DOCUMENT RESUME

ED 223 683 TM 820 821

AUTHOR Nicassio, Frank J.
TITLE The Use of Goal Attainment Scaling in the Evaluation of a Home-Based Educational Intervention.
PUB DATE [78]
NOTE 43p.
PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC02 Plus Postage.
DESCRIPTORS Educational Improvement; Elementary Education; *Evaluation Methods; *Home Instruction; *Intervention; *Nontraditional Education; *Parent Participation; Student Educational Objectives; Tutorial Programs
IDENTIFIERS California; *Goal Attainment Scaling; Parent Outreach Program; Stanford Achievement Tests

ABSTRACT

The use of Goal Attainment Scaling to evaluate a home-based educational intervention in which parents acted as tutors of their own elementary-school-aged children is described. Goal Attainment Scaling is a model originally developed for the National Institutes of Mental Health as a means of evaluating the activities of community mental health centers. As adapted for use in a public school setting, Goal Attainment Scaling proved to be a useful tool in not only determining program outcomes, but in also providing a standard for program decisions in a school environment characterized by flux and shifting frames of reference. How program goals were scaled, scored, and interpreted using the Goal Attainment Scaling procedure are discussed. It was concluded that the Margaret Sheehy School Parent Outreach Program was successful in establishing a cost-effective home-based school program focusing on both academic and related needs of referred children. (Author/PN)

# The Use of Goal Attainment Scaling in the Evaluation of a Home-Based Educational Intervention[1]

by

Frank J. Nicassio, PhD

Child Development Program

Umatilla Education Service District

P.O. Box 38

Pendleton, Oregon 97801

Abstract

This paper describes the use of Goal Attainment Scaling to evaluate a home-based educational intervention that used parents as tutors of their own elementary-aged school children. Goal Attainment Scaling is a model originally developed for the National Institutes of Mental Health as a means of evaluating the activities of community mental health centers. As adapted for use in a public school setting, Goal Attainment Scaling proved to be a useful tool in not only determining program outcomes, but in also providing a standard for program decisions in a school environment characterized by flux and shifting frames of reference. The present paper discusses how program goals were scaled, scored, and interpreted using the Goal Attainment Scaling procedure.

# The Use of Goal Attainment Scaling in the Evaluation of a Home-Based Educational Intervention

## INTRODUCTION

Goal Attainment Scaling was used to evaluate the second phase of an intervention program carried out at the Margaret Sheehy School, Merced, California during the 1977-1978 academic year. Sheehy, located in the agriculturally rich San Joaquin Valley, served 640 children in a kindergarten through fifth grade school setting characterized by high student turnover, low socioeconomic indices, a high proportion of culturally non-dominant families, and low achievement test scores (State of California, 1977). The Parent Outreach Program (POP) was one component of an overall effort committed to raising the educational performance of the large proportion of children who scored within the first quartile of the Stanford Achievement Test. Based on indicators in the educational literature (Nicassio, 1977a), POP assumed that a child's school performance could be improved by grooming the child's parent to become a primary agent of educational intervention. It was proposed that this step could be accomplished by having the parent, with the assistance, direction, and support of a representative of the school, tutor the child at home.

The program evolved through successive stages and began in 1976 by adapting materials from Project Home-Base, a federally sponsored preschool program (Yakima Public School, 1975, 1976) which was modeled after the Gordon (1969) Infant Stimulation Project. In 1977 an attempt was made to expand the home based curriculum, provide supportive education for project staff, clearly delineate goals, and evaluate outcomes. The writer was enlisted as program consultant to aid in these tasks.

Four strategies for achieving a set of broad goals formulated by the faculty and the School Advisory Committee can be briefly summarized:

1) Use paraprofessional Parent Educators to facilitate a coordinated and collaborative home and school study program by means of weekly home visits.
2) Provide Home-Tasks (activities focusing on self-help, socialization, perceptual-motor, cognitive; language, reading, and math skills) for use by parents with their children.
3) Instruct parents in the use of ten Desirable Teaching Behaviors (DTBs) to improve instructionally relevant interactions between parents and children as they work together on Home-Tasks.

4) Have Parent Educators use and model for the parent, a problem solving strategy to improve communicative interactions between parents and children as they contend with the often chronic, pervasive, and globally ill-defined day-to-day problems of interpersonal living.

These strategies became the basis for the objectives specified on Goal Attainment Guides (Tables 2, 4, 6, 7).

Intervention was carried out by three Parent Educators (nicknamed PEs or POPPEs) who designed a home-study regimen for each of 39 families that integrated concerns identified by the child's parent, the classroom teacher, and the child. Significant aspects of each home-visit were recorded on a structured log sheet, adapted from Project Home-Base (Yakima Public Schools, 1975, 1976), called the Parent Educator's Weekly Report Guide (PEWRG). These data provided much of the information used in measuring program outcomes. A complete description of demographic variables, family selection methods, program activities, etc. is contained in POP's recent evaluation report (Nicassio, 1978).

## THE EVALUATION SCHEME

Early in the program, the coordinator attempted to design an evaluation scheme that could be termed "traditional," "classical," or "research oriented." Given program constraints that made it impossible to select experimental and control children randomally from a pool of referrals, or to even establish "waiting list controls," the "traditional" hypothesis-testing approach was abandoned. A subsequent attempt to integrate quasi-experimental design (Campbell and Stanley, 1963) with single-subject design (Hersen and Barlow, 1976) was also abandoned. Although such an integration holds considerable promise for answering the educational questions posed by school personnel, more time and effort were required than was available in the working regimen of Parent Outreach.

It has been recognized that the problems of evaluation frequently differ in intent from heuristic research (Weiss, 1972, p. 6), and that evaluational settings do not necessarily provide the conditions for formal experimentation (Campbell and Stanley, 1963; Popham, 1975, p. 4). Although a "classical" approach was not possible within the constraints of the POP environment, this did not obviate the need for evaluation of program outcomes. A ready audience for evaluational results was provided by the faculty and the School Advisory Committee (comprised of faculty and parents) whose continued allocation of financial support was contingent on program outcomes that could be monitored by them daily, on an informal basis, in the classroom and in the home.

If one assumes that a valuable result of program evaluation is informational feedback upon which changes may be introduced to enhance program effectiveness, then many sufficient evaluation models do exist (Popham 1975; House, 1978). Stufflebeam's CIPP (Stufflebeam et al., 1971), UCLA's CSE (Alkin, 1969), and various goal attainment models are examples (Popham, 1975). Each of these orientations enable program staff to make decisions that are sensitive to accountability and productivity. The particular system called Goal Attainment Scaling (GAS), developed by Kiresuk and Sherman (1968) for the National Institutes of Mental Health as a means of evaluating the activities of Community Mental Health Centers was selected because of its ability to validly maintain empirical structure for activities occurring within the environment of a fluid and enfolding organization. It should be noted that GAS has been central to many earlier efforts in both work with children (Byassee and Tamberino, 1975-76; Garwick, 1976; Hegion, Fish, and Grace, 1974; and Stoudenmire and Comola, 1972) and in evaluation of program goals (Kirkhart, 1977; Stelmachers, Lund, and Meade, 1972; and Webb, 1975-76).

Based on the broad goals set by the faculty and School Advisory Committee and the four strategies cited above, measurable objectives were written for four program areas labelled Parent/Home, Student, Teacher/School, and Administrative/Maintenance. These objectives were then "scaled" on Goal Attainment Guides (Tables 2, 4, 6, 7) which were modified for use within a school setting. This process, which required consultation with school and project staff, was carried out over a two day period in September 1977 by the program consultant, prior to POP's school year activities.

"Scaling" an objective means that both positive and negative outcomes of the program's efforts are anticipated in advance of their actual measurement at program's end. For example, looking at the Goal Attainment Guide titled "Administrative/Maintenance" (Table 2) we see the first column is labelled "Scale Attainment Levels" and shows five possible outcomes: +2 is "Best Anticipated Educational Outcome Throught Likely;" +1 is "More Than Expected Level of Educational Success," etc. The second column of this Goal Attainment Guide is labelled "Scale 1: Home-Task File." The 0, or "Expected Level" portion of this column states an objective concerning the development of Home-Tasks. Given program resources and constraints, it was anticipated that POP could develop 100 Home-Tasks by the time of follow-up in June 1978. Any number of tasks fewer than 100 was considered a "Most Unfavorable" outcome and was so stated on the Goal Guide;

any number greater than 100 was considered better than expected and was so scaled. It was also judged that the creation of a Home-Task file was significant enough at this stage of program development that it should be weighted heavily with respect to other objectives. Scale 1 was, therefore, given a weight of $W_1$=40 (on a 10, 20, 30, 40 50 scale) and so noted at the top of the column. This weight was used in subsequent computations. At follow-up, the number of Home-Tasks completed was counted and the result of 145 was indicated by placing a double star symbol in the appropriate box. This objective thus earned a raw score of +1 ("More Than Expected Level of Educational Success") or a weighted raw score of (+1)X(40) = +40. Other scaled objectives covering the four program areas were treated in a similar manner by scoring them for level of attainment. Weighted raw scores were transformed to normally distributed T-scores with a mean of 50 and a standard deviation of 10, according to the computational method devised by Kiresuk and Sherman (1968). Percentile ranks were then derived using the conversion table prepared for this purpose by Garwick (1971).

Goal Attainment T-Scores were computed using the data sources specified on the Goal Attainment Guides. These included questionnaires, frequency counts, checklists, school test results, and especially the PEWRG mentioned above. Reliability of measures recorded on the PEWRG were verified by the program consultant's intermittent home-visits with Parent Educators. Since data were collected over the course of nine months, it required the last week of the school year for the POPPEs and program consultant to validate and summarize data and to compute the results described below.

## THE RESULTS OF PARENT OUTREACH, 1977-1978

The results of POP efforts may be looked at in terms of Goal Attainment T-scores for each of the four program areas and for the program as a whole. These outcome scores, and their corresponding percentile ranks, are shown in Table 1.

The percentile rank is interpreted as follows: Given all possible outcomes of the objectives scaled on the Goal Attainment Guides, the obtained outcome (T-score) represents a score such that X% of the others fall below it. For example, the outcome earned by POP for the attainment of all 20 program objectives subsumed under the four program areas was a percentile rank of 82. Thus, of all possible outcomes stated on the Goal Guides, POP achieved better than 82% of the other possibilities. This is a high yield for program efforts.

Table 1
GAS outcomes for each of four program components and for the program as a whole

| Program | Goal Attainment T-Score | Percentile Rank Attained |
|---|---|---|
| Administrative/Maintenance (10 scales) | 47.4 | 40 |
| School/Teacher (3 scales) | 70.0 | 98 |
| Student (2 scales) | 50.8 | 54 |
| Home/Parent (5 scales) | 62.2 | 88 |
| Overall (based on all 20 scales) | 59.4 | 82 |

If we interpret these results in the manner described, and note that a percentile rank score of 50 represents the exact attainment of a specified objective, we can pronounce POP as having been a success for the school year since it not only met its criteria of success, but surpassed its expectations for all but a single program area.

These results also have an alternate interpretation. That is, scores falling either far below or far above 50 represent objectives that may be either too difficultly or too easily attained given the characteristics of the particular program. Consequently, "School/Teacher" showing an outcome of 98 may represent a set of program objectives that have initially been set too low, while "Administrative/Maintenance" with an outcome of 40 may represent a set of objectives that have initially been set somewhat high. A strength of GAS is that such feedback provides program staff with information relevant to adjusting criterion levels on subsequent cycles of program delivery and evaluation. In order to implement changes in these levels, however, one must consider the nature of specific objectives contained within each program area. This is the task to which we now turn.

Administrative/Maintenance Component

This program area concerned itself with the establishment and operation of programmatic necessities: Ten objectives were scaled (Table 2).

Scale 1: Home-Task File: It was anticipated that 100 Home-Tasks could be constructed and categorized during the academic year. One hundred forty-five were produced placing POP above the expected level. The creation of Home-Tasks was weighted in importance at a high 40, since the object of intervention was to facilitate parent/child interaction around these materials. It is unlikely that so much importance would be placed on the creation of curricular materials in subsequent years. Consequently, fewer numbers of tasks and a lower weighting would be appropriate for future cycles of program operation and evaluation.

Scale 2: Translation: POP achieved below expectation and translated only 48% (n=70) of the Home-Tasks into Spanish. This presented no particular difficulty for delivery of services to bilingual or non-English speaking families. Thus, quantitative results defer to qualitative interpretation. A future objective should be to translate the remaining tasks for bilingual use.

Scales 3 and 4: Coordination and Information Dissemination: These objectives represent an effort to keep channels of communication open and to insure consensual understanding on the part of all POP staff. There were a total of 35 coordination meetings between PEs and the coordinator, and a total of 13 information memos which summarized procedures, concerns, interim results, goals, etc. The yield was high as evidenced by statements of PEs citing coordination meetings as being especially beneficial to decision making in the field. Future POP efforts should continue to incorporate high levels of staff interchange.

ORGAN. Sheehy | PROGRAM OR COMPONENT Parent Outreach Program Administrative/Maintenance Component | START DATE Sept 1977 | FOLLOW-UP DATE June 1978 | 

# GOAL ATTAINMENT GUIDE

| SCALE ATTAINMENT LEVELS | SCALE 1 : Home-Task ($W_1$ = 40) File | SCALE 2 : Translation ($W_2$ = 30) | SCALE 3 : Coordination ($W_3$ = 40) | SCALE 4: Information ($W_4$ = 10) Dissemination | SCALE 5 : Home Visits ($W_5$ = 50) |
|---|---|---|---|---|---|
| + 2 *Best Anticipated Educational Outcome Thought Likely* | 151 - 200 tasks | More than 85% of tasks | Hold more than 20 meetings ** | | Complete more than 80% of possible home visits |
| + 1 *More Than Expected Level of Educational Success* | 101 - 150 tasks ** | 81% - 85% of tasks | Hold 20 meetings | More than 10 memos ** | |
| 0 *Expected Level of Educational Success* | Establish a Home-Task file of 100 tasks by June 1978 as evidenced by numerical count. | Translate 80% of tasks into Spanish by June 1978 as evidenced by numerical count. | Hold at least 15 POP staff coordination meetings as evidenced by minutes or notes by June 1978. | POP consultant will produce at least 10 information summary memos by June 1978. | Complete at least 80% of all possible home visits per family as recorded on PEWRG II and III by June 1978. |
| - 1 *Less Than Expected Level of Educational Success* | | | Hold fewer than 15 meetings | | Complete 60 - 79% of possible home visits |
| - 2 *Most Unfavorable Educational Outcome Thought Likely* | Any number of tasks fewer than 100 | Less than 80% of tasks ** | | Fewer than 10 memos | Complete less than 60% of possible home visits ** |
| PROPOSED PLAN OF ACTION | Parent Educators (PE's) and consultant will develop tasks as needed. | Bilingual PE's will translate tasks as required. | Consultant will organize meetings based on needs identified by using visual display of Dyad Weekly Outcome | Record notes and memos and maintain file. | Sustain home-visit program and record results on Parent Educator's Weekly Report Guide (PEWRG). |

Table 2: Goal Attainment Guide for the Administrative/Maintenance Component.

GOAL ATTAINMENT GUIDE

| SCALE ATTAINMENT LEVELS | SCALE 6: PE ($W_6$=10) Presentation | SCALE 7: PE ($W_7$= 20) DTB's | SCALE 8: Task ($W_8$= 20) Selection | SCALE 9: ($W_9$ = 20) Counseling | SCALE 10: Length of ($W_{10}$= 20) Home Visit |
|---|---|---|---|---|---|
| + 2 *Best Anticipated Educational Outcome Thought Likely* | Two or more methods of task presentation on more than 75% of completed home visits | Eight or more DTB's on more than 75% of completed home visits | Parent responds more than 75% of time with #3 ** | On 51% or more of home visits ** | More than 80% of families |
| + 1 *More Than Expected Level of Educational Success* | | | | | |
| 0 *Expected Level of Educational Success* | PE uses two or more methods of task presentation on 75% of completed home visits as recorded on PEWRC V, by June 1978. | PE uses 8 or more DTB's on 75% of completed home visits as recorded on PEWRG VI, by June 1978. | Parent will respond with a #3, 75% of the time as recorded on PEWRG X, by June 1978. | Parent received other than task information on 50% of home visits as recorded on PEWRG XII, XIII, XVI by June 1978. | 80% of families average at least 3 min. of PE contact time per home visi by June 1978. |
| - 1 *Less Than Expected Level of Educational Success* | Two or more methods of task presentation on 51% - 74% of completed home visits ** | Eight or more DTB's on 51% - 74% of completed home visits ** | Parent responds 51% - 74% of time with #3 | | |
| - 2 *Most Unfavorable Educational Outcome Thought Likely* | Two or more methods of task presentation on fewer than 51% of completed home visits | Eight or more DTB's on fewer than 51% of completed home visits | Parent responds less than 51% of time with #3 | On less than 50% of home visits | Fewer than 80% of families ** |
| PROPOSED PLAN OF ACTION | Sustain home visit program. Monitor Dyad Weekly Outcome on PEWRG. In-service of deficits by consultant. | Same as Scale 6 | Same as Scale 6 | Same as Scale 6 | Same as Scale 6 |

Table 2: (continued)





tjn 7-17-72

Scale 5: Home Visits: Since PEs were expected to model constructive interaction patterns for parents, a sustained and high frequency of home visits was seen as critical to the eventual improvement of a child's school achievement. POP fell considerably short of the expected 80% completion of possible home-visits by logging only 339 completed home visits during 580 family-weeks of activity. This represents a 58% completion rate (339 ÷ 580 = 58%).

In general, this low showing resulted from several unforseen circumstances. The first was the high frequency of task avoidance by families during their early weeks in the program. For example, a new family would complete the first visit or two and then break several subsequent commitments, only to pick up onvisits again at a later date. One inference is that the time-span represented by missed visits is actually a latency period in which Home-Tasks, DTB's, and the rest of POPs basically middle class devices were accommodated to a family's personal and cultural life-style. Since the simple translation of curricular material such as Home-Tasks into either Spanish or the vernacular does not guarantee cross-cultural sensitivity or equivalence, PEs were encouraged to empathetically persist in the face of this circumstance so as to gain greater insight into inter-cultural assimilation.

Another circumstance related to the above were families requiring numerous "get acquainted" phone calls or "front porch" conversations that functioned to allay anxieties associated with formal looking and sounding school materials. This situation was best summed up by the PE who commented that, "It took me six months to get invited into the house."

Still another circumstance included several families who were contacted only by phone with regards to some particular concern. For instance, following a divorce,

the affected child's classroom teacher sought the assistance of POP to provide supportive counseling. Over a 21 week period, no home visits were completed, yet the PE contacted the parent four times by phone, and the child sixty-three times at school. These sixty-seven contacts enhanced the parent/child/school relationship and quite likely supported the child's school efforts although no data exist to support this contention.

The low showing for scale 5 is also a result of the manner in which the outcome was computed i.e., only completed home-contacts were considered. If, however, the number of phone contacts (351 contacts totaling 32.3 hours of parent/PE conversation) and the number of other contacts at school, at the PEs home, or on the street (116 contacts totaling 39.9 hours of parent/PE discussion) were combined with completed home-visits (339 home-visits totaling 181.4 hours of parent/PE interaction) POP can claim 806 direct parent contacts or 1.6 contacts (806 ÷ 508 family weeks) per family per week in the program. Communication between home and school was obviously kept open.

It is recommended that future statements of objectives take into consideration the family contacts that occur outside the formal home-visit and use such information in the computation of evaluational outcomes.

Scale 6: Parent Educator's Presentation: This objective attempted to address the variety of task presentations that PEs modeled for parents (explanation, role-playing, demonstration, listening to parent make presentations). In 64% of the home-visits, PEs utilized two or more methods of presentation which fell somewhat short of the 75% level anticipated. Since this represents no critical deficit, it is recommended only that continued attention be paid to this area during subsequent in-service training sessions.

Scale 7: Parent Educator's DTBs: This objective gauged the use of Desirable Teaching Behaviors during home visits. Parent Educators utilized 8 or more DTBs on 66% of their completed visits. This result may be interpreted in a manner similar to that of Scale 6; a like recommendation is also warranted.

Scale 8: Task Selection: This scale metered parents' opinion of the difficulty of Home-Tasks for their children. A full 85% of the tasks were considered to be "just right for the child" as recorded on the Parent Educator's Weekly Report Guide. Future programs should continue to encourage the collaborative planning with the teacher and parent concerning selection of Home-Task materials; this should insure that task selection remains a strong point in the program.

Scale 9: Counseling: In 93% of the completed home-visits, parents received assistance with other than educational concerns. Because of behavioral, emotional, or other family difficulties, PEs provided information on welfare and community services, child growth and development, health care and nutrition (one PE even became involved in an obese child's prescribed weight loss program), and enrichment materials. These areas represent pressing needs within many families and must often be dealt with before parent or child can establish an environment conducive to home study.

Parent Educator efforts in this non-academic area probably have long-run, although educationally unmeasurable, effects on families. For instance, a parent whose interaction with her child precipitated "school phobia" was given relevant reading material (Patterson and Gullion, 1971) and put in contact with a counselling information center at Merced College. After encouragement, two other parents began attending an evening class in "Systematic Training for Effective Parenting" held at Sheehy by the

school psychologist. Other parents were assisted in obtaining eye glasses for their children, or clothing, or other necessities. Two parents were assisted with enrollment and attendance at Merced College, while still two others were aided in obtaining necessary employment. Three POP parents now volunteer at school: one works in the library, one in a classroom and the third serves commendably on the School Advisory Committee. Each of these results seems directly attributable to the patient, considerate, friendly, and interested counselling carried out by Parent Educators (although the usual cautions regarding causal inferences should be observed). These improvements cannot be expected to show up in increased SAT scores in a single year, but can be thought of as "facilitators" that, if sustained, should enhance the developmental outcomes of the children served.

Scale 10: Length of Home Visit: Only 59% of the families averaged PE contacts that were 30 or more minutes in length. The distribution for the thirty-nine POP families is shown in Table 3. This outcome is difficult to interpret since there is no known function between length of home visit (or quality of home visit) and program output. The variable results of Table 3 coincide with findings of the National Home Start Evaluation (Love et al., 1976, p. 79). The data are included here as empirical fact that may be useful in establishing "baseline" for future activities.

Table 3
Number of families receiving home visit contacts of varying durations

| Average Length of Contact in Minutes | No. of Families |
|---|---|
| 60-120 | 5 |
| 50-59 | 4 |
| 40-49 | 4 |
| 30-39 | 10 |
| 20-29 | 3 |
| 10-19 | 11 |
| 0-9 | 2 |

School/Teacher Component

This program component concerned itself with the elicitation of teacher participation and of teacher response to the program effort. Three objectives were scaled (Table 4):

Scale 1: Target Specificity: In order to establish the coordinated and collaborative home and school intervention required by program goals, PEs attempted to define, with the referred child's classroom teacher, a statement of the academic problem in specific enough terms to guide selection of Home-Tasks. This is not as simple a job as it appears, for all of the affected parties (child, parent, teacher, PE) must arrive at a statement that recognizes the divergent interests of each. For example, although the classroom teacher may recognize "visual and auditory discrimination" as deficit areas, the parent may recognize behavioral outbursts as salient, while the child may not even be able to verbalize feelings of discontent and malaise. The PE, on the other hand, may become biased by the existing file of Home-Tasks and thus interpret child/parent/teacher concerns in terms of available curricular materials. (The evidence actually suggests that PEs, during this year of intense Home-Task construction, were quite flexible in task selection). A first step towards the collaboration of

GOAL ATTAINMENT GUIDE

| SCALE ATTAINMENT LEVELS | SCALE 1 : Target ($W_1$ = 20) Specificity | SCALE 2 : Unsolicited ($W_2$ = 50) Responses | SCALE 3 : Reaction ($W_3$ = 50) Sheet | SCALE 4 : ($W_4$ = ) | SCALE 5: ($W_5$ = ) |
|---|---|---|---|---|---|
| *+ 2 Best Anticipated Educational Outcome Thought Likely* | More than 90% of participating teachers | More than 50% of participating teachers ** | More than 80% will respond favorably ** | | |
| *+ 1 More Than Expected Level of Educational Success* | | | | | |
| *0 Expected Level of Educational Success* | 90% of participating teachers will have identified & specified a target problem using Behavioral Analysis and record problem on back of Teacher Check-list by June 1978. | 50% of participating teachers will make an unsolicited and positive comment about child's progress in POP as recorded in Comments section of PEWRG by June 1978. | 80% of participating teachers will respond favorably to POP on an end of program Reaction Sheet. | | |
| *- 1 Less Than Expected Level of Educational Success* | 50% - 89% of teachers ** | | | | |
| *- 2 Most Unfavorable Educational Outcome Thought Likely* | Fewer than 50% of participating teachers | Fewer than 50% of participating teachers. | Fewer than 80% will respond favorably. | | |
| PROPOSED PLAN OF ACTION | In-service of PE's in Behavioral Analysis by consultant. In-service of teachers by PE. | Monitor PEWRG | Develop and administer Reaction Sheet by June 1978. | | |

Table 4: Goal Attainment Guide for the School/Teacher Component.





fjh 7-17-72

all parties is to assist each in stating concerns specifically. With regards to classroom teachers, an attempt was made to glean information that could be used to synthesize a treatment approach by means of a problem solving strategy called the POPPE Field Analysis (Nicassio, 1977c). Although use of the POPPE Field Analysis proved less than adequate to the task, PEs were able to get 82% of the participating teachers to define a child's academic concerns with enough specificity to guide treatment. This is somewhat short of the 90% expectation but would seem to indicate a certain modicum of success, nonetheless. A strategy for updating academic target areas was a weekly report memo sent to classroom teachers by the PE. This device got off to a slow start but increased in popularity after a "reply" portion was added to the memo. This system of teacher/PE communication should continue to grow in usefulness in future years.

Scale 2: Unsolicited Responses: Indicative of a program's progress are the unsolicited comments made about discernable changes observed in affected children. A full 93% of participating teachers made unsolicited and positive comments about POP children. Some of these testimonials follow:

"_____ has improved greatly since the family (grandmother and uncles) is working with him."

"_____ is showing more effort. It's much better now."

"_____ is more independent."

"I'm pleased."

"_____ will try more now."

"I've noticed an improvement."

Although testimonials are subjective impressions, they are among the first indicators to signal changes in children's behavior. Opinion plays an important role in

the labelling of children as potential beneficiaries of special programs (e.g., E.M.R., L.H., M.G.M., P.O.P.). There is no reason to take opinion less seriously when it comes to restoring children to the ranks of the "educable," "well adjusted," or "normal," particularly in light of what has been termed the Pygmalion Effect (Rosenthal and Jocobson, 1968; Brophy and Good, 1974, pp. 30-41.) One need only remain cautious in attributing too many of the noticed behavior changes to the influence of POP; that is conservative, but a necessary caveat, nonetheless.

Scale 3: Reaction Sheet: A questionnaire was given to teachers during a faculty meeting at the end of April 1978. Responses were summarized along with qualitative replys addressing sources of satisfaction and frustration with POP. Recommendations for improvement were also made. The complete results were distributed in a memo to the faculty and School Advisory Committee dated April 27, 1978. The tabulated portion of the reaction sheet is reproduced below as Table 5. The results differ slightly from those presented in the memo since a subsequent questionnaire was turned in by a teacher who had been absent from the faculty meeting. In general, results indicate that teachers were satisfied with Parent Outreach. This attitude is also reflected in a faculty vote which allocated funds for the 1978-1979 school year; eighty-seven percent of those polled (13 of 15) voted to continue and expand POP while 13% (2 of 15) voted to modify it.

Some of the weakness in operating procedures that were noted by teachers included: less than optimal coordination with classroom programs; less than clear feedback about the character of home visits and parent/child attitudes; concerns over the ethnic/racial representativeness of families served, of PEs, and of the coordinator; and concerns that POP was not able to cope with the many crisis referrals, and with

SHEEHY SCHOOL POP

(NO NAME PLEASE)

TEACHER'S INDEX

Date N = 20

(Place an X in the column indicating your reaction to the question)

| | NO RESPONSE | POOR 1 | 2 | 3 | 4 | EXCELLENT 5 | NO CONTACT |
|---|---|---|---|---|---|---|---|
| 1. The POP Program was able to achieve most of its goals as stated at its information meeting in November, 1977. | 21% | | | 32% | 26% | | 21% |
| 2. The POP program fit well into the overall school program. | 15% | | | 30% | 35% | 15% | 5% |
| 3. I was able to keep informed as to the operation of the program by means of the weekly POP Report to Classroom Teachers. | | 5% | 5% | 25% | 35% | 5% | 25% |
| 4. POP provided appropriate school experiences for children at home. | 5% | | | 30% | 25% | 10% | 30% |
| 5. POP was successful in coordinating its activities with the classroom. | 10% | 10% | | 25% | 20% | 5% | 30% |
| 6. POP was successful in its work with children in their home. | 5% | 10% | | 35% | 25% | | 25% |
| 7. Specify the degree to which you feel you were involved in POP. | 15% | | 30% | 25% | 10% | 10% | 10% |

8. Did POP provide information about children useful in your classroom planning? ___ yes ___ no

9. Were children from your classroom involved in POP? ___ yes ___ no

10. List any sources of satisfaction the program provided.

11. List any sources of frustration.

12. How might the program be enhanced?

Table 5: Faculty response to Parent Outreach efforts, April 1978.

other families requiring assistance. Many positive aspects were also noted on the above mentioned memo.

Student Component

This area concerned itself with the frequency of Home-Task Completion, and with student affective response. Two objectives were scaled. Each was weighted quite heavily (Table 6).

Scale 1: Home-Task Completion: This scale gauges the extent of student involvement in Home-Tasks. It was anticipated that 80% of the participants would cover at least one task for each two weeks in the program. The result of 58% falls below this expectation and earned POP a negative one score for a goal weighted at 40. POPs deficit functioning is here related to the problems discussed above with respect to "Administrative/ Maintenance: Scale 5: Home Visits," and will not be repeated because the situation was already best characterized by the PE who commented on the six months of work required before being invited into the home during the 1976-1977 school year. The PE persisted and her notes go on to record that, "I slowly gained her confidence. Last year our POP visits were more regular after I gained entry into the home."

Scale 2: Student Response: This scale attempted to detect changes in student affect. It was weighted at a maximum of 50 because positive affect is believed to be central to the optimization of a child's academic and developmental well being. It is gratifying to report that 64% (n=25) of participating children made unsolicited comments to PEs that could be interpreted as enthusiastic acceptance of the home visit regimen. Comments usually focused on the Home-Task, e.g., the child would stop the PE at school and tell her that the work that had been brought the night before was already completed, or the child would ask the PE when she was going to bring more work to the home, or the child would say it had been fun doing the task with the parent. Parents also made

ORGAN. Sheehy | PROGRAM OR COMPONENT Parent Outreach Program Student Component | START DATE Sept. 1977 | FOLLOW-UP DATE June 1978 | 

GOAL ATTAINMENT GUIDE

| SCALE ATTAINMENT LEVELS | SCALE 1 : Home-Task ($W_1$ = 40) Completion | SCALE 2 : Unsolicited ($W_2$ = 50) Responses | SCALE 3 : ($W_3$ = ) | SCALE 4 : ($W_4$ = ) | SCALE 5 : ($W_5$ = ) |
|---|---|---|---|---|---|
| + 2 *Best Anticipated Educational Outcome Thought Likely* | More than 80% of participating children | More than 50% of participating children ** | | | |
| + 1 *More Than Expected Level of Educational Success* | | | | | |
| 0 *Expected Level of Educational Success* | 80% of participating children will have worked thru 20 Home-Tasks for a 40 week period (prorata adjustments) as recorded on PEWRG IV, VII, IX, by June 1978. | 50% of participating children will make an unsolicited and positive comment about POP home visits to PE as recorded in Comments section of PEWRG by June 1978. | | | |
| - 1 *Less Than Expected Level of Educational Success* | 50% - 79% of participating children | | | | |
| - 2 *Most Unfavorable Educational Outcome Thought Likely* | Fewer than 50% of participating children ** | Fewer than 50% of participating children | | | |
| PROPOSED PLAN OF ACTION | Monitor PEWRG. Persist at eliciting parent/child cooperation. | Monitor PEWRG | | | |

Table 5: Goal Attainment Guide for the Student Component.





fin 7-17-72

unsolicited comments indicating their satisfaction at being assisted in the non-threatening environment of their home, to help their own children. Spanish speaking parents were especially pleased at learning how to help their child in their native language.

Changes in attitudes of participating family members toward school activities is considered a central purpose of POP. That such a large number of POP children freely commented on their high motivational level is interpreted as a sign of success.

Home-Parent Component

This program area focused on refining parent/child educational interactions. By structuring parent participation at home, improvement in interactive quality was expected to occur. Five objectives were scaled for evaluation (Table 7).

Scale 1: Target Specicity: This scale is related to a similar objective for teachers. Here, PEs attempted to help parents focus on a single, specific academic area of interest; one that could be carefully observed for baseline and intervention effects. Parent Educators have indicated that this endeavor was no average challenge. One PE observed that, "Parents can't come up with goals because they don't know how to observe their kids." This comment echoes a precondition to any form of quality intervention--good observation. Informed and critical observational ability is not wanting in parents alone, however; it is a deficit that pervades educational endeavors at all professional levels. It is noteworthy that of the 21 families concerned primarily with their child's academic abilities (behavioral and counselling concerns excluded), 81% (n=17) were able to verbalize and target academic goals on which to concentrate home efforts, once assisted by the PE. Aiding parents in structuring objectives for their children and themselves should be vigorously pursued in further replications of Parent Outreach. This is one important step towards self-determination.

ORGAN. Sheehy | PROGRAM OR COMPONENT Parent Outreach Program Home/Parent Component | START DATE Sept 1977 | FOLLOW-UP DATE June 1978 | page 1 of 1

# GOAL ATTAINMENT GUIDE

| SCALE ATTAINMENT LEVELS | SCALE 1 : Target ($W_1$ = 30) Specificity | SCALE 2 : Home-Task ($W_2$ = 50) Utilization | SCALE 3 : DTB ($W_3$ = 20) Utilization | SCALE 4 : New Task ($W_4$ = 10) Information | SCALE 5 : Special ($W_5$ = 20) Home-Time |
|---|---|---|---|---|---|
| *+ 2 Best Anticipated Educational Outcome Thought Likely* | More than 80% of participating parents ** | More than 80% of Home-Tasks ** | More than 75% of participating parents | More than 80% of participating parents | More than 60% of participating parents |
| *+ 1 More Than Expected Level of Educational Success* | | | | | |
| *0 Expected Level of Educational Success* | 80% of participating parents will have identified & specified a target problem using Behavioral Analysis and record problem on back of Parent Checklist by June 1978. | Participating parent will have taught 80% of Home-Tasks as recorded on PEWRG VIII, by June 1978. | 75% of participating parents will have used DTB's as recorded on PEWRG XI, by June 1978. | 80% of parents will have asked for or offered task information as recorded by PEWRG XV, by June 1978. | 60% of participating parents will have set aside special non-task time to talk with their child as recorded on PEWRG XIV, by June 1978. |
| *- 1 Less Than Expected Level of Educational Success* | 50% - 79% of parents | 60% - 79% of Home-Tasks | 50% - 74% of parents | 50% - 79% of parents | 40% - 59% of paren |
| *- 2 Most Unfavorable Educational Outcome Thought Likely* | Fewer than 50% of participating parents | Fewer than 60% of Home-Tasks | Fewer than 50% of participating parents ** | Fewer than 50% of participating parents ** | Fewer than 40% of participating parents ** |
| PROPOSED PLAN OF ACTION | In-service PE's in Behavioral Analysis by consultant. In-service of parents by PE's. | Ongoing monitor of PEWRG. Sustain parent participation. | Ongoing monitor of PEWRG. Sustain parent participation. | Monitor PEWRG. | Ongoing monitor o PEWRG. Sustain parent participation. |

Table 7: Goal Attainment Guide for the Home/Parent Component.

Scale 2: Home-Task Utilization: This scale was an attempt to gauge the persistence with which parents used Home-Tasks. As recorded on the Parent Educator's Weekly Report Guide (PEWRG, entry VIII) every parent that committed themselves to using Home-Tasks subsequently reported using the tasks with their child. The comment of a Parent Educator once again provides a relevant characterization: "If I could get through the door, I could get them to use the Home-Tasks."

Scale 3: DTB Utilization: The Parent Educators Weekly Report Guide, entry XI recorded the Desirable Teaching Behaviors used by the parent during a given week of activity. It was anticipated that 75% of participating parents would have utilized some DTB's in their teaching. The record shows only 54% (n=21) of the families reporting the use of DTBs. Again, POP results fell short of expectations due to the proportion of families seen for counselling, and other reasons described above. It is recommended that future cycles of program effort concentrate more energy in facilitating parental use of these didactic principles, not only as they apply to Home-Tasks, but also as they apply to ordinary, everyday activities occurring in the home. In this way families could come to capitalize on the natural environment as a source of learning and educational stimulation.

Scale 4: New Task Information: This measure was used to determine the extent to which parents began assuming the role of colleague. POP was moderately successful in getting 51% (n=20) of all participating parents of offer information or suggestions for a new task, or for extension of an old task. Again, this result fell short of expectations due to the proportion of families seen for non-task reasons. It is, therefore, recommended that future program cycles incorporate all aspects of parent collaboration into this measure.

Scale 5: Special Home-Time: This final objective was intended to determine generalization of parent/child interactions. That is, parents were asked if they had begun to set aside special time to talk with their child other than the time allocated for completing Home-Tasks. Fifty four percent (n=21) of participating parents indicated they had set aside such time during the school year. This would seem to be an important outcome of program efforts.

Parent Reaction Sheet

In addition to the measures summarized on the Goal Attainment Guides, parents were asked to respond to a questionnaire in May of 1978. English or Spanish versions of the anonymous questionnaire were delivered to each family's home with a stamped, addressed, return-envelope. Eleven families replied. These 11 responses represent approximately 50% of the Home-Task families remaining in the program (of the 39 POP families, 4 had moved, 3 had barely begun the program, 9 were being seen for non-task reasons, leaving 23 specifically Home-Task families.) The results presented in Table 8 indicate a strong showing for POP in the minds of replying parents. Response to question 8 indicates moderate generalization from Home-Task to school work, while questions 9 through 12 point to enhanced functioning at home for parents and children. Only four parents made comments. They are:

"POP helped me understand a lot about what my child was doing in school. The reason I will not be continuing POP is that I will be working a full-time job."

"Questions 3 and 4. I didn't have any problems following these teaching methods. Because I was already using them. These are good methods to have."

"I feel that this program really helps children do better in school. And I am very glad that you have this program. Thanks a lot for helping my children learn better."

"Hope the program continues, sorry she wasn't in it at an earlier age."

Stanford Achievement Test Scores of Parent Outreach Children

One may wonder why SAT scores were not scaled using Goal Attainment Guides as were other outcome measures. The reason is that scaling would simply have made it too easy to camouflage the project's lack of experimental control. The

SHEEHY SCHOOL

PARENT POP INDEX

(NO NAME PLEASE)

Date ____ N = 11 ____

(Place an X in the column indicating your reaction to the question)

| | PRETTY GOOD | ALRIGHT | NOT SO GOOD |
|---|---|---|---|
| 1. Was it convenient to have a Parent Educator come to your home in the beginning? | 55% | 45% | 0 |
| 2. Is it convenient to have a Parent Educator come to your home now? | 33% | 67% | 0 |
| 3. How did you feel about using the 10 Desirable Teaching Behaviors in the beginning? | 40% | 60% | 0 |
| 4. How do you feel about using the 10 Desirable Teaching Behaviors now? | 70% | 30% | 0 |
| 5. How appropriate were the Home-Task for your child? | 64% | 36% | 0 |
| 6. How clearly were the Home-Tasks written? | 58% | 42% | 0 |
| 7. How well were the Home-Tasks explained by the Parent Educator? | 50% | 50% | 0 |
| 8. How well were the Home-Tasks able to help your child in doing better at school? | 55% | 36% | 9% |

| | ALWAYS | OFTEN | NOT OFTEN | NEVER |
|---|---|---|---|---|
| 9. How often was your child willing to practice Home-Tasks with you in the beginning? | 36% | 45% | 18% | 0 |
| 10. How often is your child willing to practice Home-Tasks with you now? | 60% | 40% | 0 | 0 |

| | YES | NO |
|---|---|---|
| 11. Was finding the time for doing Home-Tasks with your child difficult? | 27% | 73% |
| 12. Has working on Home-Tasks made it easier to communicate with your child in other ways? | 91% | 9% |
| 13. Would you recommend POP to other parents? | 91% | 9% |
| 14. Would you be willing to continue with POP for another year? | 91% | 9% |

OTHER COMMENTS:

Please return this form, filled out, in the accompanying postage-paid, self-addressed envelope.



Table 8: Parent response to Parent Outreach Program efforts, May 1978.

above results obtained with Goal Attainment Guides are an adequate means to approach the evaluation task when the question asked is something akin to, "Is the program producing and is it achieving its objectives" (House, 1978). These managerial questions of productivity and accountability are important considerations for program staff, and goal scaling helps sharpen observation dependent decisions. Furthermore, we arrive at no spurious conclusions providing we do not err by imputing hypothesis-discriminating abilities to our GAS evaluational results--many caveats were interwoven into the results discussed above. But, with test scores being the social symbols of numerical finality they are, it would be tempting to attach causal explantions to GAS outcomes. It would be convenient to forget that Parent Outreach was unable to exercise any experimental control through randomization, and it would be bothersome to recall that the statistical calculations required to derive a GAS score did absolutely nothing to improve on statistical control.

Nevertheless, SAT scores do exist for treated children for both a September 1977 and a May 1978 administration. These scores were also used as the main criterion in the selection of referrals. An important question remaining, then, is how to report these SAT scores in a manner that is not misleading. The mind pleads for closure.

The scores could be treated according to one of the "pre-experimental" designs cited by Campbell and Stanley (1963). But considering the weaknesses of these designs, and the many competing hypotheses that can be mustered to counter their claims of causality, it seems best to simply state pre and post test scores. This is done in Table 9.

The reader who chooses to compute pre-post difference scores and interpret the results in some favored manner is again referred to Campbell and Stanley (1963, pp. 7-12) for a discussion concerning the many sources of internal and external invalidity of such interpretations. The reader who favors the use of matched controls should be made aware that classroom teachers were unable to find equivalent matches for 8 of 25 POP children even after the five matching variables of grade, sex, race/ethnicity, socioeconomic status, and Fall achievement level were reduced to only three. More crucial to the issue are the serious criticisms of matching cited on pages 2, 15, 49, and 70 of the Campbell and Stanley book.

Table 9
Stanford Achievement Test outcomes for 23
Parent Outreach children at two points in time

| CHILD | SAT Percentile Rank September 1977 | SAT Percentile Rank May 1978 |
|---|---|---|
| $C_1$ | 8 | 6 |
| $C_2$ | 12 | 12 |
| $C_3$ | 14 | 10 |
| $C_4$ | 1 | not available |
| $C_5$ | 28 | 22 |
| $C_6$ | 32 | 6 |
| $C_7$ | 28 | 58 |
| $C_8$ | 34 | 34 |
| $C_9$ | 48 | 28 |
| $C_{10}$ | 12 | 6 |
| $C_{11}$ | 12 | 4 |
| $C_{12}$ | 8 | 10 |
| $C_{13}$ | 4 | 26 |
| $C_{14}$ | 14 | 4 |
| $C_{15}$ | 8 | 10 |
| $C_{16}$ | 22 | 36 |
| $C_{17}$ | 20 | 14 |
| $C_{18}$ | 4 | 18 |
| $C_{19}$ | 8 | 20 |
| $C_{20}$ | 26 | 4 |
| $C_{21}$ | 30 | 54 |
| $C_{22}$ | 6 | 12 |
| $C_{23}$ | 30 | 26 |

Program Costs

Parent Outreach functioned with three Parent Educators and one coordinator. The cost of a maintenance program, once development and design procedures are established, are given in Table 10.

These costs can be related to program services in various ways. For instance, $14,880 represents an average expenditure of $381.54 for each of the

Table 10
Costs of a Parent Outreach maintenance program

| | |
|---|---|
| 3 hour paraprofessional PE | $ 4,800.00 (salary + fringe) |
| 3 hour paraprofessional PE | 4,300.00 (salary + fringe) |
| 2 hour paraprofessional PE | 2,000.00 (salary + fringe) |
| 1/4 time coordinator (program and caseload supervision, but not initial program development or evaluation design and summary) | 5,000.00 (salary with no fringe) |
| Materials, conferences, mileage | 1,000.00 |
| Subtotal | $17,100.00 |
| Less 20% of PE time for community liaison duties | 2,220.00 |
| Total | $14,880.00 |

39 families served over the academic year, or $25.66 for each of the 580 family-weeks of service. Costs also represent an expenditure of $18.46 for each of the 806 direct parent contacts completed over the year, or $58.68 per hour of direct contact with parents for each of the 253.6 hours spent in parent conferencing and training. These figures of course, spread costs over only parent contacts and do not take into consideration preparation time, or the innumerable hours spent directly with children either in supportive counseling or in classroom observations. No systematic record was kept for child-contact-time since the original intent was to work with children only through their parents. Reality once again overwhelmed our intentions. Future program cycles should record child-contact-time.

The above figures would take on more relative meaning if they could be compared to programs similar to POP. The National Home Start Evaluation provides some data that may be used for comparison (Love et al., 1976). Although Home Start differs from Parent Outreach in many significant ways (especially with regards to the age level of children), program activities and home visit strategies are quite similar.

Home Start reports that, "The cost of serving a family for one year averaged $1,750 ($1,400 in federal funds and $350 in locally contributed goods and services) but ranged from a low of $1,325 to a high of $2,505" (Love et al., 1976, p. 19). The $1,750 average represents a monthly expenditure of $145.83

per family, or $1,312.50 per family over a nine month period. In contrast, Parent Outreach averaged $381.54 per family over the nine month academic year. Although the reader is again reminded that the two programs are not strictly comparable, these figures do seem to represent the limited amount of data currently available.

A final point with regards to costs concerns the family caseloads of both Home Start and Parent Outreach. Home Start determined that a full-time home visitor could effectively carry between 9 and 13 families; this allowed for approximately 3 monthly visits of 90 to 120 minutes in duration. These values appeared to be optimal for a home-visiting preschool program (Love et al., 1976, p. 28). Parent Outreach on the other hand mounted shorter but more frequent home visits per family (see "Results" above). In addition, POPs 39 families were distributed over three half-time Parent Educators (officially, PEs worked less than half-time on POP activities), giving each PE an average caseload of 13 families. The implications of these contrasts are not yet clear.

## CONCLUSIONS AND RECOMMENDATIONS

Based on the above results, it is concluded that the Margaret Sheehy School Parent Outreach Program was successful in establishing a cost-effective home-based school program focusing on both academic and related needs of referred children. In addition, judging by questionnaire results and anecdotal comments made to PEs, it is likely that the siblings and parents of focal children gained in various ways from program efforts.

Experience tells us that it is too early to detect program resultant changes in SAT scores, especially considering the large proportion of time required to foster a sustained home study regimen. But, it would be prudent for Parent Outreach to develop an experimental or quasi-experimental design that would be able to legitimately utilize SAT results in future program cycles. It seems likely that program efforts will be reflected in enhanced achievement outcomes once parent/child study "takes hold" in the home for any prolonged period of time.

One strategy that would make SAT scores subject to more valid interpretation would be the use of some variation of time-series analysis (Glass, Willson, and Gottman, 1975). Another strategy would be the use of "waiting list controls."

This strategy requires that a pool of referrals be established by the school's referral team, with families being selected for treatment on a purely random or chance basis. Unselected families become a randomly formed "waiting list control group." Random selection represents the least discriminatory (Democratic if you like) manner in which to assign limited and unproven resources to the 120 families that have already been targetted as possible POP recipients for the 1978-1979 year. Additionally, such a procedure is one of the few ways operable on a school site that can give program staff the data from which to establish "if...then" relationships. If the program staff, the school, or the community wish to make statements concerning program causality, then each of these spheres must assume the "risk" of allowing a program to function that is designed specifically to meet acceptable, research-oriented standards. Without such "risk," conclusions at the desired level of "certainty" will not be forthcoming. This does no discredit to an evaluation approach, however. Interestingly enough, a research-orientation may just possibly benefit from prior use of an evaluational-orientation, at least one such as the type represented by GAS. That is, several program cycles using GAS as a means of refining program inputs could greatly attenuate the conspicuous, unreliable homogeneity of the "independent variables" used in intervention research (Brim, 1959, p. 132; Snow, 1974), and enhance the meaning of any "if...then" conclusions arrived at.

Considering the high proportion of culturally non-dominant families served by POP in 1977-1978 and also targetted for service in 1978-1979, a word is necessary with respect to cultural assimilation. It has been mentioned that Home-Tasks, Desirable Teaching Behaviors, and the rest are primarily solutions of the dominant culture for the perceived problems labelled "academic difficulty." Even though participation in POP is voluntary, it is nonetheless appropriate to assume a posture of sensitivity towards the interpersonal communicative patterns of families. Horowitz and Paden (1973) point out that once outsiders begin prescribing parent/child interaction patterns, it no longer becomes possible to avoid questions of values and cultural relativity. For "...it can be argued that subcultures retain their identity in the subtle and complex patterns of interpersonal interaction that one generation teaches another" (p. 354). The extent to which intervention programs emphasizing skills development (school related skills, DTBs, etc.) either hinder or enhance interpersonal processes is

not known. We would do well to heed the reminder that sensitivity to these issues is mandatory if we wish to contribute constructive solutions to society's problems (Horowitz and Paden, 1973, p. 354). To this end, a study is now in progress that seeks to describe the home learning and teaching styles of families representating an array of socioeconomic levels and racial/ethnic group memberships, and whose children score across all achievement levels (Nicassio, 1977b).

A final word is warranted concerning the use of Goal Attainment Scaling in the milieu of a school. At the outset, GAS was conceived of not only as a means of evaluating program outcomes, but also as a training device for the program's paraprofessional staff. The plan was to model and use a regenerating process that relied on empirical results as the basis for decision making--a process consonant with the prevailing, and useful, educational concepts of "diagnostic-prescriptive teaching," "mastery-learning," and "informational feedback." Because scaled Goal Attainment Guides were posted in open view in POP's working and meeting area at the beginning of the school year, they provided a reference and focal point during team meetings. This function is illustrated by the following observations:

1) Scaled goals provided a representation of initial thoughts concerning program potential against which to judge ongoing progress.

2) Guides provided a standard for program decisions in a school environment characterized by flux, shifting frames of reference, changing circumstances, and pressures of the moment.

3) "Proposed Plan of Action" notations provided a constant reminder of the techniques that were trying to be developed and perfected. Such reminders became important during occasional moments of frustration and disappointment.

Maintaining program continuity in the face of staff mobility, a reality in many educational settings, can be a difficult task. When a new coordinator began planning the program for the 1978-1979 academic year, they benefited from the experience of the previous cycle of program efforts. And because they had been easily trained in the Goal Attainment Process and in the interpretation of outcome scores, they were able to formulate performance criteria at levels more closely and realistically matching both the strengths and constraints of the program they inherited. Because Goal Attainment Scaling is continuing to be used, this coordinator will be able to pass on empirically useful results to subsequent program cycles. In this manner, increasing quality and continuity of

services are more likely to be assured the children and families who are the real concern of Parent Outreach.

This paper can conclude with a quote from the National Home Start Evaluation. If you, the reader, will but substitute "Parent Outreach" everytime you come to "Home Start," insight will be gained into the overall impression this writer has developed after his association with the children, parents, and staff of the Parent Outreach Program:

> "In short, many changes in Home Start families as a result of their program experience are unrecorded here; they persist in the ways that parents approach continuing and inevitable problems with housing, jobs, or family members; in their willingness to tackle new jobs and learn new skills; in knowing where to go and how to ask for help on their own terms when they need it. And for many parents, the influence of Home Start shows up simply in the quality of the relationship between them and their children--a relationship more clearly understood by some, more eagerly developed by others, and more rewarding, they say."
>
> (Love et al., 1976, p. 12)

# REFERENCES


Alkin, M. C. Evaluation theory development. Evaluation Comment 2, No. 1, 1969.

Brim, O. G. Methods of educating parents and their evaluation. In O. G. Brim (Ed.), Education for child rearing. New York: Russell Sage Foundation, 1959, pp. 122-141.

Brophy, J. E., and Good, T. L. Teacher-student relationships: Causes and consequences. New York: Holt, Rinehart and Winston, Inc., 1974.

Byassee, J., and Tamberino, E. Individually tailored behavioral goals and therapeutic summer camping: A preliminary evaluation. Goal Attainment Review, 1975-76, 2, 71-78.

Campbell, D. T., and Stanley, J. C. Experimental and quasi-experimental designs for research. Chicago: Rand McNally, 1963.

Garwick, G. Comments on Stoudenmire and Comola's application of standardized Goal Attainment Scales. Applications of Goal Attainment Scaling, Program Evaluation Resource Center, 1976, pp. 72-75.

Garwick, G. T-Score to Percentile Rank Conversion Table: Technical Report of the Project Evaluation Project. The Project Evaluation Project, 501 Park Avenue South, Minneapolis, Minnesota 55415.

Glass, G. V., Willson, V. L., and Gottman, J. M. Design and analysis of time-series experiments, Boulder, Colorado: Colorado Associated University Press, 1975.

Gordon, I. J. Early child stimulation through parent education. (Final Report to the Children's Bureau, Social and Rehabilitative Services, Department of Health, Education and Welfare). Gainesville, Fla.: Institute for the Development of Human Resources, University of Florida, 1969.

Hegion, A. E., Fish, E., and Grace, S. Goal Attainment Scaling: An alternative for measuring academic progress. Goal Attainment Review, 1974, 1, 20-34.

Hersen, M., and Barlow, D. H. Single case experimental designs: Strategies for studying behavior change. New York: Pergamon Press, 1976.

Horowitz, F. D., and Paden, L. Y. The effectiveness of environmental intervention programs, in B. M. Caldwell and H. N. Ricciuti (Eds.), Review of child development research (Vol. 3): Child development and social policy. Chicago: University of Chicago Press, 1973, pp. 331-402.

House, E. R. Assumptions underlying evaluation models. Educational Researcher, 1978, 7, 4-12.

Kiresuk, T. J., and Sherman, R. E. Goal attainment scaling: A general method for evaluating comprehensive community mental health programs. Community Mental Health Journal, 1968, 4, 443-452.

Kirkhart, K. Evaluation of a training program for adoption and foster care workers by Goal Attainment Scaling. Goal Attainment Review, 1977, 3, 167-192.

Love, J. M., Nauta, M. J., Coelen, C. G., Hewett, K., and Ruopp, R. R. National home-start evaluation: Findings and implications. (Final Report). Ypsilanti, Mich.: High/Scope Educational Research Foundation, and the Department of Health, Education, and Welfare, 1976.

Nicassio, F. J. Parents as home-based tutors of their own children: A review of elementary level and selected preschool interventions. Unpublished manuscript. University of California, Santa Barbara, 1977a.

Nicassio, F. J. Parent/child communicative interaction patterns induced by a home learning task: A proposal for research. University of California, Santa Barbara, 1977b.

Nicassio, F. J. Exercises in classroom problem solving: A short handbook in behavioral analysis and intervention. Santa Barbara: University of California Extension, 1977c. (Mimeograph)

Nicassio, F. J. Parent outreach program: Parents as home-based tutors of their own children. (Final Report) Merced, Cal.: Merced City School District, 1978.

Patterson, G. R., and Gullion, M. E. Living with children: New methods for parents and teachers. Campaign, Ill.: Research Press Company, 1971.

Popham, W. J. Educational evaluation. Englewood Cliffs, N.J.: Prentice-Hall, 1975.

Rosenthal, R., and Jacobson, L. Pygmalion in the classroom: Teacher expectation and pupils' intellectual development. New York: Holt, Rinehart and Winston, 1968.

Snow, R. E. Representative and quasi-representative designs for research in teaching. Review of Educational Research, 1974, 44, 265-291.

State of California. Report on the Reading Test: Second and third grades: Merced City Elementary: Margaret Sheehy Elementary. Sacramento, Cal.: California Assessment Program, 1977.

Stelmachers, Z., Lund, S., and Meade, C. Hennepin County Crisis Intervention Center: Evaluation of its effectiveness. Evaluation, 1972, 1, 61-65.

Stoudenmire, J., and Comola, J. Evaluating Camp Climb-up: A two-week therapeutic camp. (Unpublished Report) Tupelo, Miss.: Mental Health Complex, 830 South Gloster Street, 1972.

Stufflebeam, D. L., et al. Educational evaluation and decision making. Itasca, Ill.: F. E. Peacock, 1971.

Webb, L. Administrative evaluation in an outpatient mental health clinic for adolescents. Goal Attainment Review, 1975-76, 2, 157-168.

Weiss, C. H. Evaluation research: Methods of assessing program effectiveness. Englewood Cliffs, N.J.: Prentice-Hall, 1972.

Yakima Public Schools. Project home base: Report to United States Office of Education. Mimeographed. Yakima, Wash.: Yakima Public Schools, 1975.

Yakima Public Schools. Project home base: Helping parents teach their own. Yakima, Wash.: Yakima Public Schools, 1976.

## Footnotes

[1]This paper describes the results of the labors of the following persons who are gratefully acknowledged: former Sheehy School principal Dr. Neil Schmidt who was the inspiration behind Parent Outreach; the faculty and School Advisory Committee, too numerous to mention, whose budgetary allocations gave the program actual substance; and especially the POPPEs, Marge Perez, Judy Sabala, and Ola Winzer whose sensitive industry contributed most to the results herein discussed. The work described in this paper was completed while the author was a consultant and doctoral candidate at the University of California, Santa Barbara.