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Teaching Basic Laundry Skills to Multiply-Handicapped Persons: An Experimental Validation

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TEACHING BASIC LAUNDRY SKILLS TO MULTIPLY-HANDICAPPED PERSONS: AN EXPERIMENTAL VALIDATION

by

Thomas J. Thompson

A Thesis
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Master of Arts

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Thomas J. Thompson
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INTRODUCTION

The recent emphasis on placing handicapped persons in normalized living environments has led to the development and experimental validation of training programs for a variety of daily living skills. Page, Iwata and Neef (1976) taught pedestrian skills to multiply-handicapped students. With a similar population, Neef, Iwata, and Page (1978) compared classroom training with "in vivo" probes to "in vivo" training of bus riding skills. Cuvo, Leaf and Barakove (1978) taught janitorial skills to mentally retarded subjects. van den Pol, Iwata, Ivancic, Page, Neef and Whitley (in press) demonstrated an effective procedure for training restauranting skills with multiply-handicapped students. These studies use a detailed task analysis and a simple reinforcement procedure to teach basic community survival and vocational skills to the developmentally disabled. The significance of these works to the applied community was demonstrated through the long term maintenance of skills and generalization to other settings.

An important factor related to successful community adjustment is the maintenance of acceptable personal hygiene and physical appearance. In a recent survey, Power (1979) asked parents, community professionals, special educators and others to rate a set of skills
according to their importance for self-sufficient/independent living. On a scale of one ("Not important at all") to five ("Extremely important, absolutely necessary"), the 18 laundry skills listed in the survey were rated at a mean of 4.08.

O'Connor (1976) describes participation in home responsibilities as a reflection of normalized life style and reports that 60% of the developmentally disabled persons placed in community residential facilities helped do laundry. In addition to their value for an individual's personal hygiene, certain self-care skills may be a necessary prerequisite for the developmentally disabled person to engage in social interactions where physical appearance can have a profound impact on the occurrence and quality of such interactions.

Several studies have reported differential effects of various clothing styles. A number of researchers (Raymond and Unger, 1972; Chaikin, Derlega, Yoder and Phillips, 1974; Schavio, Sherlock and Wicklund, 1974) have studied the effects of dress style on compliance with solicitations. In general, these studies find that people with conventional appearance are less likely to comply with requests when the solicitor's physical appearance is "deviant". Nutter and Reid (1978) addressed the problem of conspicuously deviant physical appearance
by training retarded women to coordinate clothing color combinations based on popular combinations observed in the community. Braam, Daeschlien, Frasier, Braam and Stafford (Note 1) describe a system which successfully programmed for the maintenance of such skills in a natural environment.

Survey data and casual observation lends credence to the notion that clothing cleanliness is an important community survival skill which can have significant impact on the occurrence and quality of a wide range of personal interactions ranging from the social to the vocational area. In as much as developmentally disabled persons frequently lack the language skills necessary to profit from conventional training programs relying on spoken or written instructions, there is a need to develop a cost-effective training program which teaches a generalized set of laundry skills without reliance on advanced communication skills.

Cuvo, Jacobi and Sipko (Note 2) taught a set of laundry skills to mentally retarded subjects. Several features of the Cuvo et al. study contributed to a general lack of applied significance. In particular, laundry was never actually washed, subjects were not given the opportunity to perform each step consecutively during baseline, interobserver agreement was measured on prompt level rather than response occurrence and generalization
to other settings was neither assessed nor trained.

The purpose of this study is to experimentally validate a laundry skills training program which uses the three prompt instructional procedure described by Horner and Keilitz (1975). Experimental control is demonstrated through the multiple probe experimental design described by Horner and Baer (1978.) The multiple probe design is a variation of the multiple baseline design and is appropriate for training responses across components of long behavior chains. The design is characterized by taking a series of baseline measures on each component only before intervention on that component and occasional probes of the entire chain of responses.
METHOD

Subjects

Three male students, Ronald, Chester and Foster, enrolled at the Kalamazoo Valley Multihandicap Center, an educational facility for students with multiple physical handicaps and/or developmental retardation, served as subjects. They ranged in age from 12 to 24 (mean = 17.3), with IQ scores in the trainable and Educable Mentally Impaired ranges. Criteria for selection were: ambulation necessary to perform all steps in the laundering sequence, ability to discriminate colors and wet vs. dry clothing, ability to attend to a task without serious disruptive behavior for at least \( \frac{1}{2} \) hour and no previous record of systematic training in laundry skills.

Setting and Apparatus

Training sessions were conducted in a simulated apartment in the school where kitchen and laundry appliances were located. A Whirlpool washing machine (model LFE 5800) and dryer (model LFA 5800) were used. Laundry materials included: a box of powdered laundry detergent, an 8 oz. measuring cup, a plastic laundry basket and two sets of thirty clothing articles. Each set of articles included 15 light and 15 dark pieces of clothing including a variety of common under and outer clothing with
at least two articles matching each shade on two color charts.

During training for components A, B and G (see Table 1 below) special prompting devices were placed on the machines and systematically faded. Pieces of construction paper corresponding to the color range appropriate to the sorting of light from dark articles were placed on laminated charts (30.5 x 11.5 cm) and attached to the front panel of the washing machine. Subjects were taught to match clothing articles to these sample charts and place them in a pile below the chart. From a roll of masking tape, triangular and square forms were cut and colored with waterproof markers. These were placed on the washing machine control panel to indicate the proper setting for load size, water temperature, cycle starting and ending points, on the dryer to indicate temperature and time settings and on the lint screen to indicate proper alignment for replacement. Markers of different colors were used to differentiate water temperature settings for light and dark articles and cycle beginning and ending points. Following training on Components A, B and G, the marking devices were systematically made smaller until the subject could complete the response correctly without special marking cues.

Generalization trials were conducted in a public
laundromat within walking distance of the school. Commercial washers and dryers were used. Training materials as well as the subjects' personal dirty laundry (whenever available) were used in generalization trials.

Task Analysis

A detailed task analysis of sorting, washing and drying skills was prepared from observation of persons doing laundry. The scope of the task analysis was limited to the minimal responses needed to assure clean laundry and to reduce the probability of discoloration due to color bleeding. The complete task analysis contains a sequence of 7 major components and 74 discrete responses. It is presented in written form in Table 1.

Response Measure and Observation

The 74 step chain was divided into 7 components with 4 to 30 responses in each component. Each component functioned as a logical unit with a distinct beginning and ending. Observers scored each consecutive response in the chain as correct or incorrect on a set of data sheets with separate categories for each step, the prompt level and the consequence of each response.

Sessions lasting 20 to 90 minutes (mean = 31) were conducted once or twice daily. Because stimuli from
Table 1

Laundry Task Analysis

Component A: Sorting Laundry (Sort articles into two piles which can be washed at the same water temperature.)

1) Remove an article from the laundry basket.
2) Hold the article within 30 cm of the dark color chart.
3) If the color of the article matches a color on the dark color chart, place the article on the floor in a pile below the chart and not more than 90 cm from the front of the machine. If the color of the article does not match a color on the dark chart, hold it within 30 cm of the light color chart.
4) If the color of the article matches a color on the light chart, place it in a pile on the floor below the light chart and not more than 90 cm from the front of the machine. If the color of the article does not match a color on the light chart, place it in a pile as you would for a dark article (as in #3 above.)

Note: Following the fading condition when the charts were removed from the front of the machine,
matching to sample was no longer possible.

Component B: Load Washing Machine

1) Indicate verbally which of the two sorted piles will be laundered.

2) Grasp the handle of the lid and raise it until it remains in an upright position.

3) Place articles from the pile chosen in Step 1 into the tub by dropping them from the top of the machine until all are inside or the articles inside reach the top of the agitator vanes.

4) Measure powdered detergent to the top of the measuring cup.

5) Pour the detergent from the cup into the washer tub.

6) Grasp the lid by the handle and pull it down until it rests in the closed position.

Component C: Set Washing Machine Dials

1) Set the load size dial at the second mark from the right (about 3/4 of the maximum volume, as indicated by the marker.)

2) If the articles are dark, set the temperature dial at "COLD/COLD" (indicated by marker.) If the articles are light, set the dial at "WARM/COLD" (indicated by marker.)

3) Push the cycle knob toward the console until it stops.
4) Turn the cycle knob clockwise until the line which indicates the beginning of the normal cycle (indicated by marker) is aligned with the black line indicator (indicated by marker) above the knob on the washing machine console.

5) Pull the cycle knob out and away from the console until the machine begins to fill with water.

6) When asked, "What do we do next?", verbally respond, "Wait." and allow the machine to wash until the word "OFF" (indicated by marker) is aligned with the black line indicator (and marker) at the top of the cycle knob on the console.

Component D: Remove Articles from the Washer and Place in the Dryer.

1) When the washing machine has stopped running, as indicated in Step 6 above, grasp the lid by the handle and raise it until it remains in an upright position.

2) Remove each article from the washer tub and place it in the laundry basket.

3) Grasp the lid by the handle and pull it down until it remains in the closed position.

4) Carry the laundry basket and place it within 90 cm of the front of the dryer.

5) Grasp the dryer door handle and pull it down
until it remains parallel to the floor.

6) Place all articles into the tub of the dryer so that no part of any article rests outside or on the edge of the tub.

7) Remove a sheet of fabric softener material from the box and place it in the dryer on top of the articles.

8) Grasp the dryer door by the handle and push it upward toward the machine until the latch engages.

**Component E: Clean the Lint Screen**

1) Grasp the lint screen door and pull it up until it remains upright in the open position.

2) Grasp the lint screen by the handle and pull it out until it is completely removed from the dryer.

3) Carry the screen to the garbage can.

4) Peel the lint from the screen and place it in the garbage can.

5) Replace the screen into the dryer (align the marker on the bottom of the handle with the marker inside the screen compartment.)

6) Grasp the lint screen door and pull it down until it remains in the closed position.

**Component F: Set the Dryer Dials**
1) Turn the timer knob until the number "30" on the timed drying cycle is aligned with the indicator (and marker) at the top of the console.
2) Set the temperature dial at "permanent press/medium" (as indicated by marker.)
3) Push the start button until the machine begins to operate.
4) When asked, "What do we do now?", respond verbally, "Wait." and allow the dryer to operate until the signal sounds.

Component G: Remove Articles from the Dryer and Recycle Wet Articles.

1) When the signal sounds indicating the end of the drying cycle, open the dryer door as in Step 5 of Component D above.
2) Remove each article from the dryer tub.
3) If the article is wet, place it on top of the dryer.
4) If the article is dry, place it in the laundry basket.
5) Place all wet articles back inside the dryer as in Step 6 of Component D above.
6) Close the dryer door as in Step 8 of Component D above. If articles are inside, continue with Steps 7 - 13, otherwise, go to Step 14.
7 - 13) Set the timer knob for #20 as in Step 1 of
Component F above and continue from Step 3.
Component F through Steps 1, 2, 4 and 6 of Component G.

14) Dispose of the fabric softener sheet in the garbage can.
the actual operation of the machine were considered to be important discriminative stimuli for the subsequent steps and possible aids in generalization, soap, water and softener were used during machine operation. To maximize the usage of training time, washer and dryer cycle times were shortened by manipulating the control dials while the subject was seated away from the training area. This procedure shortened the time needed to complete a full wash and dry cycle by about 50%. During the final condition and in all laundromat sessions the cycle was allowed to run its normal time. Combined wash and dry cycles lasted 90 minutes on the training equipment and 60 minutes in the laundromat. The availability of multiple machines in the laundromat allowed the subjects to participate in as many as four simultaneous trials.

Reliability observers were given instructions with response definitions and recording procedures and two practice recording sessions after which scored disagreements were discussed with the primary observer. Interobserver agreement scores were calculated across all conditions in both settings on 5%, 29% and 46% of the sessions for Ronald, Chester and Foster respectively using the formula: (Agreements/Agreements + Disagreements) x 100. An agreement was scored only when both observers scored the same response as correct or
incorrect. The observers were situated so that both could observe the training area without viewing the data sheet of the other. Agreement scores averaged 96%, 99% and 97% for Ronald, Chester and Foster respectively.

Procedures

The experimental design consisted of the multiple probe technique (Horner and Baer, 1978). Before training on any component began, the operant response level was assessed and each component was trained as a separate unit. After two consecutive correct trials at 100% accuracy for a component, the subject was required to perform the sequence of laundry responses up through the previously mastered component. In the event that errors occurred in the performance of this chain, the training procedure was employed (in a condition called "chain training") until the subject completed two trials at 100% accuracy without prompts. Thus each component was trained separately and then added in its proper sequence before progressing to the next component.

Probes and baselines

The operant response level was assessed in one probe and a variable number of baseline sessions. All probe, baseline and chain training sessions began with the statement: "(name), here is everything you need
to do the laundry." (Observer indicates the materials and apparatus.) "I want you to do the laundry; do the best job that you can." The subject was then allowed to perform each step in the sequence. If an incorrect response occurred, or if no response occurred within five seconds of an instructional prompt ("What do you do next?") the subject was seated out of view of the laundry area and the observer prepared the presentation of the stimulus conditions appropriate to the next response in the chain. The subject was then called back and asked: "What do you do next?" This procedure was continued for each response in the chain with the exception that, in the Sorting Component, the observer would sort all of the remaining articles at one time if the subject failed to respond twice or made more than two incorrect responses before completing the 30 item sorting task.

Probe sessions differed from baseline sessions in two ways: 1) A probe measured each response in the chain. Baseline sessions measured responses only on previously trained components plus the component about to be trained. 2) No tokens or descriptive praise were delivered during probes. During baseline, tokens were delivered for previously trained components only. The baseline sessions were used, as described below, to lean the reinforcement schedule for correct performance of
responses from previously mastered components of the chain. According to the guidelines of the multiple probe design, the number of baseline sessions was increased by one for each succeeding component trained unless an unstable response pattern was evident during this phase. Under such circumstances, the baseline was extended until stability was evident.

Training

Following baseline, each component was trained to criterion using a graduated three prompt procedure (Horner and Keilitz, 1975). The training procedure included: 1) Verbal Instruction; 2) Verbal Instruction plus Modelling the Correct Response; and 3) Verbal Instruction plus Physical Guidance. If one prompt level failed to produce the initiation of a correct response within five seconds, the next level was introduced. The third prompt level assured the occurrence of a response which could be reinforced.

The subjects were on token economies throughout the day. These were continued during the study with a requirement of 20 or 25 tokens needed to exchange for an edible or time to engage in a preferred activity. Initially during training, tokens were delivered on a CRF schedule for correct responses. In order to maintain a high response rate during the session, the schedule
was systematically leaned to a VR schedule. During the baseline phase of latter components, the VR schedules were again systematically leaned so that, successively, responses which were part of formerly trained components were no longer followed by contingent tokens. The schedule allowed for recycling to a higher density delivery rate if the rate of unprompted correct responses decreased following a schedule leaning. If the schedule had not allowed for the subject to earn sufficient tokens to meet the criterion for exchange by the end of the session, the balance of the total needed for an exchange was given if the subject had either performed more responses correctly than during the previous session or met the criterion for mastery. The withholding of many of the tokens until the chain had been completed also served as a transition to the final condition of the study during which no tokens were available and the completion of the entire chain was followed by the opportunity for the subject to engage in a preferred activity.

When repeated errors occurred on previously trained components during baseline or chain training conditions, a special correction procedure was utilized. This procedure was implemented whenever the same response or two or more responses within the same component
required a prompt on three consecutive trials. When this occurred, the entire component was trained as a unit at the beginning of the following session until one correct completion of the component occurred without prompts before continuing with baseline or chain training later in the session. This procedure was used three times for Chester during sessions 27, 47 and 74 and once for Foster during session 59.

**Generalization and social validity**

Generalization for sorting was assessed on a set of 30 novel items following mastery of the training set. Generalization of the entire chain was assessed in a public laundromat. The initial trial consisted of a probe similar to those conducted during training sessions in the school. In the event that the probe revealed errors, the three prompt training procedure was implemented to retrain previously mastered steps performed incorrectly and to train novel steps required for the generalization machines. A description of the skills added to and deleted from each component for generalization trials is contained in Table 2. The dependent variable for the generalization trials was the percent of correct responses for the entire laundry chain and the number of trials necessary for the subject to complete the entire chain at 95% accuracy.
Table 2
Laundromat Task Analysis

Steps were the same as those listed for Table 1 with the exceptions listed below.

Component C: Set Washing Machine Dials

1) Set the temperature dial to "HOT" or "WARM" for light articles, to "COLD" for dark articles.
2) Set the cycle knob to "NORMAL" or "GENTLE".
3) From the set of coins received at the beginning of the trial, select three quarters and place them in the slot at the top of the machine.
4) Push the coin slot forward until the machine begins to operate.
5) Delete.
6) When asked, "What do we do next?", verbally respond, "WAIT." and allow the machine to operate until the lights on the console have gone off.

Component D: Remove Articles from the Washer and Place in Dryer.

5) Grasp the dryer door by the handle and pull it out until it is open at least to the point where it is perpendicular to the dryer front.
8) Grasp the dryer door by the handle and push it closed until the magnetic catch engages.
Component E: Clean Lint Screen.
Delete.

Component F: Set the Dryer Dials.

1) From the set of coins received at the beginning of the trial, select three dimes and place them in the coin slot at the top of the dryer.

2) After placing each dime in the slot, turn the knob next to the slot until the coin falls into the machine.

3) Set the temperature selector slide bar between the third and bottom (hottest) indicator lines.

4) When asked, "What do we do next?", verbally respond, "Wait." and allow the dryer to operate until the indicator light goes out and/or the machine stops rotating.

Component G: Remove Articles from the Dryer and Recycle Wet Articles.

1) When the machine stops as indicated in Step 4 of Component F, open the dryer door as in Step 5 of Component D.

3) Place wet articles in one of the two laundry containers.

4) Place dry articles in the other container.

7 - 13) Insert coins as in Step 1 of Component F above
and continue through Steps 2 and 4 of Component F and Steps 1, 2, 4 and 6 of Component G.

Social validity was measured during the final chain trianing condition by having a subject and a normal peer each wash one of two loads of articles judged equally soiled by 3 naive observers. One female and two male university students, aged 18 - 23 (mean = 20) served as peers. The percent of correct responses completed by the subject was measured. The two sets of laundered clothing articles were compared on a five point scale which rated one set of articles as equally, slightly or much cleaner than the other by a second set of five naive observers.
RESULTS

The effect of the instructional procedure on the performance of laundry skills in the training setting is presented in Figures 1, 2 and 3. Each data point represents the percentage of steps performed correctly without prompts during each of the seven components of the laundry chain. Full probe data appear to the left of the dotted lines and as the first point within the dotted lines for each component. Baseline data appears as all other points within the dotted lines. In the initial probes of all 74 steps in the laundry chain, Ronald, Chester and Foster correctly performed 18%, 18% and 15% of the steps respectively. While some fluctuation of the data points was evident, experimental control was established through the stabilization of probe and baseline data well below the criterion for mastery before training began on each component.

As can be seen from inspection of each figure, the criterion for mastery was reached for each component only when the component underwent training. Mastery was achieved within a relatively small number of training sessions. The mean number of sessions needed for each subject to meet criterion on a single component was 2.5, within a range of just one session for each subject to master each of three components.
Figure 1, 2, 3: Percent correct responses for each trial of each component. (Letters immediately to the right of the vertical axis refer to the components of the task analysis. B = Baseline (includes Probe), T = Training, CT = Chain Training, G = Generalization, circled letters refer to the component in which the condition (B or T) is in effect, within Component C, L = light articles, D = dark articles, B = both (light and dark). Along the horizontal axis, triangles indicate sessions and vertical lines indicate trials within the session.)
(as seen, for example, in Component D of each figure) to a high of 7 sessions for Ronald to master Component G (Figure 1). Chain Training sessions comprised the majority of training sessions with a mean of 34 per subject. Figures 1, 2 and 3 show that, in general, as the number of components mastered increased, more chain training sessions were required to meet criterion. The final chain training condition indicates that each subject was able to perform the entire chain at 100% accuracy for both light and dark articles.

Generalization

Each subject showed considerable generalization of laundry skills to the laundromat setting during the pre-training probe. Percent correct responses for the probe were 79%, 82% and 37% for Ronald, Chester and Foster respectively. During training trials, each subject showed rapid acquisition of the responses performed incorrectly in the probe, requiring 3, 5 and 3 trials to meet the criterion of 95% accuracy on the washing and drying chains. While Ronald and Chester each made some minor errors in the final trial, those errors were steps which were idiosyncratic to the procedure and would not have prevented successful laundering.

Social Validity
Ronald and Chester each laundered their clothing piles with no errors. Foster made a single error and was given a verbal prompt to complete the step (separating wet and dry clothing in Component G.) Anecdotal data indicated that the peer chosen to compare with Foster made the same error. Ten of the fifteen naive observers scored the subjects' laundry equally as clean as their peers'. Four of the observers felt that the subjects' laundry was slightly cleaner than that laundered by their peers while one observer scored the normal peer's laundry as much cleaner than the subject's.

Cost Analysis

The cost for materials, utility services, trainer wages and laundromat expenses were calculated using actual community rates. Training costs were separated from research (baseline and reliability) costs because the former better represented the true amount of resources actually used to train the subject. Training costs for Chester were calculated as $111.55 and $121.46 for Foster. A nearby laundromat charges $0.40/lb. to launder clothing. If the subjects were to launder an average of 10 lbs. of clothing per week, the savings they would realize by doing the laundry themselves would offset the cost of training in 74 weeks for Chester and 81 weeks for Foster. Training costs for Ronald were not available.
DISCUSSION

This study demonstrated that the three prompt training procedure with contingent consequences could effectively be used to train a complex sequence of laundry skills which quickly generalized to a public laundromat. In addition, the study showed the utility of the multipl-probe design in demonstrating experimental control when training complex behavior chains. Social validation showed that the subjects' performance was not discriminable from community norms. The program was found to be cost-effective in a short period of time.

The response patterns of the subjects in this study led to two modifications of the original task analysis. Step 1 of Component B was added after the first subject failed to discriminate between sorted piles. Step 7 of Component G was changed to be identical to Step 1 of Component F before the third subjects' training because the first two subjects had required many trials on this step. The authors felt that the time setting was idiosyncratic and the change was made to facilitate training. These modifications point to the need to adjust for individual differences in student populations when using a prescribed task analysis.

Horner and Baer (1978) used theoretical data
demonstrate the multiple-probe design. In actual practice, several modifications of the design were necessary to maximize the opportunity for subjects to acquire and maintain laundry skills. Pilot data indicated that, when dealing with long behavior chains, there is little evidence to expect that component segments would occur in the correct sequence unless they were specifically trained to do so. For this reason, it was necessary to add a chain training condition to program for the sequential occurrence of the previously mastered components. This study trained each consecutive component to criterion and added it to previously trained components in its appropriate sequence. Whether variations on this procedure, such as training the chain in reverse order or training all components to criterion before establishing them in their appropriate sequence, would have produced a more rapid acquisition of the complex chain is an issue for future research.

Horner and Baer (1978) also suggest the possibility of extinction effects as previously mastered components occur under extinction conditions which would exist in probe and baseline sessions. In the present study, all probe sessions and baseline sessions over responses which had not received training were conducted under extinction conditions to measure the operant response rate. To avoid the problem of extinction effects,
the design was modified so that tokens were delivered for correct performance on previously mastered components during baseline conditions. The reinforcement schedule was systematically leaned during this time to produce greater resistance to extinction.

While the Horner and Baer article prescribes an additional baseline trial for each successive component, it also points out the potential for generalization or facilitation effects on such components as a result of the application of the independent variable to earlier steps in the chain. The practical result of such effects is the inability to demonstrate functional control due to unstable baselines. For this reason it is sometimes necessary to extend baselines beyond their prescribed minimums until stability is achieved. The ascending baselines seen on a few occasions in this study could be accounted for in several ways. Steps in latter components are topographically similar and occur under similar stimulus conditions as steps in earlier components. (This is particularly true of Components D, F and G and its effect can be seen on the baselines in Figures 1, 2 and 3.) Alternately arranging the stimulus conditions for the performance of the next step in the chain during baseline conditions may in fact serve as a "model" so that a subject might perform the step correctly on
the next opportunity as a result of having observed the sequence of stimulus conditions which occur in arranging the opportunity to perform consecutive steps. This response may have occurred even though the subject was prevented from observing the process by which each successive stimulus condition was arranged. (This is particularly evident in the baseline for Component E in Figures 1, 2 and 3.) To avoid the response facilitation problem, it may be important to impose a practical limit on the number of baseline sessions (given that a stable response pattern is evident after several trials.)

While the multiple probe design modified with a chain training procedure does serve as an alternative to continuous baseline measurement, there are instances when the time constraints imposed by long behavior chains make strict adherence to its rules impractical. This is evident when a subject repeatedly fails to emit or emits incorrectly one or several responses. The fact that this problem response is contained in a long chain of responses necessitates a long interval between consecutive opportunities to emit the response. To eliminate this difficulty, a special correction procedure such as the one outlined in this study might be employed.

Generalization of laundry skills was considered to
be a major objective in the development of this program. In order to facilitate generalization, several of the points outlined by Stokes and Baer (1977) were taken into consideration. The program focused on basic skills which would be common to many laundry settings and minimized skills idiosyncratic to particular equipment. The fading of contrived consequences for steps in the chain allowed for the occurrence of laundry skills under conditions which approximate those in the natural environment. Following the assessment of the generalization of laundry skills in the laundromat setting, skills particular to coin operated machines were taught as additional exemplars of the set of laundry skills common in the community.

Future research in the area of laundry skills might further extend the skills to cover prerequisite (discrimination of when clothing requires laundering) and followup (laundry folding) behaviors. The discrimination of dirty clothing might be taught as a set of rule governed responses. Clothing would be considered dirty when odor or soil are present or after a certain time period of wear has occurred. Laundry folding might be taught through a task analysis and prompt procedure similar to that used in this study.
REFERENCE NOTES


REFERENCES


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