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ABSTRACT

This paper reviews the research and attempts to identify instructional techniques and settings to promote generalization of appropriate work-related social behavior in individuals with mental retardation. First, it provides a definition of transition and discusses the importance of training for generalization, discrimination, and maintenance. Three techniques are then explained: (1) cognitive process approaches to instruction, (2) using peers as change agents, and (3) community-based instruction. The paper finds support for all three techniques and recommends that transition for students with mental retardation involve enrollment in vocational education programs, instruction in community-based environments, paid part-time employment, cognitive process approaches, and peer-mediated interventions. (Contains 30 references.) (DB)

Generalization of Work-Related Social Behavior for Persons with Mental Retardation

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Successful participation in social interaction is pivotal in defining our competence as individuals and in establishing the necessary social history for future interactions with others (Odom & McConnell, 1992). Lack of social competence, however, poses a major obstacle to successful employment and independent living for persons with mental retardation (Brickey, Campbell, & Browning, 1985; Chadsey-Rusch, 1992; Cheney & Foss, 1984; Ford, Dineen, & Hall, 1984; Greenspan & Shoultz, 1981; Salzberg, Lignugaris/Kraft, & McCaller, 1988).

The need for transition programs to address the social aspects of work and independent living has recently been recognized by the Division on Career Development and Transition, The Council for Exceptional Children, who has adopted the following definition of transition:

> Transition refers to a change in status from behaving primarily as a student to assuming emergent adult roles in the community. These roles include employment, participating in post-secondary education, maintaining a home, becoming appropriately involved in the community, and experiencing satisfactory personal and social relationships. (Halpern, 1994, p. 117)

In fact, Halpern (1985, 1994) has stated that the establishment of effective personal and social relationships may be the *most important* transition goal.

Generalization, Discrimination, and Maintenance

Social competence is an area where generalization and discrimination of performance are essential. Generalization has been defined as an outcome that facilitates widespread change without requiring active intervention across all environmental conditions and is considered successful if the relevant behavior occurs under different, nontraining conditions across persons, settings, behaviors, and time (Stokes, 1992; Stokes & Baer, 1977). Discrimination is knowing when a change in the setting calls for a change in behavior. Maintenance of learned behavior refers to the continued performance of a desired behavior over a period of time that is different from the time in which training occurred (Berg, Wacker, & Flynn, 1990). Training efforts must recognize the importance of generalization, discrimination, and maintenance to be effective in natural environments where immediate feedback and reinforcement are unavailable. Stokes and Baer (1977) warn that generalization does not automatically occur simply because there has been a change in behavior. Interventions must program for generalization

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and maintenance of learned behavior rather than passively expect it as an outcome of training.

The greatest challenge in teaching appropriate social behaviors is ensuring generalization and maintenance of those behaviors across the widest variety of circumstances. We should not assume that students with mental retardation will learn generalized rules for social interaction without appropriate instruction. Korinek and Polloway (1993) stated that a focus on social *skill* training without addressing broader issues of social competence decreases the likelihood that a student will generalize and maintain the skills in settings beyond that where the training occurred. Therefore, instructional techniques emphasizing a broader understanding of social interaction may also enhance the probability of generalized appropriate social behavior. The purpose of this paper is to highlight instructional techniques and settings to promote generalization of appropriate work-related social behavior. Techniques discussed will be (a) cognitive process approaches to instruction, (b) using peers as change agents, and (c) community-based instruction.

Cognitive Process Approaches

Traditionally, social skill interventions have targeted behavioral components using operant conditioning (reinforcement) or social learning techniques (observation, modeling, and role-playing). More recently, cognitive process approaches have been used with much success. Cognitive process approaches include a problem-solving dimension which Foss, Auty, and Irvin (1989) found to be more effective than behavioral rehearsal or modeling in teaching employment-related interpersonal skills. Cognitive process approaches focus on learning the general rules of social conduct and how to think about social situations. Cognitive process approaches break the training process into decoding, deciding, performing and evaluating (Collet-Klingenberg & Chadsey-Rusch, 1991).

Table 1. Cognitive Process Approach to Teaching Social Awareness

The Skill	Definition	Process of Learning
Social Decoding Skills	the skills used to discriminate or decode what is happening during a social interaction	Students are taught to verbalize the decoding rule and ask themselves four questions: (a) what is happening, (b) who is involved, (c) why someone is doing what they are doing, and (d) how the different actors in the situation might feel.
Social Decision Skills	the skills used to decide which response would best meet the demands of a social situation	Students are taught to verbalize the decision rule and state possible response options.

The Skill	Definition	Process of Learning
Social Performance Skills	the overt responses made to a social situation	Students are taught to verbalize the performance rule and then act based on their decision.
Social Evaluation Skills	the skills used to judge whether or not the overt social response met the demands of the social situation	Students are taught to consider what response their actions received--positive feedback or negative feedback. Students verbalize the evaluation rule then ask and answer three questions: (a) how the other individual felt, (b) how they felt, and (c) if they did the right thing.

Adapted from Collet-Klingenberg, L., & Chadsey-Rusch, J. (1991). Using a cognitive-process approach to teach social skills. *Education and Training in Mental Retardation, 26*, 258-270.

In a meta-analysis of seven studies comparing the effectiveness of behavior training strategies and cognitive process strategies, results indicated that cognitive process approaches were more effective in terms of generalization and maintenance of learned social behaviors (Soto, Toro-Zambrana, & Belfiore, 1994). In the four studies using behavioral training strategies, participants learned the targeted behaviors, but generalization was reported in only one of the studies and generalization only occurred within a workshop setting. The three studies using cognitive process approaches all reported generalization across persons and settings, whereas traditional social skills training methods for the same participants had not (Collet-Klingenberg & Chadsey-Rusch, 1991; O'Reilly & Chadsey-Rusch, 1992; Park & Gaylord-Ross, 1989).

Although strategies that "train and hope" are not adequate (Stokes & Baer, 1977), many social skills interventions, especially social skills training for the workplace, are conducted in just this manner. Brown and Odom (1994) stated that social skills training interventions using instruction, modeling, and rehearsal may have limited effectiveness beyond the restricted training conditions and settings, thus the learned skills are not maintained after the termination of treatment. Cognitive process approaches appear to address this issue by teaching ways to internalize social decision rules and response options.

Using Peers as Change Agents

Acceptance by peers is a major life issue for all adolescents including those with mental retardation. Therefore, using peers as change agents may be a promising approach in programming for generalization of acceptable social behavior. In peer-initiation interventions, socially competent peers make specific social initiations to engage students with disabilities in extended, positive social interactions and provide a context for acquiring basic social skills. Odom, Chandler, Ostrosky, McConnell, and

Reaney (1992), conducted a peer-initiation intervention for children with disabilities. Peer initiations increased when the intervention began and resulted in social interaction increases for the children with disabilities. When the teacher systematically faded prompts and feedback, social interaction continued. The peer interactions became more positive, friendly, and reinforcing as the intervention proceeded. Odom et al. recommended that a receptive environment providing interactions with socially responsive peers (i.e., integrated or mainstreamed settings) must be available for effects to generalize to other settings and be maintained over time. We believe the same type of intervention would be beneficial for adolescents with mental retardation.

Brown and Odom (1994) stated that training must occur across *peers*, settings and situations in an environment as close as possible to natural communities of reinforcement. Among adolescents in school settings, most social interactions occur in group contexts. Therefore, Haring and Breen (1992) conducted a social network intervention to assess whether a method that included multiple peers without disabilities facilitated (a) increases in verbal and nonverbal interactions, (b) inclusion of students with disabilities in a social group, and (c) the emergence of friendships with peer network members. The peer-mediated social network strategy used groups of same-aged nondisabled peers to provide ongoing social support throughout the school day to integrate individuals with disabilities into the social life of their school. Results indicated that the social network intervention was successful in increasing the quality and quantity of interaction and promoted the development of friendships. This study suggests that friendships can be developed while systematically increasing the social competence of individuals in natural contexts.

Results of peer intervention studies demonstrate that interactions with socially responsive peers and providing social support are necessary in early stages of intervention. Adolescents with mental retardation may need this initial assistance to benefit from opportunities to develop friendships in naturally occurring settings such as the workplace. Other research on social relationships of young adults with mental retardation has indicated that *programs* are needed to engage these individuals in interaction with nondisabled peers in socially valued activities on a regular basis (Ittenbach, Larson, Spiegel, Abery, & Prouty, 1993). The ability to develop and maintain friendships is so important to one's community and occupational adjustment that transition programs must consider the types of instruction and supports needed to teach individuals with intellectual disabilities the requisite skills needed to initiate, develop and maintain interpersonal relationships.

When young adults make the transition from school to adult life, society expects young adults to follow existing social rules in an independent and mature manner (Chadsey-Rusch & O'Reilly, 1992). These social rules are defined by the group, and one's social success is relative to the culture and settings

in which an individual typically functions (Greenspan, 1981). If students with mental retardation do not interact with nondisabled peers on a regular basis, they will not understand the rules of social behavior that operate in these settings. Students with mental retardation need to learn appropriate social skills through direct experience with their peers in school and in the workplace (e.g., co-workers).

Community-Based Instruction

Instructional settings are also important in the study of social competence. In order to prepare students with mental retardation for life in integrated work and living situations, it is necessary to provide experiential opportunities in dealing with the demands and expectations of these environments (Wehman, Kregal, Barcus, & Schalock, 1986). Greenspan and Love (in press) stated that competence in normalized work settings includes the ability to understand the often unstated and complex social expectations of supervisors, co-workers, and customers. Black (1991) found that students with mental retardation often did not understand the unstated rules of the workplace, with many of these rules relating to social interaction and social reciprocity. Persons with mental retardation need to learn when the situation is different and when it is the same (discrimination-generalization). The best way to learn the discerning features of environments is to have direct experience in those environments.

Gaylord-Ross, Forte, and Gaylord-Ross (1986) stated that generalization occurs more frequently when instruction takes place in the real world outside of the classroom. If a student has learned to perform certain behaviors in several settings, the student will be more likely to perform those behaviors in novel settings (Hughes & Rusch, 1992). Skills that are learned in settings closely resembling the natural work environment where they will actually be performed are more likely to generalize and be maintained in the work setting. For example, if a student has learned to respond appropriately to peers, teachers, and community-based training personnel before they enter competitive employment, they will be more likely to respond appropriately to an employer or supervisor when they are working independently. Therefore, vocational experience in integrated community settings is a necessary transition component. Instruction in classrooms (or segregated training facilities) isolated from the "real world of work" does not provide individuals with opportunities to observe social interactions expected of workers. Therefore, before students with disabilities leave school, they should have vocational experiences in environments where they can observe first-hand the social requirements of the workplace.

In summary, Langone (1990) has recommended that transition during the high school years should include three major areas: enrollment in vocational education programs, instruction in community-based environments, and paid part-time employment. Participation in vocational programs allows students to continue learning and practicing job-related skills in the presence of persons without disabilities. In

addition, students get familiar with the skills required by business and industry. Community-based instruction allows students opportunities to practice learned skills in natural environments. Paid part-time employment allows students to establish a work history while they continue practicing appropriate job-related behaviors. We would like to add to this vocational experience cognitive process approaches and peer-mediated interventions. In this way students will learn the social norms of the group as well as gain abilities to self-regulate their behavior in a wide variety of settings.

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