

## EFFECTS OF CHOSEN VERSUS ASSIGNED JOBS ON THE WORK PERFORMANCE OF PERSONS WITH SEVERE HANDICAPS

MARSHA B. PARSONS, DENNIS H. REID,  
JERRY REYNOLDS, AND MERLE BUMGARNER

WESTERN CAROLINA CENTER, MORGANTON, NORTH CAROLINA

We evaluated the effects of several choice-related variables on the work performance of adults with severe handicaps. After assessing client work preferences, three choice-related situations were presented: (a) providing clients with the opportunity to choose a work task, (b) assigning a preferred task, and (c) assigning a nonpreferred task. Results indicated that clients attended to work tasks almost twice as much when they chose their tasks and when assigned to work on preferred tasks versus when assigned to work on nonpreferred tasks. Results are discussed regarding the need to assess systematically the effects of choice-related variables.

DESCRIPTORS: severely handicapped, choice behavior, vocational behavior, alternating treatment, preferences

An area of growing interest in service provision for persons with severe handicaps is client choice making. The benefits of providing choice opportunities have been discussed from a variety of vantage points (Guess, Benson, & Siegel-Causey, 1985). However, it has also been noted that persons with severe handicaps typically are not provided with many choice-making opportunities (Dattilo & Rusch, 1985), and that research is needed to evaluate methods of providing more opportunities to make choices (Guess et al., 1985). One area in which such research may be beneficial is vocational settings. More specifically, one means of enhancing performance may involve altering the degree of choice workers have in their work activities.

When considering the potential effects of choice of jobs on work performance, one relevant question is whether workers with severe handicaps will spend more time working on tasks that the workers have chosen relative to tasks assigned by a caregiver (cf. Dattilo & Rusch, 1985; Mendonca & Brehm, 1983). On the other hand, it may be that simply

being assigned a preferred task (instead of a non-preferred task) will enhance job performance independently of whether a worker chooses that task. Before evaluating the effects of choosing work tasks versus being assigned jobs of varying preferences, workers must demonstrate the skills to express a job preference. Such skills frequently are not displayed by persons with severe handicaps (Guess et al., 1985). Further, traditional procedures for assessing vocational preferences are of little value with persons who have severe handicaps (Mithaug & Hanawalt, 1978). However, an alternative assessment approach has been developed for persons with severe disabilities (Mithaug & Hanawalt, 1978; Mithaug & Mar, 1980), although little attention has been given to this approach.

Our primary purpose was to evaluate the effects on work performance of choosing work tasks versus being assigned tasks of varying preferences. A secondary purpose was to replicate previous results (Mithaug & Hanawalt, 1978; Mithaug & Mar, 1980) by demonstrating task preferences among persons with severe handicaps.

### METHOD

#### *Participants and Setting*

The participants were 4 adults (aged 31 to 38 years) with severe handicaps who attended a sheltered workshop. Two participants functioned in the

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Requests for reprints should be addressed to Marsha Parsons or Dennis Reid at Western Carolina Center, Morganton, North Carolina 28655.

Table 1  
Mean Percentage of Pairings in Which a Task Was  
Chosen (When Paired with All Other Tasks)

Client	Task				
	Placing	Stain- ing	Wiping	Sand- ing	Gluing
Robin	85	31	25	24	85
Lucy	70	45	70	0	70
Chuck	80	80	30	20	40
Richard	100	65	40	5	40

moderate range of mental retardation and 2 functioning in the severe range. All 4 clients exhibited behavior problems (e.g., aggression). The clients communicated in short sentences, but their verbalizations were not always interpretable. Receptively, the clients functioned at approximately a 4-year developmental level. One client was visually impaired, and 1 had a seizure disorder. The clients were selected because the workshop represented their primary day program and each client had an identified need in his or her habilitation plan to improve work behavior.

The participants were in one of three work groups. There were 4 other clients in the participants' group; however, their work schedules were variable such that each worker was not always present. The other two groups typically included 18 clients. Training focused on the production of decorative plaques that were sold in resort areas and was conducted by two teaching assistants with intermittent supervision by a special education teacher.

#### *Vocational Tasks and Preference Assessment*

The work activity was organized along an assembly line concept with each client performing a part of a sequence of tasks required to complete a plaque. Specific jobs included sanding a plaque, placing a plaque onto a device that held the plaque while the trainer burned the edges, wiping burned edges of a plaque, staining a plaque with wood stain, and gluing pictures on the plaque. These work tasks were routinely available; the clients could work on target steps of the tasks with approxi-

mately the same degree of supervision (which generally consisted of verbal instructions).

Task preferences were assessed individually using the procedures of Mithaug and Hanawalt (1978). Necessary materials to complete two tasks were placed in the client's view and the trainer asked the client to choose one task. A choice of a task was defined as a client pointing to the task materials or naming a task. If a client did not choose a task, the trainer repeated the instruction (a client failed to make a choice after repeated instructions on only one occasion). The trainer recorded the client's choice and provided the materials needed to work on the chosen task for 10 min. After 10 min, the process was repeated by giving the client a choice in which the task previously chosen was paired with one of the three remaining tasks. If all combinations involving a specific task had been presented, a new pair of tasks was selected randomly and presented for choice. This process was repeated until all 10 possible combinations of tasks had been presented, at which point one assessment was completed. Five assessments were conducted with each client, requiring approximately 90 min per assessment. Assessments were conducted during the first 90 min of the clients' work day, with the entire assessment process encompassing approximately 2.5 weeks per client.

Reliability checks were conducted by an observer and trainer recording a client's task choice. An agreement was defined as both observers recording the same task selection during a choice presentation. Reliability checks were conducted during 52 of the 200 choice pairings, involving all combinations of tasks and clients. Agreement reliability was computed by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100. Across all checks, reliability on choice of tasks was 96%.

Table 1 presents a summary of the average percentage of task pairings in which each task was selected by each client when the respective task was paired with all other tasks across assessments. Using criteria similar to those of Mithaug and Hanawalt (1978), at least one high-preference task (i.e., se-

lected on at least 70% of all task pairings) and one low-preference task (selected during no more than 30% of the pairings) were identified for each client. This method replicated previous results (Mithaug & Hanawalt, 1978; Mithaug & Mar, 1980) by demonstrating that persons with severe handicaps do have preferences for different work tasks.

### *Comparison of Preferences and Assignments*

*Behavior definitions.* Two categories of work performance were targeted: on-task and disruptive behavior. *On-task* was defined as engaging in a work activity by manipulating materials in a manner required to complete a task, requesting assistance, or receiving feedback from the instructor. Also, if the task required a client to wait for another person to finish a task before he or she could engage in the task, the client was considered on-task if he or she was in the work area and not engaging in disruptive behavior. *Disruptive behavior* was defined as engaging in vocalizations that interrupted work performance, being aggressive, destroying materials, or interrupting another client's work. The on-task and disruptive categories were not exhaustive in that even though a nonoccurrence of on-task might be recorded, disruptive behavior was not scored unless behaviors representing that category were observed.

*Observation system and reliability.* Observations were conducted by two experimenters and one staff member. The observer first identified the clients on the observation sheet. Then, beginning with the first client listed, the observer briefly (no more than 5 s) watched the client and recorded whether he or she was engaged in on-task or disruptive behavior when first observed. Using a watch to cue intervals, observers noted the behavior of the first client every 10 s for 2 min. The 3 remaining clients were then observed one at a time using the same procedure. After each client had been observed for a 2-min sequence, the process was repeated.

Reliability checks were conducted during 17% of all observations, involving all clients, tasks, and treatment conditions. As a control against observer drift and bias, 23% of the checks were conducted

by a staff member who was trained to observe during the later stages of the study. This observer was trained using the same procedures as the original observers but was unaware of which treatment condition was in effect and the clients' previously assessed preferences. Reliability was calculated on an interval-by-interval basis for overall, occurrence, and nonoccurrence agreement using the same formula noted earlier. Overall reliability averaged 95% (range, 90% to 100%) for on-task and 96% (89% to 100%) for disruption, occurrence averaged 92% (81% to 100%) and 52% (0% to 77%), respectively, and nonoccurrence averaged 83% (63% to 100%) and 96% (88% to 100%), respectively. The lower average for occurrence of disruption was caused by low frequency (see Results) in which a small number of disagreements deflated the average (the modal number of disagreements per reliability check was zero and the majority of checks had two or fewer disagreements).

*Procedure.* Three 30-min work periods were identified during the work day. Target periods preceded routine changes in the work setting (e.g., before lunch or coffee break). During each work period, clients were exposed to one of three treatment conditions using an alternating treatments design. Each client was exposed to all three treatment conditions each day, with the order counterbalanced across days. The treatment conditions involved the instructor (a) assigning a client to work on a high-preference task (based on the previous preference results), (b) assigning a client to work on a low-preference (nonpreferred) task, or (c) allowing a client to choose to work on either a high-preference or low-preference task. During the conditions in which a client was assigned a work task, the trainer told the client at the beginning of the work period on which task he or she would be working. Each client was then provided with materials and instructed to begin work. During the condition in which a client was allowed to choose a task, choices were presented in the same manner as described previously, following which the client was instructed to begin work on his or her chosen task. During all treatment conditions, workshop

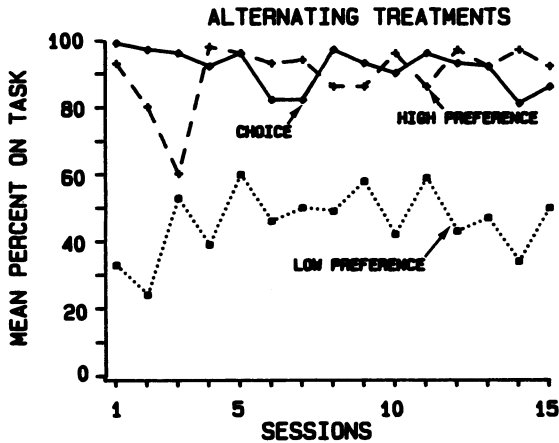


Figure 1. Mean percentages of observation intervals with on-task work performance for the 4 clients during each treatment condition for each work session.

staff made no special efforts to prompt work behavior beyond what routinely occurred. For the 4 clients, the preferred/nonpreferred task pairings were gluing/wiping, wiping/sanding, placing/wiping, and placing/sanding.

## RESULTS

The mean percentage of on-task behavior for all clients during the three treatment conditions is presented in Figure 1. When clients were assigned to work on a low-preference task, on-task averaged 46%. In contrast, during conditions in which the clients were assigned to work on a high-preference task or when the clients chose their work task, on-task averaged 90% and 91%, respectively. On-task levels for individual clients coincided with the average group results (Table 2). On-task for each client was highest during the condition in which he or she was either assigned a high-preference task or was allowed to choose a work task (mean differences between these two conditions were 11 percentage points or less per client). On-task for each participant was lowest during the condition in which he or she was assigned a low-preference task (averaging at least 33 percentage points below the next highest condition per client).

When clients were provided with a choice of tasks, they usually chose the task that was previ-

Table 2  
Mean Levels (%) of On-Task Behavior for Individual Clients (Ranges in Parentheses)

Client	Experimental condition		
	Assigned high-preference task	Assigned low-preference task	Choice of tasks
Robin	80 (0-100)	36 (0-86)	91 (46-100)
Lucy	90 (50-100)	55 (6-88)	97 (88-100)
Chuck	98 (88-100)	56 (0-97)	89 (33-100)
Richard	91 (66-100)	36 (0-83)	88 (67-100)

ously assessed to be highly preferred. Two clients chose their highly preferred task on 100% of the opportunities, 1 chose the highly preferred task on all but one opportunity, and 1 chose the previously assessed, preferred task on 60% of opportunities. Disruptive behavior for all clients remained low throughout the study, averaging 8% during the assignment of low-preference tasks, 8% during the assignment of high-preference tasks, and 6% when clients chose their tasks.

## DISCUSSION

The results indicated that persons with severe handicaps have preferences for certain work tasks. The results also provide increased support for the utility of the paired-task assessment process developed by Mithaug and Hanawalt (1978) for determining vocational preferences among this population. The results also coincide with other preference research (e.g., leisure activities; Green *et al.*, 1988; Wacker, Berg, Wiggins, Muldoon, & Cavanaugh, 1985) that indicates the utility of systematic behavioral assessments of preferences among persons with severe handicaps.

The results also suggest several choice-related variables that can affect work performance. First, if workers are provided with the opportunity to choose a work task, they will attend to that task almost twice as much as they attend to a task that they do not like and are assigned to complete. Second, assigning a client a preferred task is as effective as giving the client the opportunity to

choose his or her task. These results suggest that the task itself—in terms of a client liking or not liking the task—may be as important as the act of a client choosing the task.

Across all sessions there appeared to be no change in disruptive behavior. Because there was no baseline condition before the alternating treatments, an analysis of possible changes in disruptive behavior relative to client performance within the ongoing workshop routine is not possible. Nevertheless, one reason that there were no changes in disruptive behavior may have been the low level of disruption. Whether the various choice-related variables would affect work performance that involves higher levels of disruptive behavior differently cannot be determined from the current results. The impact of choice-related variables on productivity also cannot be determined from the results because productivity was not evaluated. Future research should consider possible effects on productivity.

Another area that warrants research is whether similar results would occur in other types of work environments (e.g., integrated employment settings) and with more extended work periods. In this regard, although sheltered work situations represent a common employment arrangement for persons with severe handicaps, integrated work arrangements are becoming increasingly common. It is not clear if choosing or being assigned a preferred or nonpreferred task would have the same effect in the latter settings as reported here, nor is it clear which type of setting allows more choice opportunities. If research in these areas does occur, an additional variable to consider in the assessment process is the degree of familiarity clients have with the assessed work tasks. In this experiment clients were familiar with the tasks on which they were assessed; it is unclear whether the process would be valid if used with novel tasks. Finally, in light of research with other populations (Monty, Geller, Savage, & Perlmutter, 1979), future research should assess whether the degree to which clients perceive that a choice exists (i.e., perceived control) affects performance.

As noted earlier, it appeared that assignment of a preferred work task was as effective as the act of

choosing a task in regard to promoting task-oriented work performance. However, because the clients usually chose their preferred task when given the opportunity, the distinction between the act of choosing and being assigned a preferred task becomes somewhat blurred (i.e., the clients were typically working on the same task in both conditions). Also, assignment of a task that has been assessed as preferred still incorporates a choice element into the work setting. That is, assignment of a preferred task involves presenting a work task that was previously chosen by a client (i.e., during the preference assessment). Nevertheless, our results show that there are likely to be many choice-related variables that affect the activities of persons who have severe handicaps in addition to the immediate opportunity to choose. Hence, instead of emphasizing the benefits of choice making per se, as has occurred in recent literature (e.g., Guess et al., 1985; Shevin & Klein, 1984), future research should identify the conditions in which choice making beneficially affects the activities of persons with severe handicaps.

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