

*PROVIDING A MORE APPROPRIATE EDUCATION FOR SEVERELY
HANDICAPPED PERSONS: INCREASING AND VALIDATING
FUNCTIONAL CLASSROOM TASKS*

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We evaluated a teacher training and supervision program for increasing the involvement of severely handicapped adolescents and adults in functional educational tasks. The program, consisting of a brief in-service followed by supervisory prompts and feedback, was accompanied by large increases in functional tasks in three classrooms. In addition, generalized increases occurred during nontargeted times in the classroom and the changes during both the targeted and nontargeted times were maintained over a 44-45 week period. In two subsequent experiments, surveys provided social validation for the criteria for functional versus nonfunctional tasks in that: (a) relevant individuals reliably categorized functional tasks as representing typical living, work, social, and leisure situations and (b) experienced clinicians consistently rated tasks previously categorized as functional as being more useful for severely handicapped persons than tasks categorized as nonfunctional. Results are discussed in terms of the relationship of functional classroom tasks in the overall provision of appropriate educational services for severely handicapped students.

DESCRIPTORS: functional tasks, teacher training, social validation, severely handicapped persons

Educational services for persons with severe handicaps have increased dramatically in recent years. A major impetus for the increase was the passage of the Education for All Handicapped Children Act (P.L. 94-142) in 1975. Within the areas addressed by P.L. 94-142 is the mandate that educational services be appropriate for the needs of handicapped students. Although the determination of what actually constitutes appropriate educational services has generated considerable discussion (e.g., Bates, Renzaglia, & Wehman, 1981; Burton, 1981), one emerging consensus is that educational activities for severely handicapped students should be directly applicable to their day-to-day functioning in nonclassroom environments (e.g., Bates et al., 1981; Certo, 1983; Langone,

1981). That is, programs should target those skills that are functional in the students' living, vocational, and community settings (Brown et al., 1979).

Recognition of the importance of teaching functional skills to severely handicapped persons is relatively widespread; nevertheless, severely handicapped students are often engaged in classroom activities that seem nonfunctional outside of the classroom environment (e.g., Bates et al., 1981; Brown et al., 1981). For example, a recent observational analysis of 43 classrooms serving severely handicapped students indicated that essentially two-thirds of all instructional tasks were nonfunctional (Green et al., in press).

One likely reason for the difficulty in providing classroom activities that assist severely handicapped students outside the classroom environment is the reliance on traditional curricula that were designed for less seriously disabled students (Green et al., in press; Langone, 1981; Wimmer, 1981). For example, teaching preacademic readiness skills such as stringing toy beads or putting pegs in pegboards may be of questionable relative value for severely handicapped adolescents who have not yet learned

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to communicate "yes" or "no," or to eat with a fork (cf. Bates *et al.*, 1981; Burton, 1981). In this respect, providing functional educational tasks is especially relevant for adolescent and adult severely handicapped students (Wimmer, 1981). These individuals are presented with different nonclassroom opportunities than severely handicapped children (e.g., various work experiences) and specific skills are needed to function in these situations. Also, there is less formal educational time available for severely handicapped adolescents and adults to proceed through developmental-based readiness tasks in lieu of acquiring skills that are immediately applicable outside of a structured classroom.

Despite a thoroughly discussed body of suggestions for implementing more useful classroom activities for the severely handicapped (e.g., Bates *et al.*, 1981; Certo, 1983; Langone, 1981), there has been little research in this area. The purpose of this study was to evaluate a program for increasing the involvement of severely handicapped adolescent and adult students in functional educational tasks in classroom settings (Experiment 1). Because criteria for determining functional tasks essentially have been based on intuitive appeal, a second purpose was to use information generated in Experiment 1 to socially validate the criteria used to determine functional versus nonfunctional educational tasks (Experiments 2 and 3).

EXPERIMENT 1

METHOD

Setting and Participants

Experiment 1 was conducted in three classrooms serving a total of 19 ambulatory, adolescent and adult students who met the U.S. Office of Education's criteria of severely handicapped (Van Etten, Arkell, & Van Etten, 1980, chap. 1). The classrooms served students who lived in a state facility for the developmentally disabled. All but three of the students were profoundly or severely mentally retarded in terms of intellectual and adaptive functioning (Grossman, 1983). Most of the students performed some basic self-help skills

(e.g., self-feeding with one utensil) with staff supervision but did not display more advanced self-help skills (e.g., serving food). Conversational skills were essentially lacking among all the students although most could communicate with simple utterances or manual signs or both. All students displayed some type of inappropriate behavior, ranging from stereotypy to severe aggression.

All classroom teachers were certified in teaching exceptional students and had 1–4 years teaching experience. There were also three teacher aides in Classroom 1 (which served 10 students), although all three aides were usually not present at the same time. There was one aide in Classroom 2, which served six students. There was no aide assigned to Classroom 3, which served three students. The overall school program had been sanctioned as complying with P.L. 94-142. These classrooms were selected because they: (a) had low levels of functional educational tasks based on prebaseline observations, (b) involved students with varying skill levels and ages, although all were adolescents or adults, and (c) included students from different areas in the residential facility.

Behavior Definitions

The definitions were identical to those used in our observational investigation of classrooms for the severely handicapped (Green *et al.*, in press). *On task* was defined as a student working on an educational task that was assigned by a teacher, interacting with a staff person such as gesturing to a teacher, or receiving an interaction from a staff member such as being physically guided through an activity. Material manipulation by a student was considered on task only if the objects were used in the manner for which they were designed or as instructed by the educator. Behaviors not considered on task included *self-care* and *transition* activities, as well as interactions with *foster grandparents*. Self-care activities involved basic care functions in which the student was not being trained, such as taking off a coat or receiving such care from a staff member. Transition activities involved moving between classrooms or getting ready

to move. Any student activity not included in the definitions just noted, and not involving a foster grandparent, was considered *off task* (e.g., sitting at a table or rocking in a chair with no other apparent activity, staring at the wall). Due to the focus of this study, further examination of the self-care, transition, and grandparent-interaction categories will be minimized.

Behaviors considered *on task* were further defined as either *functional* or *nonfunctional* (Green et al., in press). The criteria for functional tasks were based on suggested guidelines for useful instructional tasks for severely handicapped students (e.g., Bates et al., 1981; Brown et al., 1979) and included two components: functional materials and functional activities. For *materials* to be considered functional, they had to be encountered in a student's nonclassroom living situation or be used by nonhandicapped persons of the same age group as the student in a nonclassroom setting. The same age group criterion referred to the same school grouping according to junior/senior high school or postsecondary (over 18 years of age). The main concern with classroom instructional materials was that they should be as similar as possible to materials that students need in typical nonclassroom situations because of the difficulties severely handicapped persons often experience in generalizing newly acquired skills across different stimulus situations.

For an *activity* to be considered functional, it had to meet the criteria for one of the following five skill domains (cf. Brown et al., 1979): (a) it would be likely to occur among a nonhandicapped population of the same age group as the student during leisure time (leisure domain); or (b) it was part of a vocational task that, once mastered, would be a skill for which the student could be paid to perform in a partial or full employment situation (vocational); or (c) it was part of an interpersonal interaction that the student would perform, once mastered, at least weekly outside of the classroom or it represented an interaction that would not be unusual for a nonhandicapped person of the same age group to perform weekly (communication/social); or (d) it was part of an activity that, once

mastered, would be likely to occur among a nonhandicapped population of the same age group in a community setting (community living); or (e) it would be performed by someone for the student outside of the classroom if the student did not perform the task for himself or herself (domestic/self-help). The definition for the self-help domain was drawn from Dyer, Schwartz, and Luce (1984), whereas the definitions for the other four domains were drawn from a variety of discussions as referenced earlier. We elaborated on the definition used by Dyer et al. to include other domains because our pilot work had indicated that there were a number of useful activities for severely handicapped persons to learn that a caregiver would not do for them (e.g., leisure activities). In sum, to meet the criteria for a *functional educational task*, the student had to be working with *functional materials* (if materials were used) *and* had to be engaging in a *functional activity*.

An important factor in determining functional classroom activities was that the more frequently or immediately the skills involved in the activities could be used in typical domestic, recreational, vocational, and community settings, the more useful the activities would be considered for severely handicapped adolescents and adults. Hence, teaching a severely retarded young woman to put toy pegs in a pegboard, for example, as a means of teaching fine motor skills as precursors to a vocational skill would not be considered a functional activity (in this case the materials would also be nonfunctional). Putting toy pegs in a pegboard is not a paid work activity that occurs very often (if at all) even when the skill is mastered. In contrast, teaching the woman to complete initial steps of an actual assembly task (e.g., screwing together parts of a ball point pen) would be scored as functional because, once mastered, the skill is used somewhat frequently in some vocational endeavors—particularly in sheltered workshops that employ severely handicapped persons. With the latter task, the teaching activity could focus on fine motor skills as precursors while simultaneously teaching the initial parts of an actual work skill. Table 1 provides additional examples of functional and nonfunc-

Table 1

Examples of Functional and Nonfunctional Tasks, Activities, and Materials for Junior/Senior High School Severely Handicapped Students

| Skill domain | Functional task | Nonfunctional because of materials | Nonfunctional because of activity |
|----------------------|---|---|--|
| Domestic/self-help | Student attending to instructions of how to put on her winter hat | Student attending to instructions of how to put on a play police chief's hat | Student attending to instructions to look at a magazine picture of a woman putting on a hat |
| Leisure | Student being manually guided in operating a video game | Student being manually guided in operating a play video game made from a milk carton | Student being manually guided in putting toy pegs in a pegboard ¹ |
| Vocational | Student following instructions to sort like-size nuts and bolts into a package | Student following instructions to sort plastic, toy nuts and bolts into slots on a form board | Student following instructions to fill up egg cartons with cotton balls |
| Community living | Student attending to teacher demonstration of counting out 50¢ in change | Student attending to teacher demonstration of counting toy coins | Student attending to teacher demonstration of matching a real coin to a magazine picture of a coin |
| Social/communication | Student being manually guided in signing "Hi" when first greeted by the teacher | Student being manually guided in holding up a cartoon of "Smokey the Bear" waving "Hi" | Student being manually guided in drawing a picture of someone signing "Hi" |

¹ In this example the activity *and* the materials would be nonfunctional.

tional tasks (cf. Bates *et al.*, 1981; Green *et al.*, in press).

Observation and Reliability

Observations were conducted by the experimenters and a staff assistant. On entering a classroom, the observer briefly greeted the teacher and aides. The observer then identified the students on the observation sheets following a left-to-right view of the classroom. Next, the observer monitored the behavior of the first student listed, with a maximum of 10 s to determine and record the first student behavior observed. Functional tasks, activities, and materials were recorded only if the student was observed to be on task and the functional criteria were met during the entire on-task time. After the student's behavior was monitored once, the process was repeated three times with that student for a total observation of 40 s. The most recent on-task behavior observed (and subsequently scored as functional or nonfunctional) then was

briefly described within the next 20 s and the skill domain that the behavior represented was noted (to gather information required to perform a social validation of the criteria used to define functional tasks). This process subsequently was conducted for each student in the classroom and then the entire process was repeated across students up to a maximum of 22 times, or until each student was observed for at least two complete sequences. Observations were conducted during predetermined target time periods and generalization periods.

Reliability checks were conducted by two observers who independently and simultaneously conducted observations in the manner just described. Reliability checks occurred during 38% of all observations, including during each experimental condition for each classroom during the target and generalization periods. As a control against observer drift and bias (Kazdin, 1977), approximately halfway through the project an additional observer was trained with the same procedures as used with the original observers. Neither the ex-

perimental purpose nor the experimental condition in effect was mentioned to the observer.

Interobserver agreement on the occurrence and nonoccurrence of each behavior category was computed separately by dividing the number of agreements by the number of agreements plus disagreements and multiplying by 100 (Bailey & Bostow, 1979). Mean agreement on nonoccurrence averaged from 83% to 91% across categories with respective ranges for the five categories of: on task 67%–100%, off task 64%–87%, functional educational tasks 67%–100%, functional activities 67%–100%, and functional materials 70%–100%. Occurrence reliabilities were more variable, with respective means for the five categories of 83% (range 62%–100%), 81% (56%–98%), 69% (0%–100%), 71% (0%–100%), and 73% (0%–100%). The somewhat lower reliabilities for functional tasks, activities, and materials were affected more by the manner in which reliability was calculated rather than by a high frequency of disagreements. Specifically, because functional tasks were recorded only if an observer scored a behavior as on task, then even though on-task reliability was within traditionally accepted standards, whenever a disagreement did occur on on task it automatically resulted in a disagreement on the (non)occurrence of functional behavior. Hence, if one observer judged a student to be on task and recorded a functional behavior and another observer scored off task and did not make any judgment regarding functional versus nonfunctional behavior, a disagreement on the (non)occurrence of functional behavior was still scored. If occurrence reliability is calculated based on when both observers actually decided whether a behavior was functional or not (i.e., both scored on task), occurrence reliability increases to 81% for functional educational tasks, 84% for functional activities, and 91% for functional materials.

Experimental Procedures

Baseline. Observations were conducted while the educators carried out their usual classroom routines. One time slot (9:00–10:00 a.m.) was selected as the target period for observations and

subsequent intervention because it was a time when each classroom was scheduled to be engaged in direct teaching activities. Generalization time periods were also selected for observations, to evaluate whether changes that might occur during the target period would be accompanied by changes at other classroom times. The times chosen for generalization periods (between 10:30 a.m. and 12:00 noon) were selected on the same basis as the target periods. Because a partial-day summer school schedule was in effect in the afternoon, it was not possible to obtain data later in the day. Observations were conducted intermittently during the week and staff were unaware of the specific days on which observations would occur.

Prior to initiating baseline observations, the school principal (experimenter) met with educators from each class and explained that a project was being conducted to evaluate ways of improving classroom services and that participation in the project was voluntary. All staff who were contacted agreed to participate. During baseline, the classroom activities typically involved several of the five student skill domains. In Classrooms 2 and 3, the staff generally conducted training programs sequentially with each student; students not involved with ongoing individualized instruction were usually provided with tabletop activities. In Classroom 1, which contained somewhat higher skilled students, the majority of time was usually spent in group instruction programs.

Teacher training and supervision. The teacher training and supervision program was based on a behavioral approach to staff management previously shown to be effective in improving the performance of paraprofessional direct care staff in residential living environments (see Reid & Shoemaker, 1984, for a review). Three main components were included in the program, beginning with an *instructional in-service*. The in-service component in turn consisted of three steps. First, the educator(s) from a classroom met with the principal and received a seven-page set of written instructions explaining the rationale for implementing functional tasks and providing definitions and examples of functional and nonfunctional activities and materials. Second, the principal paraphrased

the handout and responded to staff questions. Third, a participative management component (Burgio, Whitman, & Reid, 1983) was included in which staff were asked to determine what activities and materials could be altered. That is, instead of the principal specifying the activities and materials to change, she encouraged the staff to make these decisions within the guidelines described in the handout. The principal asked the staff to work on new ideas and the group then determined a time to meet again for the staff to present their plans to the principal. The principal explained that the eventual goal was to provide functional tasks throughout the school day but that the current focus was on the specific target period. When the group met again, the principal gave approving or corrective vocal feedback regarding the staff members' suggestions. Finally, a target date was set for initiating the new activities and materials in the classroom. All in-service meetings encompassed less than 1 hour.

The second component of the program, prompting, began after the first in-service meeting. Initially, prompts were provided to increase the likelihood that staff prepared new activities and materials as requested by the principal. Within 2 days of the initial meeting, the principal visited each classroom unannounced and asked questions regarding plans for changing the classroom tasks in an attempt to indicate the importance of what was expected. After the date for having the new activities and materials in place passed, the principal continued to visit the classroom on a variable schedule to prompt the development and continued use of more functional tasks (e.g., by asking questions about ongoing plans/activities). These prompting interactions generally required less than 5 minutes to conduct and occurred on seven, seven, and nine occasions with the staff of Classrooms 1, 2, and 3, respectively. Because the principal used a variable schedule to visit the classrooms and the observers did not record data during the target period every day in every classroom, most of the principal's interactions with the staff occurred when observers were not present.

The prompting interactions also afforded the

opportunity to implement the third component of the supervision program—feedback. The principal provided intermittent vocal feedback to staff contingent on the classroom activities and materials the principal observed during the target period. The feedback was provided at variable, unscheduled times during the day (except during the generalization period) when the principal visited the classroom. Interactions in which feedback was provided occurred on nine occasions with staff in Classroom 1, on nine occasions in Classroom 2, and on six occasions in Classroom 3. Within a given interaction, feedback could be positive, corrective, or a combination of both. Positive feedback occurred during 79% of all interactions and corrective feedback during 42%. The principal also provided feedback to staff through a memorandum after increases in functional educational tasks had been observed. The memorandum expressed compliments for a job well done and was placed in the educators' personnel files. Throughout the program, no feedback or prompts were directed to tasks during the generalization period.

Because part of the program focused on the use of more functional materials, some classroom materials had to be replaced. For the most part, replacements were obtained from existing supplies in the classroom or from the institution where the students lived. For example, if an educational task involved color matching, a student's socks may have been obtained with the principal's assistance to replace matching two colored geometric figures cut from construction paper. Some new materials were also purchased through the existing school budget once the staff determined which materials they wanted. The education staff had the same access to purchasing classroom materials throughout all phases of the study.

Follow-up. Follow-up observations initially were continued intermittently in each classroom as part of the formal experiment for 12 weeks. During this follow-up period, the principal visited the classrooms at the same general frequency that she observed in other classrooms in the school—approximately once per week. Several long-term follow-up observations were later conducted at pe-

riods ranging from 34–45 weeks. During the entire follow-up period, the principal conducted at least monthly probes of the level of functional tasks and prompted or provided feedback contingent on her observation results. Throughout all follow-up observations, staff were unaware of the days or weeks on which the observations would occur.

Experimental Design

A multiple probe design across classrooms was used to evaluate effects of the teacher training and supervision program, including whether changes that occurred during the target periods generalized to other times in the classrooms. Because of a change in schedule, the students in Classroom 3 were no longer available for observation during the generalization period following the implementation of the program.

RESULTS AND DISCUSSION

Target Periods

Figure 1 presents the mean percentage of on-task intervals during which students were working on functional educational tasks. When the students were on task during baseline, a small percentage of that time was spent engaging in functional educational tasks, with means ranging from 30% to 37% across classrooms. The low levels of functional educational tasks were due to low levels of functional activities (mean range of 32% to 53% across classrooms) and low levels of functional materials (5% to 49%). While the supervision program was in effect (the first intervention data point represents the first observation period after the initial in-service meeting when the supervisor had initiated her prompting and feedback interactions), functional tasks increased to means of 85%, 97%, and 79%, respectively, for Classrooms 1, 2, and 3. Figure 1 also shows that the increases maintained during the follow-up checks.

The increases in functional tasks during the intervention were not accompanied by any detrimental decreases in student on task. During baseline, on task averaged 43% in Classroom 1, 50% in Classroom 2, and 55% in Classroom 3, whereas

during the program, respective averages were 58%, 59%, and 51%. Generally, these latter averages place the target classrooms slightly above the average classroom serving severely handicapped students, in which on task is approximately 45% (Green et al., in press).

Results for individual students coincided with the average group results. All 16 students in all classrooms who were present during baseline and the supervision program (three students were not present during the probes in the latter condition) increased their mean level of functional tasks while the program was in effect. Additionally, no detrimental effects were apparent for individual students' on-task and off-task behaviors.

Generalization Periods

The increases in functional educational tasks that occurred during the target periods in Classrooms 1 and 2 when the program was in effect were accompanied by similar changes during the generalization periods (Figure 2). In Classroom 1, mean percentage of functional tasks increased from 16% during baseline to 84% when the program was in effect and remained well above baseline levels during follow-up. A similar, though slower, change occurred in Classroom 2, with a 28% average during baseline, 40% when the program was in effect, and 69% (mean) during the follow-up checks. Generalization results for individual students paralleled the group results and were similar to the individual results during the target periods. Also, there were no detrimental changes in individual on- or off-task results.

Skill Domains

Educational tasks representing all skill domains were observed in each class during baseline and during the program, with the exception of the community-living domain, which was infrequent in all classes (representing less than 3% of all observations). Otherwise, there were no consistent changes across the three classes with respect to skill domains.

Results of Experiment 1 indicated that the teacher training and supervision program increased

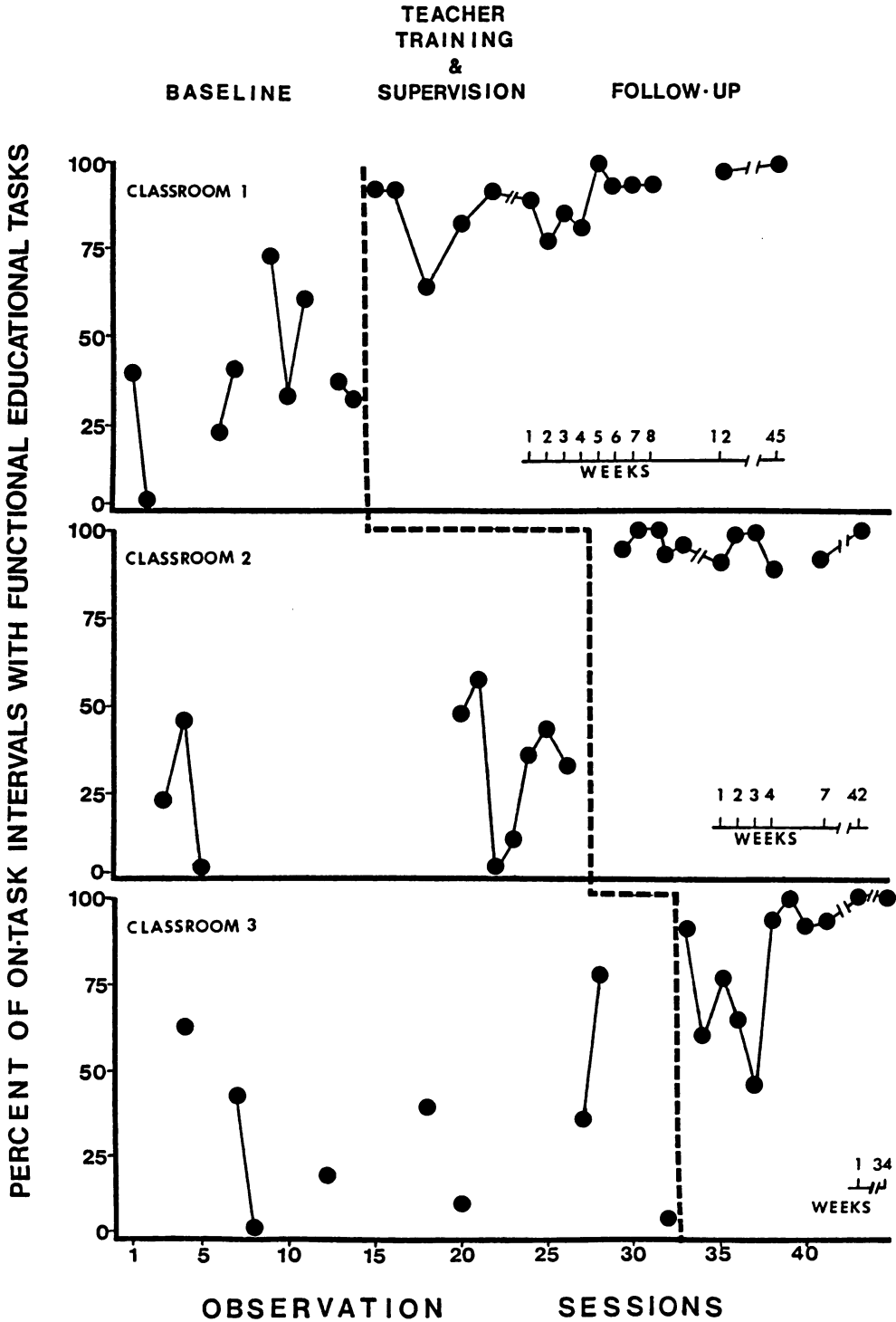


Figure 1. Mean percentage of observation intervals scored as on task that involved functional educational tasks for each observation session during the target periods for the three classrooms during each experimental condition in Experiment 1.

and maintained the involvement of severely handicapped adolescent and adult students in more functional classroom tasks. The education staff implemented more functional tasks at times directly addressed by the school principal (target periods) and during times not specifically addressed (generalization periods). However, because criteria for functional tasks were derived from experimenter judgment and previous literature rather than from an empirical data base, some question existed regarding the social validity of the criteria. The purpose of Experiment 2 was to determine if relevant individuals could reliably classify behaviors in regard to whether they occurred in typical living, work, social, or leisure situations and whether functional vocational tasks actually represented payable work tasks.

EXPERIMENT 2

METHOD, RESULTS, AND DISCUSSION

Examples of behaviors categorized as functional and nonfunctional were selected from the observations conducted in Experiment 1 and from previous classroom observations conducted by the experimenters (Green et al., in press) using procedures identical to those described here. These samples were collected only for behaviors exhibited by the adult students because: (a) the importance, and difficulties, of using functional tasks have been more heavily stressed with older severely handicapped persons than with younger individuals (e.g., Wimmer, 1981); (b) over two-thirds of the students in Experiment 1 were 18 years old or older.

For each of the skill domains, except community living, 9–10 functional and 9–10 nonfunctional tasks were selected. Examples of the community living skill domain were observed at such a low frequency there was not a sufficient sample of tasks to analyze. The examples of functional and nonfunctional tasks for each of the four skill domains represented either all of the available tasks recorded in that respective category, or they were randomly selected from all the tasks recorded in that domain. A survey was prepared for each skill domain by listing the examples of functional and

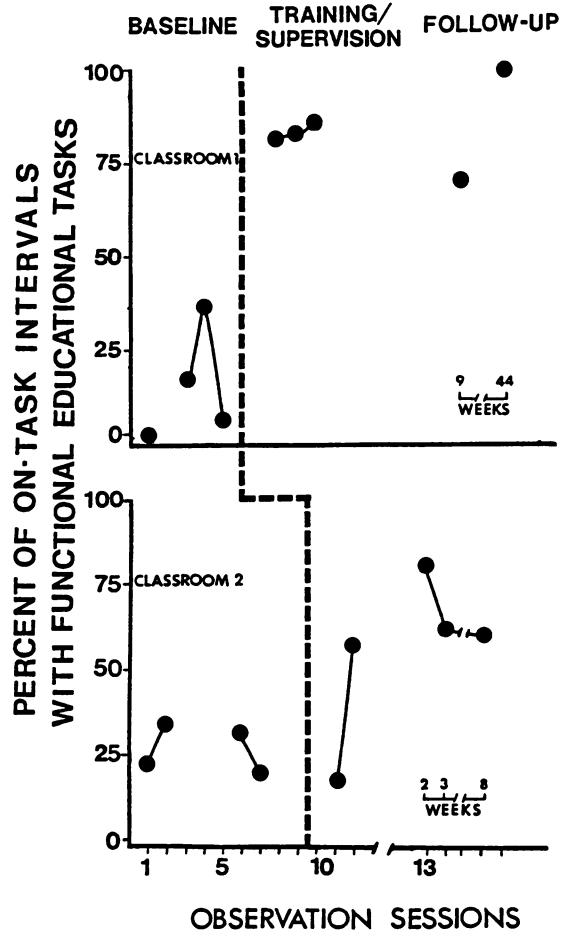


Figure 2. Mean percentage of observation intervals scored as on task that involved functional educational tasks for each observation session during the generalization periods for the two classrooms during each experimental condition in Experiment 1.

nonfunctional tasks in random order (survey respondents were unaware of the categorization of the tasks).

Leisure Domain

Using the definition of a functional leisure task as a guide, 25 adults who lived in the region of the state served by the institution where the students lived were asked to complete a survey by scoring each of 20 tasks regarding whether it was something they: (a) were likely to do during their leisure time or (b) were not likely to do. As demonstrated in Figure 3, survey respondents reported that they were likely to do things previously scored

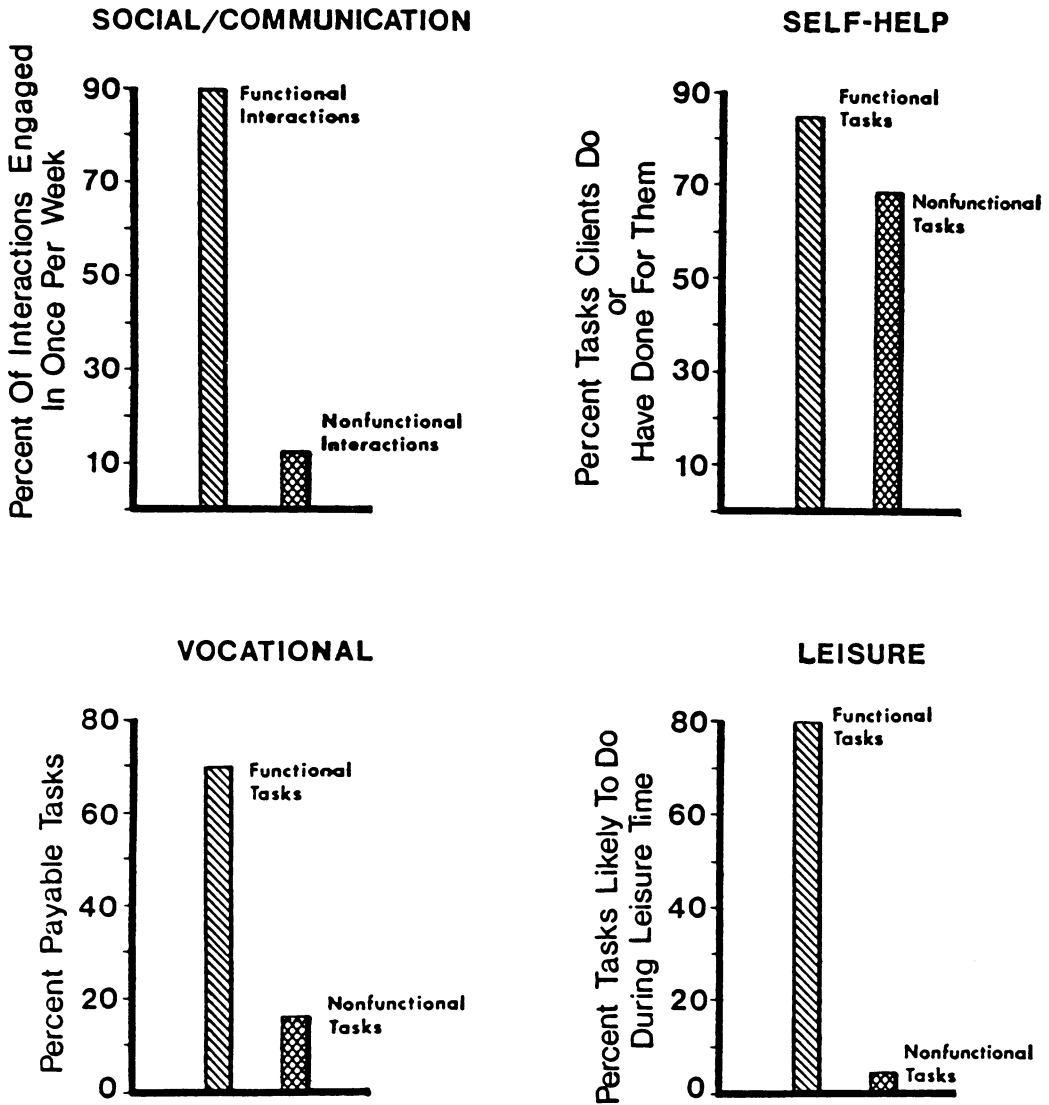


Figure 3. Results of the social validity survey for each of the four skill domains in Experiment 2. Respective bar graphs present the percentage of recordings for tasks previously coded as functional and nonfunctional that represent the respondents' typical interactions (social/communication domain), payable jobs (vocational), tasks their clients do or have done for them in nonclassroom settings (self-help), and typical leisure pursuits (leisure).

as functional at a frequency of more than 19 times the frequency of things scored as nonfunctional.

Social/Communication Domain

A survey of tasks previously recorded in the social domain was administered to the same persons who completed the leisure survey. However, because of the definition of functional social/communication tasks, respondents were asked to in-

dicate which things: (a) represented an interaction they engaged in at least once per week or they would not consider unusual to perform once per week versus (b) an interaction they did not engage in at least once per week or would consider unusual to perform once per week. Results of the survey (Figure 3) were similar to those in the leisure domain in terms of supporting the definition of functional social tasks.

Vocational Domain

A survey was sent to the directors of 22 sheltered workshops that employed retarded persons in the region of the state served by the institution in Experiment 1. Sheltered workshop personnel were questioned because the most likely work place for the students in the community was a sheltered workshop. Using the definition of functional vocational tasks as a guide, the workshop directors were asked to check each of 20 tasks regarding whether it involved part or all of a task that, once mastered by a client: (a) represented a job for which they had paid clients within the last year (payable task) or (b) represented a job for which they had not paid clients (nonpayable task). Eighty-six percent of the directors responded to the survey and reported that over 4.5 times as many functional tasks were payable than nonfunctional tasks (Figure 3). Each of the 10 functional tasks was payable in at least one sheltered workshop and 70% of the tasks were payable in at least five workshops, whereas 30% of the nonfunctional tasks were not payable in any workshop and none were payable in as many as five workshops.

Self-Help Domain

Self-help surveys were completed by 20 direct care staff who worked at the institution in Experiment 1. In accordance with the guideline for functional self-help tasks, staff were asked to indicate whether each item represented something that their adult residents: (a) typically did outside the classroom or someone did for them, or (b) typically did not do outside the classroom and nobody did for them. Direct care personnel were chosen because they were deemed as being very familiar with the daily self-care activities of severely handicapped students. Results of the self-help survey supported the definition of functional tasks (Figure 3), although not to the degree indicated with the other skill domains.

Results of Experiment 2 indicated that observed classroom tasks categorized as functional were generally judged much more representative of the types of tasks that occur in typical nonclassroom envi-

ronments than were nonfunctional tasks. Consequently, tasks labeled as functional using the definitions described earlier appeared to be considerably more representative of tasks occurring in day-to-day situations in which severely handicapped adolescents and adults need to acquire skills. The only questionable degree of difference occurred with the self-help domain. In our estimation, the lack of greater differences between functional and nonfunctional tasks was due at least in part to the institutional environment in which the students lived and its relationship to the traditional school program at the institution. For example, some of the direct care staff were aware that pegboards were used a lot in the school and consequently used pegboards as an activity during unstructured time in the living unit.

The survey respondents were asked to judge behaviors of a given skill domain under situations specific to the definition of functional behavior. Hence, a question remained regarding how persons would view the utility of functional versus nonfunctional behaviors under more general situations without specific guidelines within each skill domain. Experiment 3 was conducted to address this issue.

EXPERIMENT 3

A survey was completed by eight persons attending a meeting of the Psychology/Research Departments of the institution represented in Experiment 1. Persons attending this meeting were selected because they had responsibilities that brought them into frequent contact with severely handicapped persons' performance across all skill domains in nonclassroom settings and because each individual had at least 2 years experience with severely handicapped clients. Additionally, these eight persons were selected from all persons attending the meeting because they had work experience with severely handicapped persons in both community and institutional settings, and they were not aware of the definitions for functional classroom tasks. Educational backgrounds of the participants ranged from a bachelor's degree to a PhD in psychology,

with most respondents having a master's in psychology.

The survey was prepared by randomly selecting 10 items (five functional and five nonfunctional) from each of the four skill domains used in Experiment 2. The items were randomly listed on the survey form and participants were asked to rate each behavior in terms of how useful it was in general for a severely handicapped adolescent or adult to learn in order to function outside a classroom, using the scaled categories of not useful at all, a little useful, moderately useful, very useful, or extremely useful.

The most frequent survey response category for the behaviors previously scored as functional by classroom observers was "very useful" whereas the most frequent recording for behaviors scored as nonfunctional was "a little useful." Ratings within each skill domain also supported the definitions: For the social/communication domain, the modal rating for functional behaviors was "extremely useful," whereas for nonfunctional behaviors it was "not useful at all"; for both the vocational and self-help domains, the modal rating for functional behaviors was "very useful" compared to "a little useful" for nonfunctional behaviors; for the leisure domain the modal ratings were "moderately useful" (functional) and "a little useful" (nonfunctional).

GENERAL DISCUSSION

Results of this investigation lead to several conclusions regarding the provision of more appropriate educational programs for severely handicapped students. First, Experiment 1 demonstrated an effective method of assisting educators in involving their severely handicapped adolescent and adult students in more functional tasks. Second, Experiment 2 demonstrated that relevant individuals could reliably classify functional versus nonfunctional behaviors in regard to whether they occurred in typical living, work, social, and leisure situations. Third, Experiment 3 provided additional, and more general, validation of the categorization of tasks as functional versus nonfunctional. Expe-

rienced clinicians ranked the former tasks considerably more useful than the latter for severely handicapped adolescents and adults in terms of their general functioning outside of a classroom.

Although the criteria for functional educational tasks were based on a considerable amount of professional literature and were rather strongly supported by the social validity data, we recommend that the criteria be used only as guidelines. Clearly, there are cases in which a particular set of materials or activities will not meet the functional criteria but could still be used in certain situations with given students (and vice versa). One such example would be tasks that may appear nonfunctional but teach certain precursor skills to young severely handicapped children that may eventually lead to functional skill development with continued education. However, when considering the dominance of nonfunctional educational tasks in the Green *et al.* (in press) normative study, it seems apparent that workable, albeit flexible, guidelines are needed to help teachers focus on functional tasks and not on nonfunctional tasks.

The results provide further support for the staff management approach on which the teacher training and supervision program was based by extending its effectiveness from institutional direct care staff performance to classroom educator performance. Perhaps more importantly, effects of the program maintained at intervals up to 45 weeks. The behavioral staff management literature, as well as behavioral research with severely and profoundly mentally retarded persons, has not provided many long-term evaluations of the effectiveness of interventions (see Reid & Whitman, 1983; Whitman & Scibak, 1979, for reviews). The current data are encouraging in this respect. The fact that the school principal incorporated aspects of the program into her routine classroom interactions and provided feedback on functional task involvement probably facilitated the positive follow-up results considerably.

Given the success of the classroom program, a line of research that would be useful in the future is demonstrating the effectiveness of the procedures for increasing functional educational tasks in larger

numbers of classrooms serving the severely handicapped as well as for involving nonambulatory persons in more functional tasks. The fact that the teacher training and supervision program was used by the regular school principal who had no formal experience in applied behavior analysis suggests that the program may also be easily adopted by other principals. Once tasks that are more functional are in place in more classrooms, the research emphasis could shift to improving classroom teaching strategies to bring about more significant skill acquisition by severely handicapped students. However, we contend that before an emphasis is placed on improving skill acquisition strategies, efforts are needed to ensure that what is being taught is really useful.

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