*TRAINING PUBLIC-SPEAKING BEHAVIOR: AN
EXPERIMENTAL ANALYSIS AND SOCIAL VALIDATION¹*

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The effect of an instructional package on public-speaking behaviors was analyzed in two experiments. The instructional package was designed to teach public-speaking trainees to look at the audience, make gestures, and perform a number of speaking behaviors. The results of Experiment 1, with a university student serving as the trainee, showed that the percentage of each category of public-speaking target behavior increased only after the instructional package was introduced for that category. The results of Experiment 2, with three low-income paraprofessional staff members of a neighborhood service center serving as trainees, showed that the percentage of target behaviors increased after the instructional package was introduced for the respective trainee. Audience ratings of public-speaking performance were correlated with direct observations of target responses. All trainees showed marked improvements in audience ratings from pretraining to post-training. This study demonstrated an effective procedure for training public-speaking behaviors.

DESCRIPTORS: training public speaking, role playing, welfare recipients, instructional package for public speaking, community setting, multiple baseline, social validation, consumer satisfaction, paraprofessional training

Some authors have suggested that public speaking is "not a gift bestowed by Providence on only a few rarely endowed individuals" (Carnegie, 1971; p. 4) but rather, a skill to be taught and learned. A number of public-speaking manuals (*e.g.*, Mambert, 1968; Ott, 1970; Sarnoff, 1970; Stedman, 1971) have identified skills thought to be associated with public-speaking behavior. However, the absence of precise behavioral specifications for public speaking precludes reliable observation of the effects of such manuals upon public-speaking performance.

A behavioral approach to the training of public-speaking skills involves two prominent considerations: specification of target behaviors and development of effective training techniques.

The first consideration involves specifying public-speaking target behaviors. A search of the literature on public speaking suggests the particular importance of such target behaviors as looking at the audience or making eye contact (*e.g.*, Ott, p. 139), making gestures (*e.g.*, Mambert, p. 183), smiling, and pausing momentarily before beginning to speak (*e.g.*, Carnegie, 1971; Sarnoff, 1970). A precise specification of these behaviors may allow for the reliable observation and training of public speaking.

The second consideration involves developing effective training techniques. This requires selection and detailed specification of procedures designed to affect public-speaking performance. Most manuals to train public speaking (*e.g.*, Carnegie, 1971) consist of general instructions and examples of various public-speaking situations. Mager (1962) indicated the importance

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of preparing precise, observable descriptions of desired behaviors in the development of instructional objectives. This suggests the usefulness of written behavioral specifications as part of an instructional package designed to train public-speaking target behaviors. Some psychologists (*e.g.*, Argyle, 1967; Serber, 1972) have suggested that role-playing or behavior rehearsal, plus performance feedback are useful in training complex interaction skills. Gardner (1972) and Gartner and Riessman (1972) emphasized the particular importance of behavior rehearsal in training paraprofessionals. Jones (1969) and Riessman and Goldfarb (1964) have also suggested the usefulness of role-playing as an action technique suitable to train low-income persons. The combination of written behavioral specifications and behavior rehearsal may prove effective in training low-income paraprofessionals to speak in public.

The present study consisted of two experiments designed to analyze the effectiveness of an instructional package, involving both written instructional and behavior rehearsal components, on specified public-speaking behaviors. A scripted slide presentation served as the framework within which public-speaking behaviors were observed. Experiment 1 involved a preliminary experimental analysis of the training sections (*i.e.*, eye contact, gestures, and speaking behaviors) of the instructional package. In Experiment 2, the total instructional package was tested with three low-income paraprofessional staff members of a neighborhood service center. An attempt to determine the social validity of the target behaviors selected for training was made by asking audiences to rate the trainees' speaking skills before and after training.

GENERAL METHOD

Scripted Slide Presentation

A scripted slide presentation served as the framework within which public-speaking behaviors were observed. The information to be presented was organized in the form of a writ-

ten script. Slides were obtained depicting the activities described in the written script. The slides were then arranged so that several script lines were associated with each slide. An individual speaker's presentation consisted of approximately 13 slides grouped according to topic area. The content of each speaker's presentation remained constant during baseline and posttraining speaking sessions.

Public-speaking behaviors were observed in a series of speaking sessions for each trainee. A speaking session began with an introduction of the speaker and ended when the speaker finished talking about the scripted topic.

Observation

Two observers (each observing different behaviors) were present for each speaking session to make direct observations of the following categories of public-speaking behavior:

Eye contact: defined as the trainee's head and face directed toward the audience. An observer time-sampled the occurrence or nonoccurrence of eye contact at 10-sec intervals.

Gestures: defined as a movement of one or both hands for a distance of at least 3 in. (7.5 cm). An observer recorded on a checklist the occurrence or nonoccurrence of gestures for each of the presented slides.

Speaking behaviors. The target behaviors for this category were divided into "initial" speaking behaviors (those occurring before the scripted presentation) and "closing" speaking behaviors (those occurring after the scripted presentation). The initial speaking behaviors were:

1. *Appropriate position on stage:* speaker standing with body oriented toward the largest part of the audience, and in a position within 10 ft (3 m) from the first row of chairs in the audience.

2. *Initial eye sweep:* scanning the audience and pausing for not less than 3 sec with head and face directed toward the audience while smiling.

3. *Acknowledgment of introduction*: statement of appreciation directed to the host person by name.

4. *Initial greeting*: a greeting statement directed to the audience while smiling.

5. *Topic introduction*: an introduction statement for the topic given while facing the audience.

The closing speaking behaviors were:

1. *Final eye sweep*: scanning the audience and pausing for not less than 3 sec with head and face directed toward the audience while smiling.

2. *Final greeting*: a final greeting statement directed to the audience while smiling.

3a. *Request for questions*: a question request given while facing the audience; this followed the final greeting if the speaker was the last speaker to present.

3b. *Speaker introduction*: an introduction statement using the speaker's name while smiling and facing the audience; this followed the final greeting if the speaker was to be followed by another speaker.

An observer used a checklist to score the occurrence or nonoccurrence of each of these target behaviors.

Other. Appearance, posture, and loudness were at near-perfect levels during baseline for all trainees, and data on these behaviors are not presented.

Reliability checks were taken by independent observers who scored the speaking sessions with the first and second observers. At least one reliability check was taken in each experimental condition for all subjects. Total reliability was calculated by dividing the total number of agreements times 100 by the number of agreements plus disagreements.

Instructional Package

An instructional package (involving written instructional and behavior rehearsal components) was developed to instruct the trainee in appropriate public-speaking behaviors. The instructional materials, contained in an 83-page

Public Speaking Manual,² consisted of behavioral specifications, situational examples, and quizzes.

Procedurally, the public-speaking trainer administered the written instructions and short-answer quizzes for a particular section (for example: "How to Make Gestures") until the trainee answered all quiz items correctly. The trainee, having passed the quiz, then participated in the behavior rehearsal sessions.

The behavior rehearsal component involved rehearsing the particular target behavior in the presence of a public-speaking trainer. The trainee received feedback in the behavior rehearsal sessions on the percentage occurrence of the target behavior. The trainee was considered trained for a particular category when he or she had attained the predetermined training criterion for the particular behavioral category on two consecutive behavior rehearsal sessions. Slightly lower criteria were employed in a similar correction procedure for posttraining speaking sessions. The posttraining correction procedure involved re-administering the instructional package for those trained categories of public-speaking behavior that failed to meet the post-training criteria in speaking sessions after training. The training criteria were set at levels thought sufficient to maintain high degrees of performance on the target behaviors.

A memorization training procedure employed in association with the eye contact training involved different techniques than those described. Procedurally, a slide was projected on the screen with the instruction for the trainee to read both the script sentences and the key ideas (usually one underlined word) for those sentences. The trainee was considered trained when he or she made two consecutive errorless presentations without reading.

The low-income trainees of Experiment 2 required an average total time of 7 hr to complete the entire instructional package; the undergrad-

²Copies of the *Public Speaking Manual* are available from the first author upon request for \$6.00 per copy.

uate university student trainee of Experiment 1 required 4 hr to complete it.

EXPERIMENT 1

Trainee and Setting

One college student enrolled in a community research practicum course at the University of Kansas served as the trainee. The student, Andy, had no formal training in public-speaking skills.

The setting was a small classroom at the University of Kansas. The first and second observers were at the back of the room during each speaking session. An audience was also present during one pre- and one posttraining speaking session to rate Andy's performance.

Experimental Conditions

The effect of the instructional package on performance in three categories of public-speaking behavior was analyzed by a multiple-baseline design across behavioral categories (Baer, Wolf, and Risley, 1968). All target behaviors were scored simultaneously with a staggered introduction of the treatment package for eye contact, gestures, and speaking behaviors. The four experimental conditions were as follows:

Baseline. In the first and second sessions, Andy participated in the sessions before the instructional package was administered. He was instructed in general terms to engage in appropriate public-speaking behaviors. Before the first baseline session, Andy was given his presentation script with instructions to look over the script for as long as he wished.

Eye contact training. When baseline was terminated after the second session, Andy was administered the instructional package for eye contact. Following the practice component of the package, Andy participated in the next speaking session and was informed of the percentage of occurrence of eye contact.

Gesture training. After the fourth session, Andy was administered the instructional package for gestures. He then participated in the

next speaking session and was given feedback on both eye contact and gestures.

Speaking behaviors training. After the fifth speaking session, Andy was given the instructional package for speaking behaviors. He then participated in the sixth, seventh, and eighth speaking sessions and was given feedback on eye contact, gestures, and speaking behaviors.

Audience Ratings

Available individuals were selected to serve as audience members for one pre- and one posttraining speaking session for the trainee. The pretraining session audience of five persons was composed of various members of the Department of Human Development at the University of Kansas. The posttraining audience of eight persons contained two of the previous raters. None of the raters was familiar with either the trainee or the specific nature of the study.

Audience members were asked to rate the public-speaking performance of the trainee on a Speaker Rating Sheet. Each of the public-speaking items were rated with respect to a semantic differential (Osgood, Suci, and Tannenbaum, 1957).

RESULTS

Reliability

Total reliability was computed for the observations of Experiment 1. The average percentage of agreement was 87% for eye contact, 100% for gestures, and 100% for speaking behaviors.

Data

Figure 1 shows the percentage of target behaviors for three categories of public-speaking behavior for the trainee in Experiment 1. The mean per cent occurrence of eye contact increased from 12% during baseline to 81% after the instructional package for that category was introduced. Introduction of the instructional package increased the mean per cent occurrence of gestures from a pretraining mean of

4% to a posttraining mean of 98%. Similarly, the per cent speaking behavior target responses increased from a pretraining mean of 13% to a posttraining mean of 100%. Figure 1 shows that the percentage of target behaviors for each category increased after the instructional package for the respective category was introduced.

Rating Data

The mean ratings of Andy's performance were obtained from one pretraining session audience (Session 1) and one posttraining session audience (Session 8). Data are reported on the

question of "How well would you rate the speaker's overall performance?" (where seven is "very good" and one is "very bad" on a semantic differential). For the total group of raters, the data showed an increase from a pretraining rating of 2.2 to a posttraining rating of 5.1. For the two raters present at both pre- and posttraining speaking sessions, the data showed an increase from a pretraining rating of 2.0 to a posttraining rating of 5.5.

EXPERIMENT 2

Trainees and Setting

Three low-income paraprofessional staff members of Penn House served as trainees. Penn House is a neighborhood service center staffed and operated by low-income residents of East Lawrence, Kansas. The Penn House Speakers' Bureau provides an outreach service by which church, civic, university, business, and social organizations may invite Penn House members to speak on the activities and services of Penn House. The trainees were all participants in the Speakers' Bureau, which had been in operation for about 2 yr.

The first trainee, a low-income black woman, Rachael, had participated in the Speakers' Bureau for 1.5 yr before the experiment. During this period, she had spoken on 18 Speakers' Bureau engagements. The second trainee, a low-income white woman, Ruth, dropped out of school shortly after finishing the ninth grade. She had no experience in the Speakers' Bureau program. The third trainee, a low-income Chicano woman, Maria, was a 50-yr-old grandmother of 22 grandchildren. Maria, with 5 yr of formal education, had participated in the Speakers' Bureau for nearly 1.5 yr before the experiment. During this period, she had spoken to audiences on 15 occasions.

Public-speaking sessions during the study included engagements with the following: the staff of a community mental health agency, the Lawrence Jaycee Jaynes (wives of the Junior Chamber of Commerce), a local chapter of Viet-

Fig. 1. The percentage of target behaviors for each category of public-speaking behavior for the trainee in Experiment 1. The vertical dotted lines indicate the point at which the instructional package was introduced for each category.

nam Veterans Against the War, a church fellowship group, a local cooperative living group, and several university group residences. All invitations for speaking engagements were accepted during this study. The meeting rooms of these organizations served as the settings for each public-speaking session. Each of the speakers presented a different topic area in the Speakers' Bureau program. The first and second observers were at the back of the room during each public-speaking session. Audience numbers ranged from six to 42 persons, with a mean of about 14 persons.

Training Procedures

The written aspects of the instructional package were administered orally to the trainees of Experiment 2. This oral training procedure was designed to deal with the trainees' own reported inability to deal with written instructional programs. The instructional package was administered to the third trainee (Maria) by the second trainee (Ruth), based upon written trainer instructions on how to administer the instructional package.

After completing behavior rehearsal for the first behavioral category (eye contact), the trainees were administered the instructional package for the remaining categories of public-speaking behavior. After the instructional package for the final behavioral category was administered, the trainees were given the chance to speak before several live audiences composed of friends and others familiar with the speaker training program. Observers present at these mock audience sessions gave the trainee feedback on the percentage of target behaviors scored during the practice session. A trainee was considered trained when he or she had met the posttraining criteria on two consecutive mock audience sessions. The mock audience procedure was used to deal with the trainee's predictions of "freezing up" in front of a real audience. This technique is similar to that employed in some forms of behavior rehearsal, where a hierarchy is developed for provocative stimuli (e.g., Gittleman, 1965).

Experimental Conditions

The effect of the instructional package on public-speaking behavior was analyzed by a multiple-baseline design across subjects (Baer *et al.*, 1968). The four experimental conditions were as follows:

Baseline. In the first three speaking sessions, the trainees presented the scripted text before the instructional package was administered. Before the first baseline session, all trainees participated in a discussion of public-speaking skills during a Penn House staff meeting. All subjects had unlimited access to the script and slide program before the study began.

Training for Rachael. When baseline was terminated after the third public-speaking session, Rachael received the instructional package for the three categories of public-speaking behavior.

Training for Ruth. After the fifth public-speaking session, Ruth received the complete instructional package for all categories of public-speaking behavior.

Training for Maria. Following the seventh public-speaking session, the complete instructional package was administered to Maria.

Each of the trainees was absent from one or more of the nine public-speaking sessions due to illness or family problems.

Audience Ratings

Audience members were asked to rate the public-speaking performance of each trainee on separate Speaker Rating Sheets. A Prior Public Speaker Sheet was presented to the audience members before presentation of the first Penn House speaker. The audience members were asked to rate the overall public-speaking performance of the "last public speaker" that they had heard speak. This sheet contained the same items as those on the Speaker Rating Sheet. Written instructions called for the rater to employ the same "standard" in rating Penn House speakers as she or he had used in judging the performance of the previous public speaker.

RESULTS

Reliability

Total reliability was computed for the observations of Experiment 2. The average percentage of agreement was 97% for eye contact, 98% for gestures, and 97% for speaking behaviors.

Data

Figure 2 shows the percentage of target behaviors for the three categories of public-speaking behavior for each of the three trainees in Experiment 2. For Rachael, introduction of the instructional package for the three categories of public-speaking behavior resulted in increases from pretraining to posttraining means of 3%

to 85% for eye contact, 5% to 95% for gestures, and 13% to 97% for speaking behaviors. Ruth showed a similar increase of pretraining to posttraining means of 7% to 85% for eye contact, 0% to 87% for gestures, and 9% to 75% for speaking behaviors. For Maria, introduction of the instructional package for the three categories of public-speaking behavior resulted in an increase from pretraining to posttraining means of 0% to 94% for eye contact, 0% to 100% for gestures, and 3% to 88% for speaking behaviors. Figure 2 shows that the percentage of target behaviors for each category increased after the instructional package for the respective category was introduced. This pattern was repeated for each of the baselines for all trainees. Thus, the individual trainee data are in

Fig. 2. The percentage of target behaviors for the categories of public-speaking behavior for each trainee in Experiment 2. The vertical dotted lines indicate the point at which the instructional package was introduced for each trainee.

total agreement with the mean patterns of performance.

Rating Data

Figure 3 shows the mean audience ratings on the overall speaking performance of trainees for each of the public-speaking sessions. Data are reported on the question of "How well would you rate the speaker's overall performance?" (where seven is "very good" and one is "very bad"). For Rachael, introduction of the instructional package for the three categories of public-speaking behavior increased audience ratings from a pretraining mean of 4.1 to a posttraining mean of 5.4 (where the mean is based upon a sample size consisting of the combined total of audience members observing the trainee either before or after training). Ruth's performance ratings showed a similar increase from a pretraining mean of 3.1 to a posttraining mean of 4.4. For Maria, introduction of the instructional package increased ratings from a pretraining mean of 3.5 to a posttraining mean of 4.4. Figure 3 shows that the audience ratings for each trainee increased only after the instructional package was introduced for each category of public-speaking behavior.

The overall ratings for all low-income trainees increased from a pretraining mean of 3.6 to a posttraining mean of 4.7. The total mean ratings for all prior public speakers was 5.7.

CONCLUSIONS

Experiment 1 analyzed the effect of an instructional package on the performance of a trainee for three categories of public-speaking behavior. The results showed that the percentage of target behaviors for the categories of eye contact, gestures, and speaking behaviors increased after the instructional package for the respective category was introduced. The staggered introduction of the instructional package across behavioral categories showed the increase to occur only after the instructional package was introduced. The results of this preliminary eval-

uation indicated that the individual sections of the package were responsible for the increased percentage of target behaviors for the respective categories of public-speaking behavior.

The rating data for Experiment 1 showed the posttraining audience ratings of Andy's public-speaking performance to be markedly higher than the pretraining audience ratings. The mean ratings for groups attending either the pretraining or posttraining speaking session were comparable to the respective ratings of the group attending both pre- and posttraining speaking sessions. This finding suggests that the increase in audience ratings from pretraining to posttraining was the result of improved speaking

OVERALL PERFORMANCE RATINGS

Fig. 3. The mean audience ratings on overall speaking performance in public-speaking sessions for each trainee in Experiment 2. The vertical dotted lines indicate the point at which the instructional package was introduced. The horizontal dotted lines indicate the mean audience ratings for the experimental condition based upon the total number of audience members rating the trainee during that condition.

performance, and not a consequence of audience differences.

Experiment 2 analyzed the effect of an instructional package on the public-speaking performance of three low-income paraprofessional staff members of a neighborhood service center. The results showed that the percentage of target behaviors for the categories of eye contact, gestures, and speaking behaviors increased after the instructional package was introduced for each of the trainees. The results indicate that the instructional package, and not some coincidental variable, was responsible for increased trainee performance during the treatment conditions.

The speaker rating data for Experiment 2 showed the posttraining audience ratings to be higher than the pretraining audience ratings for each of the three trainees. Pre- to posttraining rating gains for all trainees ranged from 0.9 to 1.3, with a mean gain of 1.1 (on a seven-point semantic differential). Ruth and Maria showed increased performance ratings from below "average" (4.0) to above average speaker ratings. Rachael evidenced a rating gain from about average (4.1) to what might be considered a rating of "good" (5.4). The increased posttraining audience ratings for all trainees were correlated with introduction of the instructional package and a corresponding increase in the percentage of public-speaking behaviors. These findings suggest that the selected target behaviors are a socially valid measure of public-speaking performance. That is, the instructional package—in producing an increase in public-speaking target behaviors—brought about an improvement in audience judgments of public-speaking performance.

GENERAL DISCUSSION

These experiments suggest that the "gift" of public speaking may involve a number of specifiable target behaviors. An undergraduate university student and three low-income staff members of a neighborhood service center were

administered an instructional package that brought about increases in both directly observed target responses and audience ratings of public-speaking performance. These findings demonstrate the effectiveness of the instructional package in improving public-speaking performance.

The instructional package involved both written instructional and behavior rehearsal components. This combination markedly improved public-speaking performance. The relative importance of written instructions and behavior rehearsal was not analyzed in Experiment 2, nor was the relative importance of written instructions, behavior rehearsal, and posttraining feedback on performance analyzed in Experiment 1. The marked improvements in performance (without posttraining feedback) of the trainees in Experiment 2 suggests that performance feedback may not be critical in improving public speaking. While casual observations suggest that the effectiveness of the individual components of written instructions and behavior rehearsal may be interdependent, the analysis of the relative importance of each of these components is an important area for future research.

A central question with respect to the present results is whether relevant judges consider the target behaviors selected for training to be an important aspect of skillful public-speaking performance. This question does not arise for experiments involving the manipulation of simple behaviors whose importance have face validity (for example: the reduction of self-mutilating behaviors). However, this validation question is critical for experiments in which several behaviors are selected from a complex of behaviors representing the particular activity. The very selection of specific target behaviors implies that the experimenters judge them to be important components of the complex of behaviors. Observed changes in the selected target behaviors are important only insofar as relevant others also judge them to be important. If relevant others do not so judge them, then the observed

changes represent the manipulation of arbitrarily selected and insignificant behaviors. Thus, this validation question involves the reliability of the target behavior selection activity. This reliability has been termed the "social validity" of the selected target behaviors (Fixsen, Phillips, Phillips, and Wolf, *in press*; Minkin, Braukmann, Minkin, Timbers, Timbers, Fixsen, Phillips, and Wolf, *unpublished*).

The social validity of selected target behaviors may be documented by determining if changes in the rates of specific target behaviors (for example: eye contact, gestures, speaking behaviors) are correlated with changes in the qualitative appraisal of the quality of the speaker's performance by audience members. This involves obtaining scaled judgments from relevant observers on some evaluative dimensions of the observed performance (Hasse and Tepper, 1972). In the present experiments, a Speaker Rating Sheet was used to obtain audience verbal statements about speaker performance on dimensions such as "overall speaking performance", "knowledge of the subject", "enthusiasm", and "sincerity". Approximately one-point rating increases (on a seven-point semantic differential) for each of these dimensions increases our confidence that increased rates of responding on public-speaking target behaviors are correlated with improvements in how audiences describe the skill of the public speakers. This evidence suggests a satisfactory level of agreement between the experimenters and relevant observers on the identification of the specific target behaviors representing the important components of public speaking.

Goldberg (1969) and Riessman (1967) indicated the importance of providing specialized training for the trainers of paraprofessionals. The development of standardized instructional components, accompanied by standardized training procedures designed to train trainers, allows experienced speakers to train less experienced speakers. Thus, Ruth (the second low-income trainee of Experiment 2) trained Maria (the third trainee) according to these written trainer

instructions without the intervention of a research staff member.

It was hoped that the training procedures, designed to improve performance on specific public-speaking target behaviors, would also increase self-confidence in the public-speaking situation. The low-income paraprofessionals completed a Speaker Self-Rating Sheet at the end of each public-speaking session. One question asked was: "How confident did you feel when giving your talk?" (where seven is "very confident" and one is "very unconfident"). Pre-training to posttraining rating means showed a marked increase in "confidence" for Maria (from 1.7 to 7.0) and Ruth (from 4.0 to 5.8), with Rachael maintaining a "confidence" rating at 5.0. As part of an evaluation of the public-speaking training program, staff members were asked: "How much did the training program improve your confidence about speaking in public?" (where seven is "very much" and one is "very little"). The mean staff-member rating of the role of the training program in improving "confidence" was 6.7. These findings suggest that the training of specified skills to low-income and minority group persons may have the bonus effect of improving "self-confidence" in these skill situations.

In this age of accountability, some psychologists have suggested the importance of measures of "consumer satisfaction" in the development of training and rehabilitative programs (Wolf, *personal communication*). This approach suggests that how well trainees "like" training procedures is important when evaluating programs for use by potential consumers. All staff members indicated that they were "very happy" with the public-speaking training program (7.0 on a scale of 7). The combined information obtained from direct observations of public-speaking target behaviors, audience ratings of speaker performance, and speaker ratings on self-confidence and "consumer satisfaction" suggests that the public-speaking training program was effective in producing skilled, confident, and satisfied public speakers.

In summary, this study examined the effect of an instructional package on increasing public-speaking target behaviors and improving ratings of public-speaking performance. The results from two experiments indicate that the instructional package was responsible for increased rates of target responses. The audience ratings of public-speaking performance were found to be correlated with direct observations of target responding. This study demonstrated an effective procedure for the training of public-speaking behaviors. In addition, the training program received high ratings from the trainees on "consumer satisfaction". The use of a written instructional package and written trainer instructions suggests the dissemination capability of the public-speaking training program for use by other adopting individuals or service agencies.

REFERENCES

- Argyle, M. *The psychology of interpersonal behavior*. Baltimore: Penguin Books, 1967.
- Baer, D. M., Wolf, M. M., and Risley, T. R. Some current dimensions of applied behavior analysis. *Journal of Applied Behavior Analysis*, 1968, 1, 91-97.
- Carnegie, D. *How to develop self-confidence and influence people by public speaking*. New York: Pocket Books, 1971.
- Fixsen, D. L., Phillips, E. L., Phillips, E. A., and Wolf, M. M. Training teaching-parents to operate group home treatment programs. In M. E. Bernal (Ed.), *Training in behavior modification*. New York: Brooks/Cole (*in press*).
- Gardner, J. M. Teaching behavior modification to nonprofessionals. *Journal of Applied Behavior Analysis*, 1972, 5, 517-521.
- Gartner, A. and Riessman, F. New training for new services. *Social Work*, 1972, 18, 55-63.
- Gittleman, M. Behavior rehearsal as a technique in child treatment. *Journal of Child Psychology and Psychiatry*, 1965, 6, 251-255.
- Goldberg, G. S. Nonprofessionals in human services. In C. Grosser, W. E. Henry, and J. G. Kelley (Eds.), *Nonprofessionals in the human services*. San Francisco: Jossey-Bass, 1969.
- Hasse, R. F. and Tepper, D. T. Nonverbal components of empathic communication. *Journal of Counseling Psychology*, 1972, 19, 416-424.
- Jones, M. J. Roleplaying as an educational and teaching device in a poverty-oriented, multi-racial group. *Group Psychotherapy*, 1969, 22, 195-201.
- Mager, R. F. *Preparing instructional objectives*. Belmont, Cal.: Fearon Publishers, 1962.
- Mambert, W. A. *Presenting technical ideas, a guide to audience communication*. New York: John Wiley and Sons, 1968.
- Minkin, N., Braukmann, C. J., Minkin, B. L., Timbers, G. D., Timbers, B. J., Fixsen, D. L., Phillips, E. L., and Wolf, M. M. *Analysis and validation of conversation skills and training them in pre-delinquent youths*. Unpublished paper presented at the American Psychological Association Convention, Montreal, Canada, August, 1973.
- Osgood, C. E., Suci, G. J., and Tannenbaum, P. H. *The measurement of meaning*. Urbana: University of Illinois Press, 1957.
- Ott, J. *How to write and deliver a speech*. New York: Trident Press, 1970.
- Riessman, F. *Issues in training the nonprofessional*. New York: New York University, New Careers Development Center, 1967.
- Riessman, F. and Goldfarb, J. Role playing and the poor. *Group Psychotherapy*, 1964, 17, 36-48.
- Sarnoff, D. *Speech can change your life*. New York: Doubleday and Company, Inc., 1970.
- Serber, M. Teaching the nonverbal components of assertive training. *Journal of Behavior Therapy and Experimental Psychiatry*, 1972, 3, 179-183.
- Stedman, W. *A guide to public speaking*. Englewood-Cliffs, N.J.: Prentice-Hall, Inc., 1971.
- Wolf, M. M. Personal communication, 1973.

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