementation must be assured at each level in order to assess effectiveness at each level. Thus, staff training may be viewed as an independent variable with respect to the skills of the clinical staff, but it may be a dependent variable when considering program dissemination efforts. These long chains of causes and effects are what makes built-in evaluation a critical part of any program model that is to be disseminated. Program developers and users must be able to separate implementation and effectiveness issues at each level of application.

Some Group-Home Dissemination Data

Next, we would like to share some of the results of our efforts over the past 27 years to create new realities for kids in trouble. Then, we will describe what we have learned as we have progressed from the original Achievement Place group home to the creation of the Teaching-Family Model. The group-home data that are reported below were carefully compiled, reviewed, and corrected for errors over a 3-year period (1980 to 1982) with the help of all site members of the Teaching-Family Association. The data reported for site replications were compiled in 1991 and 1992, based on records maintained by the authors.

The opening of the Achievement Place group home in April 1967 marked the beginning of the Teaching-Family Program. In the next 4 years, intensive applied research tested possible treatment procedures and organized those procedures into a practical set of daily routines suitable for the group-home setting. The opening of three other group homes in 1971 marked the beginning of attempts to replicate the Achievement Place program in group homes across North America. Table 1 shows some results of these early efforts, in contrast with more recent attempts at replicating the group-home pro-

Table 1

Success of Early and More Recent Group Home Replications

Replication era	Percentage loss/retention		
	Ended after 1 couple	Ended after 3 or more couples	Still operating after 6 years
First 25 group home replications (3/71 to 10/73)	56	20	24
More recent 25 group home replications (1/81 to 1/82)	4	12	84

gram. Over half of the first 25 attempts ended when the Teaching-Parent couple we originally trained left the group home, and only 24% lasted 6 years or more. After this experience, adjustments were made in the dissemination strategies again and again. Data from a more recent set of 25 attempted group-home replications showed that only 4% ended after the original couple left, and 84% continued operating after 6 years. Thus, the initial loss rate dropped dramatically from 56% to 4%, and the long-term retention rate increased substantially from 24% to 84%. Also, note that these data cover a 17-year period from March 1971, when the first of the replication homes began, through February 1988, when the 6-year follow-up period ended for the more recent group homes.

The dissemination strategies changed dramatically between 1971 and 1988. The first 25 attempted replications were the product of a "national group-home dissemination strategy" in which couples or group-home representatives contacted the Achievement Place project staff, a couple was trained in Lawrence, Kansas, and was then moved to or returned to the group home where they were employed. After that, telephone consultation provided long-distance advice and helped to solve problems, and an evaluation occurred toward the end of the year (if the couple lasted that long). In retrospect, this approach was not very successful for the reasons previously cited by Shadish (1984),

Haavind (1985), and Faggin (1985). We, too, found that innovations must fit the organizational context, new technology often is viewed as a problem and not a solution, and change is a threat to established ways and can produce hostile or at least unhelpful reactions.

Based on our early experiences, our approaches changed and the data led us to a new reality (Blase et al., 1984; Fixsen, Phillips, & Wolf, 1978). We learned that effective, sustainable replication meant shifting from a national dissemination strategy to a regional approach that focused on the development of regional training sites that would in turn support networks of group homes. To deliver services to homes effectively, there were practical parameters related to the organization of these sites and the group homes. In order to have group home replications that persist over time, the home must be near the training site (within a 3-hr drive) so that the staff can not only train the couple but also supervise and consult with the couple in person to observe and help correct treatment implementation problems, evaluate the couple's performance at least twice during the first year and annually thereafter, and administratively support the couple by helping to establish, maintain, and troubleshoot problems in referral systems, finances, political systems, labor laws, and so on. Key people (both internal and external) had to learn new roles and learn how to relate to one another in new ways. Thus, a new group home needed to become part of a new overall organizational structure that provided local support and continuity to each couple and to the group home and could deal day by day with the suspicion and hostility evoked by change.

Some Organizational Dissemination Data

Based on these early experiences, we shifted our strategy over time to focus on attempting to replicate the program through training sites supporting networks of group homes. Some Teaching-Family sites are large (e.g., there are over 30 Teaching-Family homes in communities in western North Carolina associated with the Bringing It All Back Home Study Center, and over 50 Teaching-Family homes on the campus at Father Flanagan's Boys'

Home) and others are small (e.g., there are two Teaching-Family homes for autistic children at the Princeton Child Development Institute), some are community-based and others are campus-based, and some serve delinquent youths and others serve children or adults under mental health, autism, mental retardation, or social service mandates. In each case, the key site staff are those who provide direct selection, training, consultation, evaluation, and administrative support services to the Teaching-Parents and Assistant Teaching-Parents in the group homes. They may create or operate an independent organization or be embedded in a larger, multipurpose organization. Nevertheless, the key staff (and their colleagues) must have reasonable autonomy to create and provide selection, training, consultation, evaluation, and administrative services to identified programs that aspire to implement the Teaching-Family Model. It is these key site staff and their organizational context that became the focus of our dissemination efforts.

Data are available to compare the first 25 attempted *site* replications with the data regarding the first 25 *group-home* replication attempts. The data are very similar. At the site level, 48% of the sites ended after the originally trained site staff left. This was comparable to the 56% initial loss rate for group homes that ended after the originally trained Teaching-Parents left. Similarly, the long-term retention rate for sites still operating after 6 years was a modest 32%, comparable to the 24% long-term retention rate for the first 25 group-home replications.

An expanded look at organizational dissemination over a 20-year period is presented in Figure 1. This figure shows the first 40 attempted site replications and the percentage of those organizations that met the quality assurance criteria established for site certification by the Teaching-Family Association (the definition of a successful replication). The initiation of the first 10 attempts occurred between 1972 and 1976, the next 10 began in 1976 through 1978, next 10 occurred during 1979 and 1980, and the last 10 occurred during 1980 through 1986. As the graph shows, 11 of the first 30 (37%) organizations were certified at
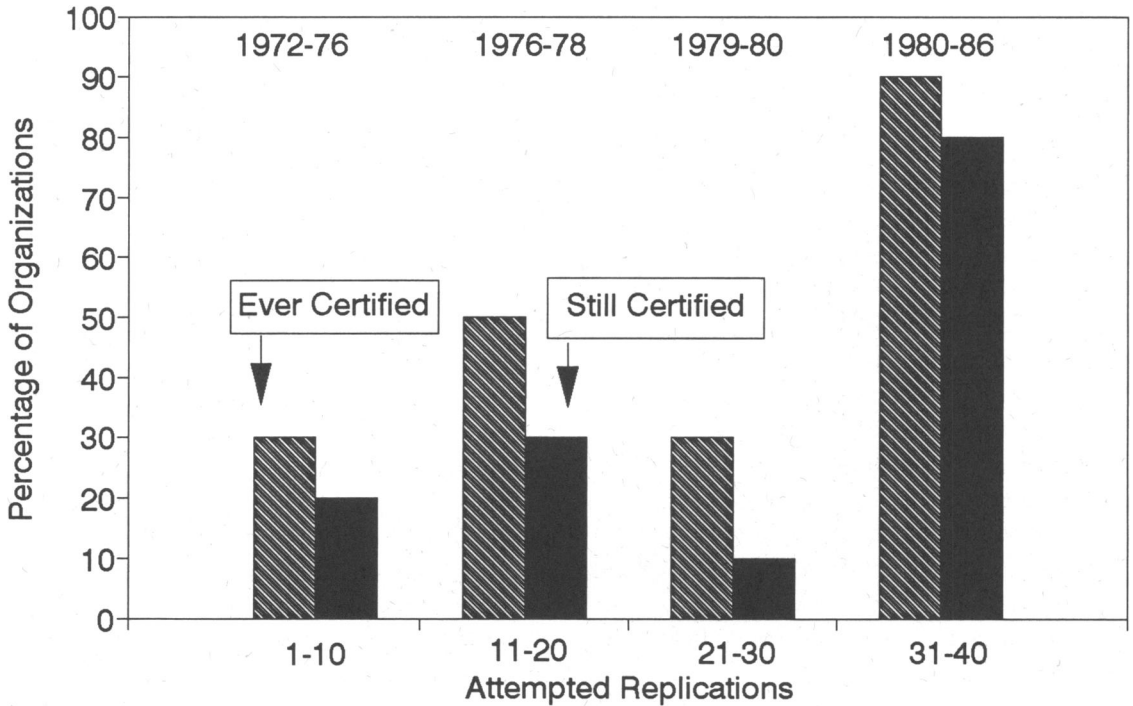
Figure 1. The percentage of attempted site (organizational) replications that were ever certified or are still certified by the Teaching-Family Association over a 20-year period (July 1972 through December 1991).

least once, and 6 of the 30 (20%) have survived as Teaching-Family sites through the end of 1991. Of the last 10 replication attempts, 9 organizations (90%) were certified, and 8 of the 10 (80%) have continued as Teaching-Family sites for 6 years or more. These results are very similar to those presented in Table 1 for the early and more recent group-home replication attempts. In each case, as Whyte (1948) noted, failure led us to search for, and eventually find, better solutions.

The dramatic improvement came about when we finally realized that we should approach site replication in the same way we had approached group-home replication. That is, group homes started to become consistently successful when we began to provide local training, consultation, evaluation, and facilitative administration support. Similarly, sites became successful when we initiated an integrated site development system to *train* the trainers, consultants, evaluators, and administrators; *consult* with the trainers, consultants, evaluators, and administrators; *evaluate* the perfor-

mance of the trainers, consultants, evaluators, and administrators; and provide facilitative *administrative support* to trainers, consultants, evaluators, and administrators at a new site. In essence, we turned the technology in on itself to produce more and better technology. This is much like the early scientists and technicians who developed an oscilloscope out of poor-quality vacuum tubes, then used that oscilloscope to develop better tubes that were then used to build a more sensitive oscilloscope, and so on. This "positive technology spiral" has served the electronics field very well in the past 75 years. It will be interesting to see where it leads us in the human services field over the next 75 years.

PROGRAM DEVELOPMENT AND DISSEMINATION

We would like to discuss the lessons of history that may have some value to others engaged in the enterprise of human services program development,

replication, and dissemination, starting with some views that have emerged from our experiences over the past 27 years.

An Interactive View

Assembly lines have had a huge impact on our society. Goods can be produced more efficiently, cheaper, and with better quality than ever before. Each group of workers can specialize and become highly skilled at their part of the overall task. No one person is responsible for the finished product: It is a group effort, and as long as each person does his or her part to standard, the product will be of good quality. The assembly line works well because the managers can prescribe the inputs (e.g., materials, labor, machine speeds) and the outputs fairly precisely (e.g., 100 widgets a day with 5% waste and spoilage).

Some larger human services organizations in the medical, social services, and mental health fields have adopted the assembly line system, with various specialists each doing his or her job with a high degree of skill, thus contributing to a "product" (person) of good quality. To the extent that a person is a predictable or passive participant, much like a car body of known specifications moving down the assembly line, then this may be a useful approach. What is done to, with, or for the person in these cases does not depend to any large extent on the person as an individual (e.g., injecting a serum, filling a tooth, completing an application form, responding to interview protocols, maintaining order during an 8-hr shift).

Most of the human services do not fit this mold. We are confronted with the utter complexity of people interacting with people, with each interaction based in part on the unique individuality and history of each person. Highly prescriptive inputs and standardized processes do not fare well under these fairly unpredictable circumstances. What is required is a highly flexible, immediately adjustable, and very responsive approach to each situation with each person so that the treatment can more precisely fit *this* person at each point in time and the dissemination program can fit *this* agency and community and its unique circumstances.

A Contextual View

Equally personal and unique is the social environment in which a person lives. This expands the interactive view to include the interactions between and among all the people in a person's life and their histories as well. As Sandra Scarr said in the earlier quote, "each of us has our own reality." Given these mutual, interactive effects, any treatment program in the human services must have an impact on the person-in-context in order to be effective. Similarly, any dissemination program must have an impact on the context surrounding the replication agency in order to be successful. The more serious and chronic the person's problems are, the more pervasive and contextual the treatment must become. The more resistance there is to change at a replication site, the more pervasive and contextual the dissemination efforts must become. For example, replication efforts that encounter regulatory or financial "resistance" in the form of inflexible regulations and inadequate funding are likely to require contextual community and political interventions. The contextual view helps us to see that the more serious problems that lead to referrals to the human services system often are problems in the interactions among people and do not simply reside in the person (like a tumor that can be carried from one treatment specialist to the next). Similarly, once implementation problems are viewed as contextual, program disseminators are more likely to fix the problem and not assign blame when they encounter difficulties. These contextual relationships and the impact on program replication must be an active part of the program disseminator's domain.

An Integrated View

Interactive, contextual treatment requires a consistent therapeutic approach to the person-in-context. This usually means having one or two therapists who take full responsibility for interacting with a person in all relevant contexts, for deciding on the treatment plans, and for implementing the treatment plans directly. The therapist can get to know the person quite well in a very short time and can implement treatment in a way that is

sensitive and responsive to the person on a day-to-day basis. Therapeutic relationships and clinical judgment seem to be critical to any treatment enterprise. The therapist-in-context with adequate training and the authority to plan and to act seems to create a setting in which both relationships and good judgment flourish.

At the next level, the treatment program itself must be well integrated. Treatment planning must fit the treatment technology being used to promote therapeutic changes, and both must be supported by staff selection, training, consultation, evaluation, and other organizational components to facilitate the clinical work of the agency. All these parts must blend into a coordinated, functioning whole. To the extent that these parts are isolated or operate from different points of view, the agency is disintegrated and perhaps even a bit chaotic.

Integration also is important at the dissemination level. A "site coordinator" (see below) takes responsibility for interacting with the people in all the contexts internal and external to a new site and serves as a broker for all services to that site. In this way, the site coordinator can be sensitive and responsive to the technical, political, personal, financial, and other circumstances at a developing site. Personal relationships and good judgment are critical to the integrative functions at this level as well.

A Long-Term View

Twenty-seven years is a long time to focus on the evolution of one treatment program. Yet, it is just enough time to start to understand the processes of human services program development and widespread dissemination. Not all outcomes are short term. As Butler (1976), Faggin (1985) and Scarr (1985) have described, it takes many years to try out an idea, experience the results, modify our construction of reality to try to produce better outcomes, then experience those results and modify our approach again and again. This is contingency-shaped behavior on a grand scale, where our approaches to treatment and program dissemination continually are being modified by recent experiences.

At a treatment level, the feedback loop is often short and reality is more dynamic. The teenager is sullen or having tantrums or very anxious, the therapist engages in a treatment procedure, and the behavior improves, stays the same, or gets worse immediately or within a few hours or days. The therapist can experience the results and adjust the therapeutic procedures accordingly in a short period of time. Within a year or two, the systematic therapist (or researcher) would have sorted through several variations and come up with a set of treatment processes that seem to work well for most teenagers most of the time.

At a dissemination level, the feedback loops are usually very long. Disseminators must engage in a lot of behavior over many months and years before the results can be experienced, strategies adjusted, and the new results experienced. It is at this point that the value of the integrated view becomes as apparent for program dissemination as it is for treatment. Enough program developer/disseminator staff must be present throughout the entire process in order to learn the lessons that these experiences have to offer. At least a few people have to be consistently present and personally involved in order to be contingency shaped and come to "a new and different rational understanding [that] has more Quality" (Pirsig, 1974, p. 255).

TREATMENT PROGRAM DEVELOPMENT

Program dissemination requires a *program* to disseminate. The definition of a program is like the definition of a procedure or any independent variable in an experiment, only more complicated. Baer, Wolf, and Risley (1968) pointed out that

> the techniques making up a particular behavioral application [must be] completely identified and described. . . . Especially where the problem is application, procedural descriptions require considerable detail about all possible contingencies. It is not enough to say what is to be done when the subject makes response R1; it is essential also wherever possible to say what is to be done if the subject

makes the alternative responses, R2, R3, etc.
(p. 95)

Researchers devote their lives to looking for the
necessary *and* sufficient conditions under which hu-
man behavior can be affected. Program developers
devote their lives to looking for the sufficient con-
ditions under which treatment can be implemented
to improve the lives of people. We hope that the
necessary conditions also will become apparent over
time as more and more replications become func-
tional.

Prototype Development

The road to widespread dissemination starts with
the development of a prototype program unit, a
working model of what can be achieved. This pro-
vides the opportunity to try out ideas, evaluate the
effects of various procedures, organize the program
unit (e.g., group home, classroom, foster home,
family-based specialists, mental health clinic), and
gain exposure to the day-to-day events and de-
mands in that setting, from the mundane (such as
staff scheduling) to the exciting (such as treatment
planning for difficult cases). The "aha" phase de-
scribed by Faggin (1985) probably has already
occurred to some extent, and the program devel-
opers are now committed to reducing their ideas
to practice. They are ready to get started and let
the realities of their efforts teach them how to do
it better (Varella, 1977). The program developers
need to specify clearly what they think are the
critical treatment and administrative components
and test their ideas on a small scale before moving
on. For Achievement Place, the first 4 years were
spent in this mode as we conducted dozens of
studies on different treatment procedures and gained
experience in the real world of courts, families,
neighborhoods, boards of directors, referrals, fi-
nances, licensing, state and federal mandates, and
so on and on, all in the context of running a group
home and treating children with difficult problems.

Program Replication

Replication of the program unit is the next step.
It may take persistent and determined effort to

locate or create another program unit nearby where
the managers are willing to participate in a repli-
cation attempt. Yet, this is the critical stage that
separates "demonstration projects" from program
development, because most of the components that
the developers thought were critical will be tested
severely and many will be discarded. Replication
truly is the cornerstone of science (Sidman, 1960),
not only at a scientific procedural level but also at
a science-based program level. It is the time to
consider that "we may have constructed the prob-
lem [or solution] inappropriately for the time and
space," and it provides the opportunity to invent
"other approaches to a perceived problem" (Scarr,
1985, p. 499). This is as it should be. Given the
complexities of human behavior, there is no reason
to think that all the guesses that went into the
development of a good prototype program unit are
correct. Superstitious behavior is not confined to
pigeons pecking keys.

The first couple of replications of the program
unit creates the opportunity to learn about what
actually helps the program function effectively. The
program developers can compare each replication
attempt with the prototype to see what the differ-
ences and similarities are and evaluate the extent
to which any differences seem to matter. There are
also opportunities to analyze extreme cases and
failures at both the client and staff levels, and these
analyses help to expand and define the program
technology. It was during our analyses of major
problems in one of our early replication attempts
that we discovered the teaching interaction and
began to define the steps involved in it (Blase &
Fixsen, 1987). Up to that point, a primary focus
of program replication was the contingency man-
agement system, which was an elegant token econ-
omy. As serious problems emerged at the replica-
tion home, we systematically observed the successful
interaction style of the Teaching-Parents at
Achievement Place and the less successful ap-
proaches of the replication couple. As a result, we
were able to define behavior that was preferred by
children, that kept them engaged with the Teach-
ing-Parents, and that effectively taught skills. To-
day, there are nine variations of the teaching in-

teraction that are in use, and teaching is the cornerstone of the entire treatment, staff training, and program dissemination endeavor. The group home failed, but the lesson was learned.

It is at the point at which a dozen replications have been operating for a couple of years that the focus on procedures begins to be replaced by an emphasis on the program, the overall system for providing effective treatment. In effect, the focus shifts from an interactive view to a more inclusive contextual view. In many ways, this is the most critical phase of program development and dissemination. It is also the most difficult to fund. Federal granting systems are not set up to fund large-scale, multiyear, multisite human services delivery dissemination experiments (perhaps only the military establishment is funded for such advanced thinking). The Teaching-Family Model benefited greatly from over 20 years of continuous funding from the National Institutes of Mental Health, including one grant to help start site replication. Without the financial support from NIMH over the years, the sustained effort required to learn our many lessons would not have been possible. Yet, site dissemination had to stand on its own. Early on, we began making site dissemination a part of the agencies in which we worked and began charging a reasonable cost-recovery fee for program installation at new sites.

PROGRAM DISSEMINATION

Given the technical nature of the integrated treatment planning, treatment implementation, and program support components that define the Teaching-Family Model, the development of a new Teaching-Family site is costly in terms of time, energy, and money. New relationships need to be formed, new people need to be recruited and selected, skills need to be learned and implemented, a new organization needs to be formed, budgets and administrative practices need to be established; all of this needs to be done concurrently with establishing and providing services to new Teaching-Parents working with youths in new Teaching-

Family homes—a formidable task. And yet, this task can be accomplished with the cooperation and assistance of many people working toward the common goal of quality care for youths.

Mutual Assessment and Selection

The site selection process begins with the dissemination of a great deal of general information to interested agencies or organizations. Initial interest is typically generated by key individuals reading about the program, hearing about it at conferences, or visiting a Teaching-Family home. As an agency or organization continues to express interest, more detailed and technical information is provided. At a basic level, this information-sharing process allows interested parties to select themselves into or out of the Site development process on any of a number of dimensions, ranging from financial considerations to philosophical incompatibility.

As an agency maintains an interest, one or more on-site assessments of the agency are conducted by staff at a certified site. These assessment visits usually consist of a formal presentation of Teaching-Family home and site development processes to a group of key individuals, individual interviews with key persons, and visits to existing facilities. During the assessment phase, a number of "educational dialogues" answer questions, discuss the prospects for site and home development, and so on. In addition to verbal discussion and commitments, the agency might be asked to submit proposed site and home budgets, to present written material with respect to licensing and zoning requirements, or for agency personnel to visit operational Teaching-Family homes. The timeliness and completeness of the response to such requests are often good indicators of that agency's or organization's ability to sponsor a site. This mutual assessment phase can require anywhere from a few months to several years to complete.

If the mutual assessment process is completed to the satisfaction of both parties, an affiliation agreement is developed to detail programmatic and financial responsibilities and the commitments to site and home development.

Site Development Activities

After the affiliation agreement is signed, the certified site begins to assist in the development of the new site and in the selection and training of site personnel. Consensus regarding key site personnel must occur between the certified organization and the agency. Typically, currently or formerly certified Teaching-Parents move into the roles of site directors, trainers, consultants, and evaluators at a new site to assure a basic level of technical competency in the Teaching-Family Model. The certified site then provides *information* to new site personnel (such as evaluation resource materials, training manuals, videotapes, etc.). *Skill-oriented training* through specific workshops is also provided to develop the new site staff's training, consulting, evaluating, and management skills. Workshops (such as those listed below) are offered at the certified site as well as at the developing site.

Preservice workshop. This is a 6-day workshop designed to teach married couples the basic skills needed to begin being Teaching-Parents. It is designed to provide detailed treatment information to potential site sponsors and site developers who could be observers in the workshop.

Consultation workshop. This is a 5-day workshop designed to teach people experienced in the Teaching-Family Model the basic skills needed to begin consulting regarding treatment and program operations with Teaching-Parents working in a home.

Program manager workshop. This is a 5-day workshop designed to teach people experienced in the Teaching-Family Model the skills needed to direct, manage, and fund a Teaching-Family site.

Evaluation workshops. These are 5-day workshops designed to teach people the skills needed to assess and report Teaching-Parent performance with their youths and their consumers, and to assess site staff performance with respect to training, consultation, evaluation, and administration.

Group-home development workshop. This is a 4-day workshop designed to teach people the skills needed to establish new group homes in a community.

Site development workshop. This is an annual 5-day workshop designed to teach the solutions to many administrative, technical, funding, and political issues commonly faced during the development of a new site.

Preservice training institute. This workshop is variable in length, depending upon the background and skills of each participant. It is designed to teach people experienced in the Teaching-Family Model the skills needed to conduct preservice workshops for Teaching-Parents.

Follow-up *consultation* occurs to ensure and assist with implementation related to each training experience. Consultation takes the form of regular telephone contacts and on-site visits to observe and provide feedback on services provided to homes by the new site. *Evaluation* of site services is accomplished through reviews of records, data, and observations during on-site visits and through the certified site coevaluating each set of Teaching-Parents who are attempting certification. The certified site is involved in *administration* at the new site by providing recommendations and samples of site and home budgets, examples of policies and procedures, general program information, and procedures to select and interview Teaching-Parents. The goal is to develop a site that can meet the certification standards of the Teaching-Family Association in terms of the kinds of services provided and the quality of its group homes. It appears that it requires 3 to 4 years to develop a site that can meet certification standards. Although this overall process is conceptually similar to franchising, there are significant differences in terms of the need for programmatic adaptations based on client population, service delivery systems, and government regulations.

To facilitate the site development process, each new site is assigned to a site coordinator. The site coordinator is well versed in all aspects of site operations and has had several years of experience operating a Teaching-Family home and/or actually providing site services. The site coordinator maintains regular telephone contact with a new site and is responsible for developing a new site's annual *service delivery plan*. This service delivery plan is

akin to an individualized treatment plan at an organizational level. It details the information, training, consultation, and evaluation services the new site needs from the certified site and also documents services provided by the new site to its homes. The site coordinator then serves as a "broker" for delivering services to the site. This may mean that the site coordinator personally provides the necessary services, or that the coordinator schedules other qualified staff to provide such services. For example, one part of a site service delivery plan includes development of a site's preservice workshop for Teaching-Parents. The site coordinator assists the new site in determining the current skills and experience of site staff with respect to training; provides access to the necessary training manuals, outlines, transparencies, and videotapes; and schedules appropriate new site staff to participate in a training institute to develop and receive formal training and feedback on their presentation, production, and behavior-rehearsal leader skills. Following formal training, the site coordinator schedules an experienced trainer to attend the preservice workshop at the new site in order to assist with training and to provide detailed written and verbal feedback to the new site and the site coordinator. Progress and suggested improvements are detailed along with a review of data both before and after the workshop. Follow-up activities to observe or document improvements are then scheduled.

The site coordinator is also responsible for collecting information concerning variables, critical incidents, and factors affecting site development. This information is collected by having each site coordinator record issues, suggested solutions, and requests for assistance that occur during on-site visits and during regular telephone contacts. For example, site coordinators document feedback given to new site staff as they learn their roles as trainers, consultants, and evaluators. Documentation of administrative, political, and funding issues also occurs as it affects site development. In this way, common site development problems can be identified and reduced over time and across sites, and solutions can be found to benefit future site development.

The site coordinator and the other staff at the certified site work hard to "fit the site" and tailor site development activities for each new site. For example, training content is adjusted to reflect the skills of the key staff at the new site and the particular population with whom they are working. On-site visits are scheduled to coincide with board meetings or other critical events, so that political or administrative agendas can be pursued along with more technical ones. Clinical judgment is key to site coordination activities as well. The site coordinator must make many judgments about the sequencing and timing of activities to avoid overloading key staff or overwhelming stakeholders while maintaining progress toward site development. The treatment components themselves may have to be modified to some extent to fit the population or some special circumstance (e.g., a state law that specifies or prohibits certain practices). Yet, the essence of the Teaching-Family Model must be preserved and implemented in order to meet certification standards and to remain effective at the direct service level and at the site level. This process is infinitely complicated and must be approached in the same sensitive, respectful, and goal-oriented way that we approach each child or adult in any of our programs. Local adaptation is very important to the adoption process for any service delivery model.

NEXT STEPS

The development and dissemination of the Teaching-Family Model over the past 27 years serve to illustrate the promise implied in an empirical, behavior-analytic approach to problems. Given our experiences and those of our dissemination colleagues in business and the social sciences, we now believe that we understand the sufficient conditions under which we can do what we set out to do; that is, to deliver humane, effective, and individualized treatment to clients in a way that is satisfactory to participants, is cost efficient, and is replicable on a broad scale. Of course, the next step is to disseminate the program-dissemination technology itself; that is, to select, train, consult, evaluate, and ad-

ministratively support site coordinators to establish
more dissemination units for Teaching-Family pro-
grams and, perhaps, for other treatment models as
well. At this point, we do not see any fundamental
differences between disseminating the Teaching-
Family Model and disseminating any other well-
articulated treatment program. Given a sufficient
critical mass of skilled staff who are experienced
and knowledgeable in the treatment model, these
staff members can learn the skills to be site coor-
dinators and, with support, apply those skills to
the development of new sites for *that* treatment
model. Makes sense, doesn't it? Probably because
it hasn't been tried . . . yet! Perhaps after a few of
those experiences, we will know a lot more about
the *necessary* conditions for dissemination of hu-
man services program models that could affect so-
ciety on a large scale (Osborne & Gaebler, 1992).

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