

The Teaching-Family Model: The First 50 Years

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Abstract The Teaching-Family Model was perhaps the first “evidence-based program” in human services. This article describes the development of the treatment model, the failure of the first attempts to replicate the treatment model, the discovery of larger units for replication, the modest success of first attempts to replicate larger units, and the eventual success of replications. The Teaching-Family Model is a testament to the sustainability (and continual improvement) of innovation and implementation methods and the value of the Teaching-Family Association for sustaining a community of practice and for managing the practitioner fidelity and organization fidelity data systems nationally. The benefits of applied behavior analysis and the implications for a new science of implementation for having research purposefully used in practice are explored.

Keywords Teaching-Family Model · Evidence-based programs · Enabling contexts · Applied research · Active implementation · Science of human behavior

Achievement Place, a family-style group home for six teenagers referred by the juvenile court, opened in May 1967. This event marked the beginning of several decades of research on effective treatment practices (e.g., relationship development, teaching appropriate alternative behavior, self-government and rational problem solving, motivation systems) to help adolescents be more successful at home, in school, and in the community. This research led to the establishment of the Teaching-Family Model (a bibliography and related information are available at <http://www.teaching-family.org>). The Teaching-Family Model is an early example of an evidence-based program. It

This article is dedicated to the memory of our colleagues Montrose M. Wolf, Elery L. (Lonnie) Phillips, and Saleem A. Shah who made all things possible.

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was cited as a “model program” by the American Psychological Association in its initial review of “evidence-based programs” (Roberts, 1996), as one of three evidence-based residential programs in the Surgeon General’s report (U.S. Department of Health & Human Services, 1999), and as perhaps the best developed and researched residential treatment model among those reviewed by the California Evidence Based Clearinghouse (James, 2011). Subsequent meta-analyses have found the Teaching-Family Model to be one of three residential programs that produce positive and cost-beneficial outcomes (Lipsey & Wilson, 1998; Washington State Institute for Public Policy, 2016). The Teaching-Family Model currently is in use in a variety of group home treatment, home-based treatment, treatment foster care, supported independent living, and school-based service delivery settings. The purpose of this article is to recount the first 50 years of development and describe the features deemed essential to the effectiveness, replicability, and sustainability of the Teaching-Family Model as well as the general application to any treatment program.

Enabling Social, Political, and Professional Contexts

A program of research requires a hospitable environment in which to grow and flourish. The establishment of the Teaching-Family Model benefitted from several concurrent developments in the United States: the development of applied behavior analysis as a discipline, a national mandate to find solutions to pressing social problems, and federal funding to support applied research.

The creation of Applied Behavior Analysis as a discipline within social sciences has its roots in the 1960s. The University of Kansas Bureau of Child Research, led by Richard Schiefelbusch, assembled a team to conduct research to produce socially significant change. By 1965 Frances Horowitz was the Chair of the newly configured Department of Human Development and Family Life (HDFL) and Don Baer, Mont Wolf, Todd Risley, and others joined the faculty of HDFL with joint appointments in the Bureau of Child Research. The Bureau had established research centers in an impoverished urban Kansas City, Kansas neighborhood (Juniper Gardens Children’s Project), and at Parsons (Kansas) State Hospital, a large institution for children with severe developmental disabilities. Dean Fixsen and Elery (“Lonnie”) Phillips became friends when they were employed at Parsons State Hospital while completing their undergraduate degrees at a nearby college. They were mentored by Joe Spradlin and participated in research and program development activities sponsored by the Bureau of Child Research.

The research and development efforts in the Bureau of Child Research and HDFL were stimulated by the Great Society Program, a massive national initiative supported by President Johnson that focused on developing and using effective programs to solve national problems in education, housing, urban living, and so on. The Great Society programs led to support for applied research from the National Institute of Mental Health (NIMH). In the 1940s, NIMH was one of the original four institutes that comprised the National Institutes of Health (NIH). By the mid-1960s NIMH had responsibility for a large portfolio of national programs and in 1967 NIMH was moved from NIH and became an independent Bureau within the Public Health Service with a focus on research and practice. The national mandate (Great Society Program),

University of Kansas (KU) support for applied researchers (Bureau of Child Research and HDFL), and a funder (NIMH) with a focus on creating socially significant outcomes came together to facilitate the development and sustainability of the Teaching-Family Model as an evidence-based program.

A program of research requires a team of practitioners and researchers who pursue socially significant outcomes over many years. In 1966 a small team of applied researchers was at KU under the guidance of Montrose Wolf. Mont Wolf was advising the local Junior Chamber of Commerce (JayCees) and Juvenile Court Judge Rankin on their efforts to open a group home in the community for youths involved in the delinquency system instead of sending them to the State Boys Industrial School; Lonnie Phillips was a graduate student in HDFL with Mont Wolf as his advisor; Elaine Phillips was a teacher in a rural school near Lawrence; Dean Fixsen was a graduate student in the Department of Psychology. In 1967 Lonnie and Elaine Phillips were recruited to be the “houseparents” at Achievement Place; Dean Fixsen was a frequent visitor at Achievement Place and assisted with data collection; and Mont Wolf began working with Saleem Shah, the Chief of the Center for Studies of Crime and Delinquency at NIMH, to secure the first research grant.

Develop the Science

The first task with any program or practice is to get the science right to ensure an effective, useful, and usable intervention. In 1968, Mont Wolf was the first editor of the *Journal of Applied Behavior Analysis (JABA)* and the first issue announced the development of a new field called Applied Behavior Analysis (Baer, Wolf, & Risley, 1968). The first article describing research at Achievement Place was published in the third issue of *JABA* (Phillips, 1968; his master’s thesis). In 1968, thanks to support from Vance Hall at the Juniper Gardens Children’s Project, Jon Bailey was the first research assistant employed by the Achievement Place Research Project. The Achievement Place Research Project was a group of researchers and program developers in the Bureau of Child Research and HDFL at KU. The group was led by Mont Wolf, Lonnie Phillips, and Dean Fixsen (named “the developers” in this article) and included Mont Wolf’s graduate students (Phillips, Phillips, Fixsen, & Wolf, 1973). In 1969, the first NIMH research grant was funded and over the next 25 years over \$20 million (\$60 million in 2017 dollars) was invested by NIMH, the Office of Juvenile Justice and Delinquency Prevention (OJJDP), and others to develop, replicate, and evaluate the Teaching-Family Model. Summaries of the research and development of the Teaching-Family Model are available for review and are not detailed here (Blase, Fixsen, & Phillips, 1984; Fixsen & Blase, 1993; Fixsen, Blase, Timbers, & Wolf, 2001; Fixsen, Schultes, & Blase, 2016; Wolf, 2001; Wolf, Kirigin, Fixsen, Blase, & Braukmann, 1995).

In the early years, applied research at Achievement Place examined the use of the motivation system—points that could be earned for appropriate behavior, lost for inappropriate behavior, and earned back for learning appropriate alternative behavior. Issues that arose in the daily life of Achievement Place youths broadened the agenda to include research on self-government and rational problem solving (Fixsen, Phillips, & Wolf, 1973; Phillips, Phillips, Wolf, & Fixsen, 1973), improving interactions with

parents (Kifer, Lewis, Green, & Phillips, 1974), and affecting behavior at school (Bailey, Wolf, & Phillips, 1970). This research agenda established the essential components of the Teaching-Family Model that included relationship development (Willner et al., 1977), teaching methods (Bedlington, Braukmann, Kirigin Ramp, & Wolf, 1988; Bedlington et al., 1978; Ford, 1974), motivation system components (Phillips, Phillips, Fixsen, & Wolf, 1971), and development of socially acceptable behavior (Maloney et al., 1976; Minkin et al., 1976; Werner et al., 1975; Wolf, 1978). Having the data to support the essential components of the Teaching-Family Model turned out to be critical for program improvement and replication. The developers knew what the essential components of the Teaching-Family Model were, and we had data to support our assertions about what had to be there for anyone to claim to be using the Teaching-Family Model. The current definition of essential functions is referenced as a key element of a “usable innovation” (see Table 1; Fixsen, Blase, Metz, & Van Dyke, 2013).

Getting the science right included being informed by knowledgeable and diverse perspectives of researchers, program developers and policy makers. During the initial program development period, NIMH, OJJDP, and other federal agencies were mission driven, with the mission being to create a Great Society as envisioned in federal legislation. The research and development of the Teaching-Family Model benefited greatly from the flexibility and investment of intellectual capital from these federal agencies. Saleem Shah had a substantial influence on the directions of the research

Table 1 The Four Components of a “Useable Innovation”

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1. Clear description of the program
 - a. Clear Philosophy, Values, and Principles
 - i. The philosophy, values, and principles that underlie the program provide guidance for all treatment decisions, program decisions, and evaluations; and are used to promote consistency, integrity, and sustainable effort across all provider organization units.
 - b. Clear inclusion and exclusion criteria that define the population for which the program is intended
 - i. The criteria define who is most likely to benefit when the program is used as intended.
 2. Clear description of the *essential functions* that define the program
 - a. Clear description of the features that must be present to say that a program exists in a given location (essential functions sometimes are called core intervention components, active ingredients, or practice elements)
 3. *Operational definitions* of the essential functions
 - a. Practice profiles describe the core activities that allow a program to be teachable, learnable, and doable in practice; and promote consistency across practitioners at the level of actual service delivery (Hall & Hord, 2011)
 4. A practical *assessment of fidelity: the performance of practitioners* who are using the program
 - a. The performance assessment relates to the program philosophy, values, and principles; essential functions; and core activities specified in the practice profiles; and is practical and can be done repeatedly in the context of typical human service systems.
 - b. Evidence that the program is effective when used as intended.
 - i. The performance assessment (referred to as “fidelity”) is highly correlated with intended outcomes for children and families.
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agenda. Shah would convene groups of NIMH-funded researchers to promote shared views of problems and solutions and methods to conduct research related to the ideas that emerged from those meetings. Meetings included representatives from developers of evidence-based programs including Fairweather Lodges for adults with severe mental health problems (Fairweather, Sanders, & Tornatzky, 1974), Functional Family Therapy (Alexander & Parsons, 1973), Assertive Community Treatment (Stein & Test, 1978); evaluators and theorists from the Center for Research on Utilization of Scientific Knowledge (Havelock, 1969), and others (Elliott, Ageton, & Canter, 1979; Liberman, 1979). The focus of these meetings and NIMH-funded research groups was on how to develop, research, replicate, and scale evidence-based approaches to solving significant social problems.

In these meetings, discussions with our colleagues who were struggling with the same issues in other arenas had a direct impact on the development of the Teaching-Family Model. For example, we all were struggling with how to define and operationalize treatment components, how to assess treatment processes (fidelity) to determine what contributed to outcomes, how to teach new practitioners how to do what prototype practitioners were doing so well, how to conduct research in complex applied settings, and how to connect in a meaningful way with potential users of the evidence-based programs that were being developed. The shared learning from these sessions taught us early on that the challenges and solutions in program development and replication were universal and not unique to any one field or type of program.

From Procedures to Programs

Given the applied research and service focus of NIMH, Saleem Shah and colleagues at NIMH were actively engaged in helping solve difficult problems. During one of his visits at Achievement Place, Shah called our focus on discrete procedures “developing a bag of tricks” and challenged us to think of a program that consisted of evidence-based procedures and interactions that occurred 24 hours a day, seven days a week in a residential setting. He pointed out that the evidence-based procedures were being used all day every day with each youth. For example, relationship development was affected with each interaction. Teaching appropriate alternative behavior was done proactively, reactively, and incidentally as opportunities arose with youths interacting with one another, the teaching-parents, or people outside the group home. In addition, Shah encouraged us to document the setting conditions and general infrastructure required including referral methods, funding streams, board of director’s involvement, and relationships with juvenile court, child welfare, and family support systems. What does it take for Achievement Place to have a positive impact on the lives of youths and what does it take to operate a group home year to year? We took his advice and these programmatic elements were included in the second edition of the *Teaching-Family Handbook* (Phillips, Phillips, Fixsen, & Wolf, 1974).

Thinking of the Teaching-Family Model as a program was a significant shift. With the shift to program thinking, the task was not just to replicate findings regarding specific procedures but also to replicate the program as a whole. To this end, Mont Wolf engaged his colleagues in another community to form a nonprofit organization and board of directors to operate a group home. Mont Wolf worked for over a year with the Optimist Club to raise funds to purchase a home, secure zoning and licensing permits,

renovate the home, and so on. While this was going on, an excellent couple was recruited to be the teaching-parents (the new name for the couples who lived in and operated a teaching-family group home) and they enrolled in the HDFL master's degree program at KU. They also spent considerable time at Achievement Place interacting with the youths and learning all they could from Lonnie and Elaine Phillips. Finally, in 1971 the new group home was ready, the newly graduated teaching-parents moved in, referrals arrived from the juvenile court, and our troubles began.

It was clear from the beginning that the new teaching-parents had learned the applied behavioral concepts in the graduate courses we taught, but we had not taught them the skills teaching-parents need to interact effectively with the youths. Before the end of the first year of operation, our friends on the board of the new home called us to a meeting and fired us! At about the same time we learned that other communities that wanted to start teaching-family group homes were not willing to wait a year or two for teaching-parents to complete graduate courses.

The developers began to resolve these program replication issues by creating a skill-based training program for teaching-parents. The new standard for training involved describing the essential components of the Teaching-Family Model then having the trainees practice essential skills related to those components to criterion during a week-long preservice training workshop. Pre- and posttests of knowledge and skills became standard and were a major source of feedback for improving training content and methods (Blase, Timbers, & Maloney, 1975; Kirigin et al., 1975). We also learned the value of having a fidelity assessment. The Teaching-Family Model had failed in the first replication home simply because it never was in use—it was a program replication failure, not a treatment program failure. However, at the time, we did not have a way to assess the use of the Teaching-Family Model in practice. By the end of 1972, an initial version of a teaching-parent certification (fidelity) assessment had been developed as an indicator of the presence and quality of the Teaching-Family Model in any group home and community (Braukmann et al., 1975). We learned that fidelity defined a successful replication. Without fidelity, there is no consistent way to judge whether a program “is there” or not and therefore no way to interpret outcomes. Fidelity assessment becomes more important as the number of replications increase (Tommeraaas & Ogden, 2016) and as outcome evaluations are done (Dobson & Cook, 1980).

Program Replication

With the skill-based training workshop and Teaching-Parent Certification assessment in hand, and the demand for community-based group homes at a high level (the “deinstitutionalization movement” was well under way), successful replication of Teaching-Family group homes was feasible. It is interesting that the original couple who staffed the first (failed) replication attempt was hired by one of the new replication homes, went through the skill-based training, and met Teaching-Parent Certification criteria each year during their tenure in the home. Clearly, we had failed *them* the first time around!

By the end of 1975, the developers had attempted to replicate the Teaching-Family Model in 64 group homes (Fixsen & Blase, 1993). We tracked each home for five years after the home began operating as a Teaching-Family home (i.e., the couple completed

a preservice workshop offered by the staff of the Achievement Place Research Group at KU). As we monitored their progress we found that after five years 31 of those homes were still operating as Teaching-Family homes and 33 were closed (i.e., stopped operating as a group home or continued operating without sending new staff for Teaching-Family training). The retention rate was less than 50% and sustainability became a real concern. Upon analyzing these data, we found that 25 of the 64 homes were in Kansas and 39 were in 11 other states. The retention rate was about two times greater for the group homes that were in Kansas: 58% of the Kansas homes were still open after five years compared to only 23% of the out-of-state group homes. It seemed that our proximity to the homes was a key variable. For nearby homes, we knew much more about the operation and quality of the homes, our advice was based on direct observation, and our communications and supports were more functional and timely. The lesson was that the posttraining support of the research team at KU seemed to be important to the sustainability of the program.

The Concept of a Teaching-Family Site

In 1973, graduates of the KU doctoral program moved to Morganton, NC, to start eight community-based group homes in western North Carolina. Gary Timbers became the director of the Bringing It All Back Home (BIABH) Teaching-Family organization; Karen Blase was director of training; and Dennis Maloney was director of evaluation. The BIABH organization was different from the research group at KU. BIABH had direct responsibilities for ensuring administrative supports as well as treatment supports for each Teaching-Family group home. BIABH also had to work with communities to establish the homes and work with the state delinquency and mental health systems to ensure licensing and adequate funding support for all the group homes. This organization became the first Teaching-Family Site and was the learning laboratory for the next set of program development lessons.

By 1975, it was clear that the North Carolina group had established an excellent organization of Teaching-Family Model homes complete with staff selection procedures, preservice and in-service training, ongoing staff coaching and consultation, staff certification evaluations, program evaluation, and facilitative administration. All the homes were within about two hours' drive from Morganton, all eight of the original homes were still open and thriving (100% retention), and more Teaching-Family homes were being developed to serve youths and families in communities in the area.

The North Carolina experience led to reworking the entire approach to the replication of the Teaching-Family Model. Instead of replicating the Teaching-Family Model one group home at a time, the decision was made to replicate by developing teaching-family sites modeled on the North Carolina organization. A focus on site development addressed the issues of proximity, continued contact with and frequent coaching for teaching-parents as they used the treatment program, and continued attention to local political and funding changes over time.

Site Replication: First Attempts

Once the focus shifted to site development, it took a couple of years of trial and learning to figure out what was required to gain entry to whole organizations, conduct a

mutual assessment so each party had enough information to make an informed choice, conduct training for the key site staff (e.g., trainers, coaches, supervisors, evaluators), provide ongoing assistance and support to whole organizations, and evaluate progress toward organizational development.

The KU research team had worked with organizations in the 1970s to help agencies develop two or more group homes in a community-based or a campus-based setting. However, the focus of these early replication efforts was on the group homes and not on organizational change and use of the Teaching-Family Model on an organization-wide basis. The early attempts were not very successful in working with organizations. The first organizational site success occurred when members of the research and development team moved to an agency and directly ran the program at BIABH in North Carolina. In 1975, five KU researchers and program developers moved to Boys Town, Nebraska, to replicate the Teaching-Family Model at Father Flanagan's Boys' Home. The Houston (Texas) Achievement Place site was started by Hector Ayala and developed by Paul Guilford, both from the Achievement Place Research group at KU. Other early successes at site development occurred when our colleagues who had their doctorate in applied behavior analysis from KU became directors of organizations of group homes. For example, Hewitt ("Rusty") Clark and Alan Garner established a Teaching-Family site at a mental health center in Nevada; and Lynn McClannahan and Pat Krantz established a program that included Teaching-Family group homes for children with autism at the Princeton Child Development Institute in New Jersey.

The Teaching-Family site replication at Father Flanagan's Boys' Home was instructive. It was a large and complex residential campus, not community-based group homes like those we had developed previously, and it was in trouble. In 1972, a small weekly newspaper in Omaha reported on Boys Town's immense wealth (over \$200 million in the bank in 1971) and poor care of youths. As a side note, the now-famous Warren Buffet was the publisher of the newspaper and likely did the financial analyses in the reports; the newspaper won a Pulitzer Prize in 1973 for its investigative journalism. In response, Boys Town had suspended fund raising, changed directors, and hired two successive groups of experts to change the care of youths on campus. Each change effort had failed and at the end of 1974, Fr. Robert Hupp, the new director, contacted Mont Wolf, Lonnie Phillips, and Dean Fixsen and asked them to consider replicating the Teaching-Family Model at Boys Town. As we discussed the possibilities, our colleagues Jerry Miller and Ed Budelman who were in the midst of deinstitutionalization in Massachusetts warned us about the dangers of organizational change and told us not to risk the reputation of the Teaching-Family Model in what likely would be a lost cause.

We were familiar with large institutions and how intractable they seem to be, resisting change of any consequence (Reppucci & Saunders, 1974). But what if we could change a large institution? Would the new standard become just as intractable and sustain humane and effective care for decades to come? Would the Teaching-Family Model work just as well in a campus setting as in a community setting? With these thoughts in mind, and armed with the Teaching-Family site learning from BIABH, Lonnie Phillips became the director of youth care in May 1975 and was joined by Dean Fixsen (from KU), Karen Blase and Dennis Maloney (from the BIABH prototype Teaching-Family site), and Richard Baron (from an attempted Teaching-Family replication in an institution in Salina, KS). Change at Boys Town required remodeling 41

dormitory-style cottages to become family homes; eliminating cafeterias, dental offices, furniture making facilities, and so on in favor of eating at home and going into the community for typical services; and changing the staffing from shift staff to teaching-parents. By 1979, every aspect of Boys Town's operations had been changed. The five of us who moved to Boys Town did not know how to change an institution, but we did know how to develop and operate a Teaching-Family Model home. The basis for change was the Teaching-Family Model (Fixsen et al., 1978). Teaching-parents needed individual transportation, so each home had a van. Teaching-parents needed to shop in town, so each couple had a checking account. Teaching-parents needed access to maintenance, so staffing was changed to do timely repairs. Teaching-parent recruitment and hiring required ads that would attract couples to apply and interviews that tested skills and ability to accept and act on feedback, so the human resources department was revamped. Youths needed a good education to address and compensate for learning deficits, so the instruction and behavior programs were changed in the schools on campus (Black, Downs, Phillips, & Fixsen, 1982). Each of these decisions was contested (sometimes with lawsuits) by Boys Town Board members and affected staff. Without the Teaching-Family Model as the standard, and without the ardent support of Fr. Hupp, we might have lost these arguments. In addition to the administrative changes, teaching-parent selection, training, coaching, and certification (fidelity) assessments, and organization administrative supports and data systems were in place by 1979 and part of the daily routines in the organization. As it turns out, the hypothesis about the intractability of institutions was correct: Boys Town continues as a certified teaching-family site decades after the institutional change process was complete (Hurley, Lambert, Gross, Thompson, & Farmer, 2017; Thompson et al., 1996).

Site Replication: Continuing Attempts

The good news from these experiences was that site replication could be done and we could establish successful teaching-family sites. The bad news was that it required a scarce resource: people with PhDs and master's degrees from KU who were highly skilled and had superb experience in developing and evaluating behavioral programs.

If the Teaching-Family Model was to have a broader impact, our task was to develop a practical site development system so that a broader range of staff could learn how to perform the key functions of staff selection, training, coaching, evaluation, and administration at a local site. Over time, essential functions were identified to replicate entire teaching-family sites. The following factors came to define the site development process used to replicate the Teaching-Family Model at an organization level.

Site selection A mutual selection process (similar to informed consent) was used that provided increasing levels of information to a potential site while asking for increasing levels of behavior from the potential site. For example, a first meeting might outline the basics of the Teaching-Family Model and the benefits of using the Model with fidelity. Later meetings might ask the staff to produce budgets, minutes of board meetings, and other details regarding the organization and its operations. In these meetings, difficult issues were identified and solutions agreed on prior to agreeing to engage in site development. The mutual selection process helped the board and executive director

understand and commit to the change process and prepare for the turmoil of organization change.

Site staff selection The best candidates for the positions of site director, director of training, and director of evaluation are those who have been certified Teaching-Family Model practitioners and therefore know the treatment technology and understand the life style. It is difficult for others to learn the Teaching-Family technology and change an organization at the same time.

Site staff training Preservice and in-service workshops were provided to introduce site staff to teaching-family training, consultation, evaluation, administration, and leadership concepts and skills.

Site staff coaching and consultation The site development team members made frequent (often, monthly) visits to observe, provide on-site coaching, conduct information-data reviews, etc. with new site staff. During visits the site development staff also met with the board or other responsible body to teach, inform, and troubleshoot problems that arose. On-site visits were augmented by regular communications between visits.

Site staff evaluation The site development staff conducted regular formal reviews of site staff behavior and competencies as they engaged in staff selection, training, consultation, evaluation, and supportive administration within their organization. Verbal and written feedback informed the consultation agendas with new site staff.

Program evaluation The site development staff conducted a “systems checkout” with direct observation, review of fidelity data, review of documents, and consumer evaluations once a year.

Site staff administration The site development staff worked with the new site staff to facilitate the development of supportive administrative systems at a new site by working directly with boards, funders, and other key external consumers. The site development staff demonstrated how to identify problems, explore motivation to change administrative practices, and problem-solve so that the treatment program could be fully implemented.

At the end of the site development process, the developing site applied for certification by the Teaching-Family Association. The Teaching-Family Association site certification process is a gatekeeper and quality control mechanism for the Teaching-Family Model. Thus, the criterion for “successful” site development is certification by the Teaching-Family Association.

Teaching-Family Association

The Teaching-Family Association is an association of site directors, teaching-parents, trainers, consultants, evaluators, administrators, directors, board members, and supporters that functions as a “community of practice” (Rosenheck, 2001) for the

Teaching-Family Model. The Association began in 1975 when Dean Fixsen, Lonnie Phillips, and Mont Wolf convened a meeting of staff from the existing Teaching-Family sites to discuss how to assure the quality of the Teaching-Family Model as it was being developed in agencies around the nation. The group agreed to form the Teaching-Family Association and develop guidelines and quality assurance procedures (e.g., ethical standards; Braukmann, 1979). Each agency agreed to pay annual dues to the Association and contribute staff time to develop the standards and metrics. In addition to annual dues from the agency, annual dues were paid by teaching-parent couples who became members, registration fees were paid to attend the annual Teaching-Family Conference, and expenses were reimbursed for two evaluators who visited a site as part of the site certification process.

The review and certification of sites is a critical function of the Teaching-Family Association. As established by the Association in 1978, site certification parallels teaching-parent certification processes and consists of:

1. A review of the documents pertaining to the site's actual use of the staff selection, training, consultation, certification (fidelity) evaluation, and supportive administration services to teaching-parents and group homes;
2. A site consumer evaluation that asks the agency's funding sources, referral sources, board members, teaching-parents, trainers, consultants, and evaluators to rate and comment on the services and procedures offered by the site;
3. An on-site review by two skilled evaluators who use established protocols to review and observe treatment services and documentation (e.g., group home treatment, records review, interview referral/funding agents), site services (staff selection, training, consultation, certification evaluation, and supportive administration), and conduct individual interviews with staff and consumers.

A developing site must meet all the criteria stated above in order to become a full, independent member of the Teaching-Family Association. After initial certification document reviews are conducted annually, and every three years site certification is renewed by undergoing the entire site certification process. No service setting (e.g., group home, foster home, homebased unit, classroom) can claim to be providing teaching-family treatment unless they are a certified site or are affiliated with a certified site. The Association provides a mechanism for assuring the fidelity, quality, and consistency of the actual use of the Teaching-Family Model internationally.

Site Replication: Data

Between 1972 and 1995, the teaching-family research group at KU and members of Karen Blase's site development unit at Boys Town (funded by NIMH) worked with 59 agencies and organizations in an attempt to replicate teaching-family group homes (see Table 2). As discussed above, it took a while to conclude that the road to successful Teaching-Family Model replication was through site replication, not direct group home replication. It took a few more years to puzzle through the steps involved in site development and to figure out the key functions of a Site needed to replicate successful teaching-family group homes.

Table 2 Number of Attempted Teaching-Family Site Replications in Agencies and Organizations by Year (*N* = 59 total)

| Year | Number | Year | Number | Year | Number |
|------|--------|------|--------|------|--------|
| 1972 | 1 | 1980 | 4 | 1988 | 0 |
| 1973 | 4 | 1981 | 3 | 1989 | 0 |
| 1974 | 1 | 1982 | 1 | 1990 | 0 |
| 1975 | 2 | 1983 | 1 | 1991 | 2 |
| 1976 | 2 | 1984 | 1 | 1992 | 3 |
| 1977 | 3 | 1985 | 1 | 1993 | 5 |
| 1978 | 6 | 1986 | 2 | 1994 | 6 |
| 1979 | 5 | 1987 | 3 | 1995 | 3 |

Note: Starting in 1979, the site development work became more systematic. Notice how many years it took to engage 59 sites (whole organizations) in the site replication process

Purposeful Site Development

The 19 agencies for the years 1972–1978 represent the “pre-site development group” where the focus was on development of teaching-parent competencies within individual group homes. The remaining 40 agencies represent the “post-site development group” with a focus on developing the organizational infrastructure (like BIABH) to develop and sustain a regional network of teaching-family group homes. Of course, the point separating the two groups is not totally clear given that the site development technology did not spring to life full blown, it evolved. 1979 was chosen as the starting point for the “post” group because late 1978 marks the point when the essential functions of a teaching-family site were articulated and began to be purposefully developed in partner organizations. In 1979, NIMH funded Karen Blase’s site development proposal for the development of training and support for site staff. Thus, 1979 was early in the evolution process and it still took a couple of years to develop the major processes; any differences between the two groups is a conservative estimate.

The results of the new site development efforts are shown in Table 3. A total of 7 of 19 Sites achieved certification in the pre-site development group: 6 (66%) were certified out of the 9 that were initiated and operated by staff that had moved there

Table 3 Results of Attempted Site Replications Before and After Site Development Methods Became More Systematic in 1979

| | | Total <i>N</i> | Achieved Site Certification | |
|-----------------------|----------------------|----------------|-----------------------------|---------|
| | | | Number | Percent |
| Pre-Site Development | Kansas Staff or PhDs | 9 | 6 | 66% |
| | Others | 10 | 1 | 10% |
| Post-Site Development | Kansas Staff or PhDs | 3 | 2 | 66% |
| | Others | 37 | 23 | 62% |

from our teaching-family research group or was a PhD graduate from KU and only 1 (10%) was certified out of the 10 initiated and operated by others.

Thus, the pre-site development group results indicated that well-trained and highly skilled PhDs with superb experience in developing and evaluating behavioral programs could establish successful teaching-family sites. The other staff did not fare so well.

In the post-site development group, two (66%) of the three sites operated by a group that had moved to a new location from our teaching-family research group or was directed by a PhD graduate from KU were certified, the same ratio as we found in the pre-site development group. The encouraging result was that 23 (62%) of the 37 sites initiated and operated by others also achieved certification (this includes 1 certified site out of 5 attempts in 1979; removing those, the ratio is 22 out of 32 attempts or 68% certification). The percentage of sites achieving certification by the Teaching-Family Association substantially improved. With the help of a systematic site development effort, other qualified staff could replicate the Teaching-Family Model treatment and organizational support components and earn site certification by the Teaching-Family Association.

Efficiency and Effectiveness

Another set of organizational data is presented in Table 4. This table shows the average number of years that a developing site was affiliated with a site development group before it achieved certification as a site, or a decision was reached to end the site development process. In either case, a decision is made that ends the site development efforts. Across all 59 attempted replications, it took an average time of 4.3 years to be certified or 3.5 years to terminate the site development process (without certification). This represents a considerable investment of resources in either case. The subgroup analysis shows that the pre-site development group required 6.4 years to achieve certification whereas the post-site development group that had the benefit of site development assistance required an average of only 3.7 years, a reduction of over 40%. The time required to reach a decision to terminate the site development process went from 3.9 to 3.1 years, a reduction of about 20%. Planned and purposeful site development assistance appeared to have a noticeable impact on efficiency and effectiveness of developing new teaching-family sites.

Table 4 Years to Reach a Site Development Conclusion

| | Total <i>N</i> | Achieved Site Certification | |
|-----------------------------|----------------|---------------------------------|---------------------------------|
| | | Yes | No |
| All Attempted Replications | 59 | 4.3 Yrs. <i>N</i> = 32 | 3.5 Yrs. <i>N</i> = 27 |
| Pre-Site Development Group | 19 | 6.4 Yrs. <i>N</i> = 7 (37%) | 3.9 Yrs. <i>N</i> = 12 (63%) |
| Post-Site Development Group | 40 | 3.7 Yrs. <i>N</i> = 25 (63%) | 3.1 Yrs. <i>N</i> = 15 (37%) |

Note: A “conclusion” was either certification of the site by the Teaching-Family Association, or a decision to end attempts to develop a teaching-family program in that organization

Impact on Sustainability

The shift from replicating teaching-family homes to replicating teaching-family sites had a substantial impact on sustainability of teaching-family group homes. A sample of 25 group homes that were opened in 1981–1982 (all associated with teaching-family sites) was tracked for six years. The retention rate for the 25 group home replications (all outside the state of Kansas) was 84% (Fixsen & Blase, 1993, p. 605). This is a substantial improvement from the 23% retention rate for non-Kansas homes noted in an earlier section of this article.

Thus, teaching-family homes associated with teaching-family sites sustained at a much higher rate than teaching-family homes not associated with a site. As indicated in these examples, the timeline is long for gathering data related to efficiency and sustainability (for a recent example, see McIntosh, Mercer, Nese, & Ghemraoui, 2016). It was fortunate that the developers maintained good records for the couples, homes, and sites receiving training and assistance over the years. But it takes time to see the outcomes with respect to survival and quality of services. For example, it takes about three to four years to develop a teaching-family site and have it meet the certification standards of the Teaching-Family Association (Blase et al., 1984). Then it is necessary to follow up with each certified site to document longer term survival and their ability to continue to meet certification standards on each ensuing triennial evaluation. This takes a minimum of 6 more years (two cycles of site certification reviews), so about 10 years elapse before there is a clear view of these organizational outcomes. Developing and replicating effective programs requires considerable attention from groups of applied researchers and staff of service organizations over long periods of time (Wolf et al., 1995).

By 1992, 25 years after Achievement Place opened and research to develop the Teaching-Family Model began, a data-based quality assurance system was in place. As outlined in Table 5, the goal is to have certified practitioners delivering high fidelity teaching-family services to recipients in service delivery systems. Teaching-family sites provide implementation supports in hospitable organization environments that facilitate high fidelity use of the Teaching-Family Model treatment services and high-fidelity implementation supports. That is, for example, training provided by skilled trainers who teach teaching-family knowledge, skills, and abilities and conduct pre- and posttests of training to assure learning by practitioners. Coaching is done by coaches who have been selected, trained, coached, and assessed regarding their use of skills-based coaching in practice. The Teaching-Family Association conducts teaching-family site certification evaluations and continually updates the system to help ensure that teaching-family sites support the development and certification of practitioners year after year, one group of practitioners after another, in evolving human service systems. The Association also convenes meetings to help assure continual examination of the Teaching-Family Model itself so that improvements are recognized and incorporated in each site and in the certification standards.

All of the activities listed below the practitioner line in Table 5 were required to establish and sustain high fidelity use of the Teaching-Family Model as the program was scaled. The linked activities and functions outlined in Table 5 are possible because the Model provides a common language, common measures, and common frameworks across practitioners and organizations. With so much in common, members of the Teaching-Family Association can readily communicate issues that arise, share solutions

Table 5 Teaching-Family Quality Assurance Activities and Functions

| Person or Organization | Activity | Function |
|-----------------------------|--|---|
| Practitioner | Provide teaching-family treatment services to recipients | Improve self-care, social, academic, family, and community outcomes |
| Teaching-Family Site | Provide timely implementation supports (staff selection, training, coaching, and fidelity) to multiple practitioners | Ensure high fidelity teaching-family treatment services provided by certified teaching-family practitioners |
| | Provide leadership to assure a hospitable organizational environment | Ensure high fidelity implementation supports; assure state system supports for the teaching-family organization |
| | Collect data on organization processes, fidelity, and outcomes for recipients | Use data to inform decision making and in continuous improvement cycles |
| Teaching-Family Association | Provide support for the development of new teaching-family sites | Expand the use of the Teaching-Family Model via certified teaching-family sites |
| | Conduct Site Certification Evaluations | Ensure high fidelity teaching-family treatment and implementation support services |
| | Convene meetings and an annual conference | Continually share knowledge and update requirements for site certification |
| | Advocate for children, youth, families, and individuals in state and national meetings | Inform policy and funding decisions to support evidence-based practices and organizations |

that are found, and continue to improve services and service systems even as practitioners, managers, and leaders come and go in teaching-family sites.

Independent Evaluations

The developers’ focus on behavior led to requests from the funder for inclusion of other research perspectives. In 1972, the NIMH funded an independent evaluation of the Teaching-Family Model with research based on a nonbehavioral perspective (Eitzen, 1974a, b). Eitzen’s research found that the feelings of self-efficacy and attitudes of youths in teaching-family homes improved compared with a sample of youths not in care. Contrary to expectations, the use of the point systems (token economy) did not increase scores on tests of Machiavellianism. The results were encouraging, showing improvements in youth attitudes and feelings in addition to their improved behavior.

In 1975, the NIMH funded a six-year independent evaluation of Teaching-Family Model outcomes. In this study, 26 teaching-family group homes and 25 comparison group homes were recruited and agreed to participate. Teaching-Family Model homes were found to be 7% less expensive to operate on a per diem basis and cost approximately 20% less per youth. Teaching-family homes did better on measures of school performance, evaluations by consumers (e.g., youths, parents, teachers, court workers, case workers) were more positive for teaching-family homes, but no difference was found for delinquent behavior outcomes either at discharge or up to three years later (Howard, Jones, & Weinrott, 1981; Jones, Weinrott, & Howard, 1981; Weinrott, Jones, & Howard, 1982). These positive results were obtained at the time when the Teaching-

Family Model was shifting from individual group homes to a site development as the focus for replication, and at the time when the Teaching-Family Association was forming and becoming functional. In retrospect, a better test would have been to evaluate teaching-family homes that were supported by a certified site with teaching-parent certification as an additional variable in the analysis of outcome data (Naleppa & Cagle, 2010). However, these conditions did not exist between 1975 and 1980. Subsequent evaluations by independent researchers have demonstrated positive outcomes for delinquent behavior and cost for the Teaching-Family Model (De Wein & Miller, 2009; Farmer, Murray, Ballentine, Rautkis, & Burns, 2017; Kingsley, 2006; Lipsey & Wilson, 1998; Washington State Institute for Public Policy, 2016).

The lesson we learned from the independent evaluations was the critical role of fidelity measures. The Eitzen studies were conducted in teaching-family homes closely associated with the Kansas group where the program developers could vouch for the fidelity of use of the Model. The Jones study evaluated group homes spread across the nation: some were associated with developing teaching-family sites and some were not, and some had fidelity assessments and some did not. If we had insisted on fidelity assessments in every teaching-family home, then fidelity (the degree to which the group home was actually using the Model as intended) could have been used as a variable in the analysis of outcome data, a recommended practice today (Durlak & DuPre, 2008; Naleppa & Cagle, 2010). In 1975, we did not have fidelity assessment as a requirement. The independent evaluations helped lead us to include fidelity outcomes as a required part of site certification reviews by the Teaching-Family Association.

Systematic Replications

In the 1980s, the teaching-family treatment components began to be used in home-based and treatment foster care service delivery systems. Teaching-family staff at the BIABH Site in North Carolina (Gary Timbers, Patrice White) and the Hull Community Services Site in Calgary, Alberta (Karen Blase, Diane Jaeger), worked with colleagues to learn about the different service delivery systems and find ways to adapt the Teaching-Family Model treatment procedures to meet the needs of the populations of concern served by those systems. Our colleagues at Homebuilders® in Seattle, Washington (Jill Kinney, David Haapala, Charlotte Booth, Shelley Leavitt), and at Pressley Ridge in Pittsburgh, Pennsylvania (Pam Meadowcroft), were especially helpful. Blase et al. (1984) had discriminated treatment services (e.g., the Teaching-Family Model) from service delivery systems (e.g., a group home, foster home, homebased). Thus, the teaching-family treatment model was being adapted for use in multiple service delivery systems. Today, more community-based and home-based teaching-family treatment services are provided in these service systems than in residential care systems.

The use of the core features of the Teaching-Family Model in multiple service delivery systems likely is important to the sustained use of the Model for 50 years and counting. In the early days, it was important to combine procedures into a program and include the group home service delivery components as part of the definition of “the program” (the lesson from Saleem Shah recounted earlier). As we approached non-group-home applications, we had to separate the teaching-family treatment components from the service delivery system components. For example, a practitioner’s use of

teaching interactions to teach appropriate alternative behavior was critical in each service delivery setting. Staff skills required to set the occasion for using the teaching interaction were different in an unstructured home-based treatment system compared to a more contained group home delivery system or foster home delivery system. Thus, adaptations were in how and when to use teaching interactions. The teaching interaction components themselves were the same in each service delivery system and recognizable when fidelity assessments were done. Trained evaluators could do fidelity assessments in multiple service delivery settings without losing the integrity of the fidelity assessment methods.

As the systematic replications occurred across settings (e.g., from group homes to home-based or foster-home-based), the populations being served in teaching-family treatment settings also expanded. Children, youths, adults, and families referred by child welfare, mental health, substance abuse, and developmental disability systems were served as well as youths from the delinquency system. In each case, the adaptation process resulted in teaching-family programs tailored to the specific needs of each population while maintaining fidelity to the essential functions of the Model (McClannahan, Krantz, McGee, & MacDuff, 1984).

Conclusions

In the research grant application that Montrose Wolf wrote in 1968, he specified the goal for the Achievement Place research program (the prototype group home for what was to become the Teaching-Family Model). He wrote that, “the general purpose of this research will be to develop an effective, community-based juvenile rehabilitation program which could be adopted by other communities” (Wolf, 1968, p. 12).

Little did he, or any of us, realize that it would take over 25 years to begin to fulfill that aim! From the perspective of 50 years, the following lessons seem important for developing evidence-based programs that can be replicated and scaled to affect social problems or achieve aspirational goals.

Lessons for Behavior Analysis

Baer et al. (1968) stated that

. . . an applied behavior analysis will make obvious the importance of the behavior changed, its quantitative characteristics, the experimental manipulations which analyze with clarity what was responsible for the change, the technologically exact description of all procedures contributing to that change, the effectiveness of those procedures in making sufficient change for value, and the generality of that change. (p. 96)

They stated as well that, “a behavioral change may be said to have generality if it proves durable over time, if it appears in a wide variety of possible environments, or if it spreads to a wide variety of related behaviors” (p. 97). The Teaching-Family Model comes close to meeting all these criteria and the lessons learned can help advance applied behavior analysis as a professional discipline. Those lessons are summarized in Table 6.

Table 6 Lessons for Applied Behavior Analysis Derived from the First 50 years of the Teaching-Family Modelb

| Lesson | Comment |
|---|--|
| <p>Get the science right and develop evidence related to the essential elements that define a program. The years of research on relationship development, teaching appropriate alternative behavior, motivation systems, self-government, and so on provided a solid foundation for creating a sound theory of change regarding “what works.” The essential elements inform staff selection, comprise the curriculum for staff training and coaching agendas, and are the basis for assessing the use of those skills effectively in practice (fidelity).</p> | <p>Applied behavior analysis is well suited to the task of program development with its emphasis on operationalizing independent variables and using within-subject designs (multiple baseline, reversal, probe) to efficiently evaluate the functional relationships between independent variables and important proximal outcomes.</p> |
| <p>Develop a team to collect data on what matters and use data to improve. As scientists we yearn for better designs and better measures, and as program developers and implementation practitioners we are “in the moment” when facing failure and “wicked problems” (Rittel & Webber, 1973). The first task is to develop something that seems to work better than whatever failed, then demonstrate, even in a crude way, what it is, how to do it, and that it matters. Collecting data, plotting trends, summing up information frequently, and using those data to inform debate and discussion and decisions are keys to program development and scaling.</p> | <p>Applied behavior analysis provides a strong foundation for “following where the data lead” and using data to inform decisions that matter. “If we can’t measure it, it doesn’t exist” was a functional fiction that served us well for the past 50 years. That thought pushed us to collect more data at multiple levels (youth, staff, organization) and articulate new measurement concepts when needed (e.g., social validity; Wolf, 1978).</p> |
| <p>Develop and define larger units of behavior and analysis, from procedures to programs to whole organizations. The Teaching-Family Model examples in this article provide ample evidence of the need to keep adding the next layer of the system to the lists of tasks that make a difference (Biglan, Glasgow, & Singer, 1990) and ensuring that each layer of the system is producing outcomes needed by the subsequent layer. It is the opposite of peeling the onion. The developmental progression from procedures, to programs, to organizations, to organizations of organizations, to human service systems is daunting but necessary for achieving socially significant scale of effective, sustainable innovations.</p> | <p>Applied behavior analysis emphasizes operationalizing methods. The methods can be at the procedural level, but operationalizing can occur at the systems level as well. What are the leverage points? How can we operationalize the processes so that they are teachable, learnable, doable, and assessable in practice? What are the proximal and distal indicators of impact? How can those indicators be assessed, reported, and reviewed in a practical, day-to-day way?</p> |
| <p>Stick with it. In the summary of the first 50 years of the Teaching-Family Model, many of the people and organizations named are still working on research and development and making good use of the teaching-family program. Given time frames that are measured in decades, the same people need to be around to experience, and be shaped by, the current effects of past decisions (Fixsen & Blase, 1993). Documentation helps to “create memory” but it is difficult to know many important outcomes until they have occurred. We continue to ask, “Given what we are facing now, what could we have done differently 3, 5, 10 years ago?” The answers to such questions are then built into the</p> | <p>Applied behavior analysts have a penchant for collecting and using data and are reinforced by solving problems (Baer et al., 1968). The 50th anniversaries of the Bureau of Child Research (now the Schiefelbusch Institute for Life Span Studies), Juniper Gardens Children’s Project, and the Teaching-Family Model are just a few of the research and development projects that have been sustained for decades with many of the same people involved over long periods of time.</p> |

Table 6 (continued)

| Lesson | Comment |
|---|---|
| <p>beginning of the next new program or replication effort in hopes that those problems will not occur 3, 5, or 10 years from now.</p> <p>Learn from failure. When something does not work as intended it is another data point. Most things do not work as intended, at least not at first. There are only a few ways that things work in practice. Napoleon, known as a meticulous planner, said no plan survives its first encounter with reality. Winston Churchill said, “Success is the ability to move from one failure to another without loss of enthusiasm.” A willingness and ability to learn from failure and propose improvements are keys to eventual success.</p> | <p>Applied behavior analysts are prepared to learn from mistakes and move on toward the next apparent solution. Within-subject designs provide a means to quickly discover what is effective or not. If the initial A-B with a few participants shows no change, then it is time to regroup and try another solution. Little time and few resources are wasted pursuing data collection with dozens of participants within a three-year group design only to discover that the best-laid plan did not work as intended in practice.</p> |

Lessons for Human Services

Green (2008) asked, “if it is an evidence-based practice, where’s the practice-based evidence?” The lessons learned from replicating the Teaching-Family Model provide decades of practice-based evidence to help answer that question. Furthermore, the Model’s lessons are being used to advance implementation science. “Implementation” is the “to” in science to service (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). “Implementation science” is the study of factors that influence the full and effective use of innovations in practice (Fixsen, Blase, Metz, & Van Dyke, 2015). Active implementation frameworks reflect the long-term learning from the teaching-family experiences (Fixsen et al., 2016) and their applications to scaling effective innovations to produce socially significant benefits (Fixsen, Blase, & Fixsen, 2017; Fixsen et al., 2013). Active implementation frameworks include:

1. Usable innovations: operational descriptions of innovations that include a practical assessment of fidelity that is highly correlated with intended outcomes. The Teaching-Family Model treatment program is an example of a usable innovation.
2. Implementation teams: groups that are highly skilled in the use of active implementation frameworks and affecting organization and system change. The site director, director of training, and director of evaluation who staff each new teaching-family site is an example of an implementation team.
3. Implementation drivers: methods to ensure the development of innovation-related competencies, organization changes, and engaged leadership that support high-fidelity use of innovations in practice. The implementation drivers were embedded in each teaching-family site and were examined as part of the site certification process.
4. Implementation stages: exploration (creating readiness), installation (acquiring and preparing human and financial resources), and initial implementation

- (beginning to support the use of the innovation in practice) activities and outcomes that support eventual full implementation (at least 50% of the practitioners meet fidelity standards for using the innovation in practice) within organizations and systems. The implementation stages were used to initiate new teaching-family sites, guide their development, and to assess their progress over time.
5. Improvement cycles: plan-do-study-act cycles and usability testing methods for purposeful problem solving and continual improvement in methods and outcomes. Improvement cycles were in continuous use over several decades as each plan (e.g., methods to replicate procedures; replicate group homes; replicate sites) was put to the test in practice (do) and data (study) of some kind were collected to help develop a new plan (act) for the next cohort (cycle).
 6. Systemic change: practice–policy communication protocols to align, integrate, and leverage existing structures, roles, and functions so that the implementation supports for the innovation maximize intended outcomes at scale. Teaching-family sites were engaged in intervening in systems to assure adequate funding, hospitable system policies, and support for using evidence-based programs to improve human service outcomes.

The active implementation frameworks are generalizable to multiple programs and systems with implementation and scaling capacity development and systemic change work underway in education (Fixsen et al., 2013), child welfare (Metz et al., 2014), vocational education (Fixsen, Blase, & Van Dyke, 2012), global health (Peterson, 2016), pharmacy (Blanchard et al., 2017), and so on.

The investment in Teaching-Family Model research and program development continues to pay off. We look forward to the next 50 years!

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