

*A COMPARISON OF THREE STAFF-MANAGEMENT PROCEDURES*H. ROBERT QUILTCH<sup>1</sup>

NEVADA MENTAL HEALTH INSTITUTE

Even though administrators must have effective staff-management procedures to ensure implementation of desired programs, many traditional staff-management procedures remain unevaluated. This study investigated the effectiveness of three such procedures. The administrator of an institution for the retarded (1) sent a memo instructing all staff to lead daily recreational activities, (2) sponsored a workshop teaching staff to lead such activities, and (3) assigned staff activity leaders and provided performance feedback to staff by publicly posting the daily average number of active residents on each ward. Neither the memo nor the workshops motivated staff to lead activities, but after staff were scheduled to lead such activities and given performance feedback, the average daily number of residents engaged in activities on four wards for 95 retarded persons increased from seven to 32. The administration of this facility has adopted similar procedures to maintain such activities on all wards.

DESCRIPTORS: activities, administrative procedures, attendants, feedback, inservice training, memos, retardates, staff scheduling, staff workshops, feedback to staff

Administrators responsible for the successful delivery of services to the institutionalized retarded must possess effective management procedures to ensure that desired programs are actually implemented by line staff. Otherwise, administrators who have no reliable means of directing the day-to-day work of their staff will be hard pressed to guarantee others, such as interested legislators, that an innovative program will actually reach its intended clients.

Many effective remedial procedures for the retarded have been developed and disseminated (*Journal of Applied Behavior Analysis*, 1968 to

present) but have not been brought into general use. Perhaps the technology of therapy and training has surpassed the technology of program implementation. After reviewing many state institutions for the retarded, one author concluded: "A wide discrepancy exists between programs reported in the literature and the number of available programs. It is one thing to demonstrate remedial or therapeutic programs, but it is quite another to adopt them effectively as routine programs" (Balthazar, 1972, p. 10). Effective staff-management techniques allow administrators to implement desired programs by precisely directing the work of line staff.

Many common staff-management procedures seem to be based simply upon tradition. An administrator might typically send out a memo in an effort to change staff work behavior; another might arrange a series of staff in-service training workshops to accomplish the same ends. Research could verify the effectiveness of such staff-management procedures. Threats to fire staff were found ineffectual, for example, while proportional payment contingent upon work accomplished greatly improved the work performance of neighborhood youth corps aides working

---

<sup>1</sup>I wish to thank Dolores Davis, RN, Clinic Administrator; David Edwards, MSW, Acting Clinic Administrator, and Jeannette Gray, RN, Assistant Clinic Administrator of the Mental Retardation Services for assistance in the public evaluation of these procedures. This work could not have been completed without the friendly cooperation provided by Dr. Victor J. LoCicero, Institute Director and all the staff of these wards. Susan Miller managed data collection, and Dr. Todd Risley provided helpful experimental design suggestions. Reprints may be obtained from the author, Department of Psychology, Nevada Mental Health Institute, Box 2460, Reno, Nevada 89505. of Kansas, Lawrence, Kansas 66045.

within an urban recreation center (Pierce and Risley, 1974). Performance feedback is another useful staff-management procedure available to administrators. Feedback improved the performance of teachers (Cooper, Thompson, and Baer, 1970), reading tutors (Barnard, Christopherson, and Wolf, 1974), and psychiatric aides (Panyon, Boozer, and Morris, 1970). It has also been shown that feedback and cash incentives contingent upon patients' behavioral improvement led staff to train for even greater improvements (Pomerleau, Bobrove, and Smith, 1973).

One problem facing many administrators of institutional programs for the retarded is chronic resident inactivity. General idleness and a lack of purposeful activity is a persistent and widespread problem among the 200,000 institutionalized mentally retarded in this country (Blatt, 1969). Such inactivity is associated with poor health (Comstock, Mayers, and Folsom, 1969) and low morale (Maddox, 1963). Stereotyped behaviors are found more often within institutional environments that lack opportunities, materials, and leadership for purposeful activities (Klaber and Butterfield, 1968). Such stereotypies are generally incompatible with purposeful, socially useful behaviors (Berkson and Mason, 1963; Berkson and Mason, 1964; Moseley, Faust, and Reardon, 1970). Increased toy play, for example, reduced or eliminated stereotypies among institutionalized mentally retarded persons (Favell, 1973).

The present study compared the effects of three staff-management procedures in maintaining a daily recreational activity program for residents of an institution for the mentally retarded.

## METHOD

### *Subject and Setting*

Ninety-five mentally retarded persons lived within four wards at the Nevada Mental Health Institute. They had lived there from one month to 40 yr (mean = 10 yr), ranged in age from 3 to 55 yr (mean = 20 yr), and had been given IQ scores ranging from two to 63 (mean = 20).

This program was staffed during the day by a Chief Administrator, Assistant Chief Administrator, four registered nurses, two licensed practical nurses, 17 mental health technicians, and 10 foster grandparents. Mental health technicians and foster grandparents responsible for activities on each ward were supervised by another mental health technician, the designated ward manager. All ward managers reported to the Chief and Assistant Administrator. All staff had easy access to a toy lending library and numerous books that explained how to lead activities for such residents.

### *Recording Procedures and Reliability*

The Planned Activity Check evaluation of group care (Risley and Cataldo, 1973) was adapted for use in these studies. Each ward was observed four times daily, Monday through Friday. Four of the nine 15-min intervals from 9 to 11 A.M. (9:00, 9:15, 9:30, *etc.*) were randomly chosen as observation times each morning. Observations were randomized to prevent staff from initiating activities just before an observation. A ward observation took about 4 min and consisted of two observational sweeps in rapid sequence. First, the observer walked through an entire ward (including bathrooms), following a map of the ward, counting the number of residents present. The *active* residents were then counted during the second sweep. A resident was counted as active if he was doing a chore, grooming himself, reading or writing, conversing with another person, or using recreational materials. Inactive residents not included in this count were usually napping, staring, rocking, pacing, or engaged in stereotypies. The figures were summed and averaged at the end of each morning to determine the daily average number of residents present and the daily average number of active residents on each ward.

The primary observer made 804 observations on the four wards throughout this study. Reliability observers made 204 evenly spaced observations, about 25 reliability observations in each of the baseline and scheduling plus feed-

back conditions on the four wards observed. The number of times the observers agreed or the degree to which they differed was tallied. When counting the number of active persons on the four wards, for example, the observers agreed exactly 152 times (75%),  $\pm 1$ , 44 times (22%), and  $\pm 2$ , 8 times (4%). Thus, their counts agreed exactly or were within  $\pm 1$  of each other for 97% of their observations. Similarly, when observing the number of persons present on each of the four wards, the two observers agreed exactly on 54% of their observations, were within  $\pm 1$ , for 31%,  $\pm 2$  for 9%, and  $\pm 3$  to 6, for 6% of their observations. Naive observers (persons having no knowledge of the study and untrained in data collection except for a page of written instructions read just before observing) made 34 of the above 204 reliability observations on all four wards across all experimental conditions. When counting the number of active residents, the naive and primary observer agreed exactly for 57%,  $\pm 1$ , for 36%, and  $\pm 2$ , for 7% of their observations. This demonstrated that the observer instructions were nontechnical and determined that observer expectations were not biasing data collection.

### *Experimental Procedures*

1. *Memo.* An official memo from the Chief Administrator was distributed to all staff on Day 1. This memo stressed the importance of daily activities for all residents and suggested that they be carried out in a designated activity room on each ward, from 9:00 to 11:00 A.M. each day.

2. *Activities workshop.* An instructional workshop teaching ward staff how to lead recreational activities was held from 8:00 A.M. to noon for the staff of Ward I between Day 19 and Day 20 (data were not collected on the day of a workshop). Both this workshop and the one to follow were publicized well in advance and extra staff were brought in to cover a ward so that all the regular staff might attend. A technician from the Department of Psychology gave a talk emphasizing the importance of construc-

tive activities involving verbal and social interaction as a means of helping residents maintain good contact with their environment. A recreational therapist told of the importance of social relationships and how they could be fostered through activities. A short film described a procedure useful in handling large numbers of persons passing from one activity area to another.<sup>2</sup> A slide presentation demonstrated that even the most severely and profoundly retarded residents were capable of learning to participate in activities such as block play, water coloring, doll play, rhythm band, and socially oriented ball games. An intermission was held for coffee, donuts, and informal discussion among all workshop participants. The Director of Psychology then spoke on the importance of simple activities, such as those taught within good preschool programs. All staff filled out workshop evaluations anonymously. The same workshop was held on Ward II between Day 22 and Day 23.

3. *Scheduling and feedback.* On Day 37, an activities schedule for one month was posted on Ward I, specifying that activities would be held between 9:00 and 11:00 A.M., and gave the room number in which the activities were to be held and the names of mental health technicians responsible for leading three days of activities. A feedback poster that gave the name of the activity leader for the previous day and the daily average number of active residents for the ward was visibly posted in the nursing station. A graph on the lower portion of the poster depicted the same figure. This poster was maintained daily by the observer and provided the staff with their first opportunity to monitor the number of their residents in activities. These same procedures were put into effect on Ward II on Day 46.

Since the creation and maintenance of daily recreational activities was highly desirable within this setting, a multiple-baseline experimental

<sup>2</sup>*The organization of day care environments: zone versus man-to-man defense*, a 10-min color, sound, film produced by Dr. Todd R. Risley, available for rental from the Bureau of Child Research, University of Kansas, Lawrence, Kansas 66045.

design was chosen to demonstrate increased activities without requiring that staff efforts cease during a reversal period (Kazdin, 1973).

## RESULTS

Since the average number of residents present on each of the four wards did not vary systematically across experimental conditions, these figures were not graphed. A daily average of two residents of 28 present, were active on Ward I, and a daily average of one resident, of 29 present, was active on Ward II in the baseline condition for these wards. Technical difficulties prevented the first seven days of observations on Ward II. Thus, a daily average of only three of 57 residents were active on these wards, even after all staff had received an official administrative memo instructing them to initiate such activities.

Further analysis revealed that the daily average number of active residents on Ward I was one before and two after the workshop was held, while this figure averaged one before and one after the workshop for Ward II.

With implementation of scheduling and feedback procedures, the daily average number of active residents rose from one to seven on Ward I and from one to eight on Ward II. These data are summarized in Figure 1.

The memos and workshops, nonfunctional in themselves, might have been necessary preconditions for the scheduling and feedback to improve staff performance. If this were true, scheduling and feedback alone would not modify staff behavior. Thus, only the scheduling and feedback procedures were then implemented on Wards III and IV, both wards similarly lacking activities for their residents. This second study commenced about three months after the first.

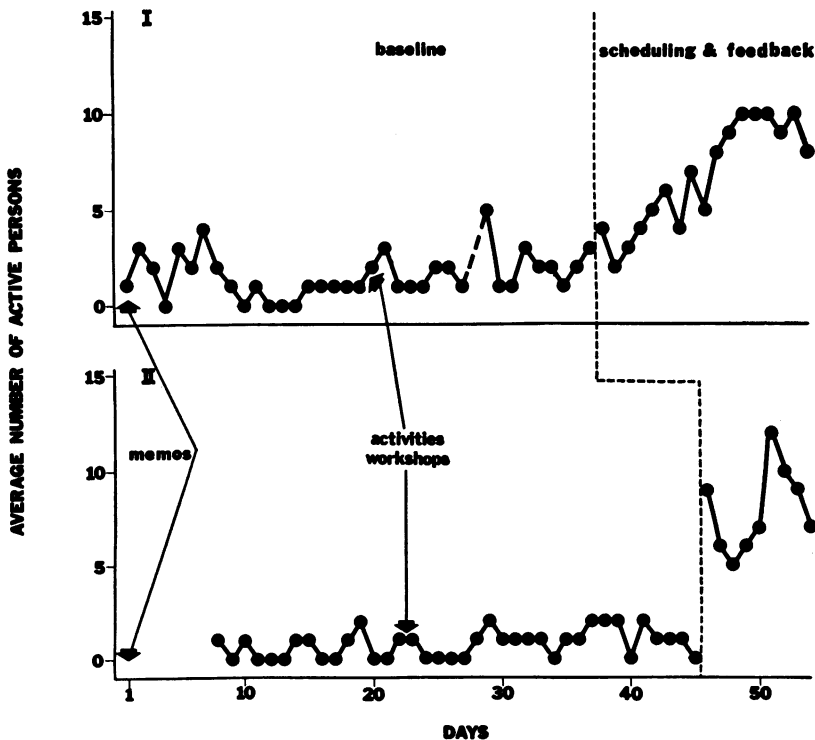


Fig. 1. The daily average number of active persons living on two wards for the mentally retarded after the staff were sent a memo instructing them to lead activities (Day 1), provided a workshop teaching them how to lead activities ("activities workshop"), and scheduled to lead activities and provided feedback on the daily average number of active persons.

The daily average number of active residents increased from two to seven of 14 persons present on Ward III and from two to 10 of 24 present on Ward IV. These data are summarized in Figure 2.

Four staff, one on each ward daily, were thus able to engage a daily average of 32 residents, about one-third of the total population of 95, under the scheduling and feedback condition.

*Social validation.* To determine whether such recreational activities were judged as useful and socially relevant by persons *other than the researcher* (Baer, Wolf, and Risley, 1968), 75 staff (mental health technicians, nurses, social workers, and secretaries) and five parents of residents of this facility were formally given written descriptions of these activities and asked whether such activities would be helpful for the residents if held daily. This poll was implemented by a secretary, using a written, secret ballot procedure. All 80 persons voted "yes".

The effectiveness of the scheduling and feed-

back procedures was then validated (Phillips, Phillips, Wolf, and Fixsen, 1973). Two staff members from each of the four wards observed were asked to estimate the percentage of residents on each ward engaged in desirable or rehabilitative activities on a scale from one (none engaged) to 10 (all engaged) between 9 and 11 A.M. before and after the schedules and feedback posters were placed on each ward. These eight staff members rating ranged from one to three (mean = 2.2) before and from eight to 10 (mean = 9) after the schedules and posters were placed on each ward.

Thus, a large number of interested persons freely judged the activities encouraged by this study as helpful to these residents. Furthermore, staff having an opportunity to observe each ward before and after these activities were implemented estimated that the percentage of residents engaged by desirable activities increased about four-fold after the schedules and posters were placed on each ward. These data were solicited

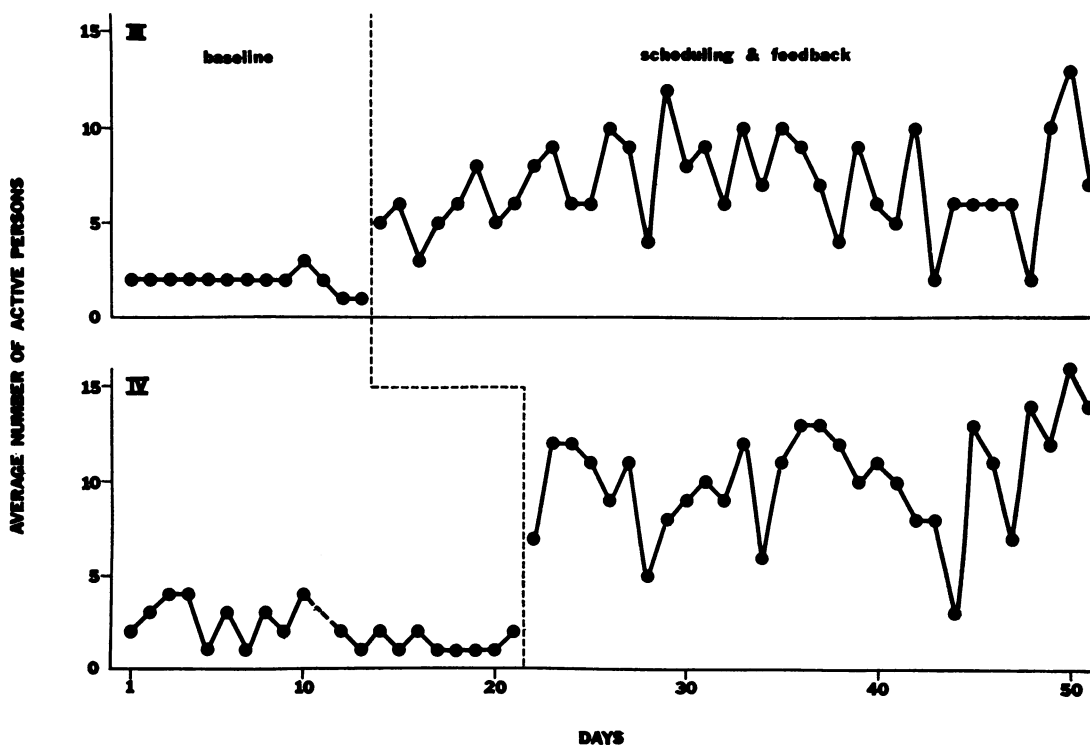


Fig. 2. The daily average number of active persons living on two wards for the mentally retarded before and after staff were scheduled to lead activities and provided feedback on the daily average number of active persons.

from staff about nine months after the last study described was completed.

## DISCUSSION

This study clearly demonstrated that memos and workshops were ineffective administrative staff-management procedures within this setting, while staff scheduling and performance feedback effectively motivated ward staff to lead daily recreational activities. Perhaps demonstrations of effectiveness should be required of any staff-management procedure by the administration of any facility before large amounts of professional time and money are invested in one procedure.

It is generally assumed by administrators that in-service training leads to improved staff performance and, finally, more effective service programs. Some administrators are of the opinion that all staff performance problems can be solved through additional training (*American Society for Hospital Education and Training*, 1969). Workshops are frequently used to deliver this training and generally consist of prepared talks (Hegedus, McCarthy, and Scipien, 1973), audio-visual aids (*Educational Technology*, 1969), case presentations and live demonstrations (Foster, 1970), discussion groups (Rossier and Steiger, 1969), handbooks and texts (Adler and DeBlois, 1973), specially prepared instructional materials (Root, 1973), refreshments (Hardy, 1974), and questionnaires allowing participants to evaluate the workshop (Johnson and Ferryman, 1969). Unfortunately, much of the literature on in-service training describes various existing programs at specific institutions, rather than documenting their effectiveness in improving staff performance (Butterfield, 1967), and available research does not bear out the optimistic assumptions made about the value of in-service training. In objectively rating the services provided by six institutions for the retarded, Klaber (1969) found that the least effective of the six had the strongest in-service training program and concluded that, overall, there was

simply no relationship between institutional effectiveness and in-service training.

In-service training directors are frequently asked to handle employee performance problems that could be much more effectively and humanely dealt with through administrative changes. One student of employee performance problems suggests 11 reasons, *other than a lack of training*, for staff not meeting administrative expectations (Mager and Pipe, 1970). An administrator concerned over employee tardiness who requested that the in-service department hold workshops to "motivate" employees to come to work on time, for example, would probably waste large amounts of professional time, set the occasion for considerable bickering, and not solve the problem. Such an administrator might more simply install a time clock and consequate tardiness or punctuality.

Both memos and workshops used in these studies may be considered as unsequenced instructions to staff and, as such, would not be expected to exert a powerful effect over staff performance (Ayllon and Azrin, 1968). Such instructions, if carefully sequenced, might be quite effective in improving staff performance.

No relationship was found between the workshops, staff's evaluations of the workshops, and the workshops' effect upon staff performance. Staff evaluations of both workshops were overwhelmingly positive. Many personally thanked the workshop organizers for coming to talk with them. Evaluation comments, given anonymously, such as "material presented was useful, easy to apply and understand" were typical.

Previous research in this setting had demonstrated that institutionalized mentally retarded persons such as these would neither initiate nor maintain their own daily recreational activities without appropriate materials and staff assistance (Quiltch and Gray, 1974). This suggested that the residents' activities might be accepted as an outcome or product measure of staff's efforts in this area. This strategy, especially useful to administrators, was used in a study that compared the effectiveness of various procedures in improv-

ing the performance of psychiatric aides (Pomerleau, Bobrove, and Smith, 1973).

An administrator should probably never assume that desirable staff behaviors will necessarily lead to desirable client behaviors. One researcher has shown, for example, that contingent cash bonuses to staff for leading training sessions greatly increased the number of such training sessions, but had no significant effect on the performance of students of the sessions (Martin, McDonald, and Murrel, *unpublished*).

While the specific procedures outlined in this paper could probably not be entirely adopted by the administration of such a facility, they may be easily modified into a series of weekly self-reports on activities from each ward manager to the administrator. The administrator may discuss the reports weekly with the ward managers and post the reports publicly. The facility in which this study was carried out has adopted such a system, with results considered successful by administrative personnel.

## REFERENCES

- Alder, D. and DeBloois, M. Stimulating faculty readiness for instructional development: a conservative approach to improving college teaching. *Educational Technology*, July, 1973, 16-19.
- American Society for Hospital Education and Training of the American Hospital Association. Training versus management in improving employee performance. In *Bulletin on Hospital Education and Training*, February, 1969.
- Ayllon, T. and Azrin, N. *The token economy*. New York: Appleton-Century-Crofts, 1968.
- Baer, D., Wolf, M., and Risley, T. Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1968, 1, 91-97.
- Balthazar, E. Residential programs in adaptive behavior for the emotionally disturbed more mentally retarded. *Mental Retardation*, 1972, 10, 10-13.
- Barnard, J., Christophersen, E., and Wolf, M. Supervising paraprofessional tutors in a remedial reading program. *Journal of Applied Behavior Analysis*, 1974, 7, 481.
- Berkson, G. and Mason, W. Stereotyped movements of mental defectives: III. Situation effects. *American Journal of Mental Deficiency*, 1963, 68, 409-412.
- Berkson, G. and Mason, W. Stereotyped movements of mental defectives: IV. The effects of toys and the character of the acts. *American Journal of Mental Deficiency*, 1964, 68, 511-524.
- Blatt, B. Purgatory. In R. Kugel and W. Wofensberger (Eds.), *Changing patterns in residential services for the retarded*. A monograph report by the President's Committee on Mental Retardation. Washington, D.C.: U.S. Government Printing Office, 1969. Pp. 35-49.
- Butterfield, E. The characteristics, selections and training of institution personnel. In A. Baumeister (Ed.), *Mental retardation*. Chicago: Aldine Publishing Company, 1967. Pp. 305-328.
- Comstock, R., Mayers, R., and Folsom, J. Simple physical activities for the elderly. *Hospital Community and Psychiatry*, 1969, 20, 377-380.
- Cooper, M., Thompson, C., and Baer, D. The experimental modification of teacher attending behavior. *Journal of Applied Behavior Analysis*, 1970, 3, 153-157.
- Educational Technology*. Summer science institute aids India's teachers (in News Notes), April, 1969, 2.
- Favell, J. Reduction of stereotypies by reinforcement of toy play. *Mental Retardation*, 1973, 11, 21-23.
- Foster, R. Here's how in-service education works. *Modern Hospital*, October, 1970, 95-98.
- Hardy, H. *Child abuse: a community concern*. An announcement of a workshop sponsored by the University of Nevada at Reno School of Home Economics, March, 1974.
- Hegedus, K., McCarthy, K., and Scipien, G. Continuing education in retardation nursing. *Mental Retardation*, 1973, 11, 28-30.
- Johnson, D. and Ferryman, Z. In-service training for the non-professional in a mental retardation center. *Mental Retardation*, 1969, 7, 10-13.
- Kazdin, A. Methodological and assessment considerations in evaluating reinforcement programs in applied settings. *Journal of Applied Behavior Analysis*, 1973, 6, 517-531.
- Klamber, M. The retarded and institutions for the retarded—a preliminary report. In S. Sarason and J. Doris (Eds.), *Psychological problems in mental deficiency*. New York: Harper & Row, 1969. Pp. 148-185.
- Klamber, M. and Butterfield, E. Stereotyped rocking—a measure of institution and ward effectiveness. *American Journal of Mental Deficiency*, 1968, 73, 13-20.
- Maddox, G. Activity and morale: a longitudinal study of selected elderly subjects. *Social Forces*, 1963, 42, 195-204.
- Mager, R. and Pipe, P. *Analyzing performance problems or 'you really oughta wanna'*. Belmont: Fearon Publishers, 1970.
- Martin, G., McDonald, L., and Murrel, M. *Developing and maintaining behavior modification skills of psychiatric nurses, aides and attendants working with institutionalized retardates*. Unpublished

- paper presented before the American Psychological Association, Montreal, 1973.
- Moseley, A., Faust, M., and Reardon, D. Effects of social and nonsocial stimuli on the stereotyped behaviors of retarded children. *American Journal of Mental Deficiency*, 1970, **74**, 809-811.
- Panyon, M., Boozer, H., and Morris, N. Feedback to attendants as a reinforcer for applying operant techniques. *Journal of Applied Behavior Analysis*, 1970, **3**, 1-4.
- Phillips, E., Phillips, E., Wolf, M., and Fixsen, D. Achievement Place: development of the elected manager system. *Journal of Applied Behavior Analysis*, 1973, **6**, 541-561.
- Pierce, C. and Risley, T. Improving job performance of neighborhood youth corps aides in an urban recreation program. *Journal of Applied Behavior Analysis*, 1974, **7**, 207-215.
- Pomerleau, O., Bobrove, P., and Smith, R. Rewarding psychiatric aides for the behavioral improvement of assigned patients. *Journal of Applied Behavior Analysis*, 1973, **6**, 383-390.
- Quilitch, R. and Gray, J. Purposeful activity for the PMR: a demonstration project. *Mental Retardation*, 1974, **12**, 28-29.
- Risley, T. and Cataldo, M. *The Planned Activity Check: material for training observers*. Lawrence: Center for Applied Behavior Analysis, 1973.
- Root, A. Educational dynamics: modeling instructional development processes in schools. *Educational Technology*, July, 1973, 32-35.
- Rossier, M. and Steiger, T. Teaching attendants to cope with stressful patient situations. *American Journal of Nursing*, February, 1969, 305-309.

Received 18 March 1974.

(Final acceptance 30 October 1974.)