References


Social Skills Assessment and Intervention with Children and Adolescents

Guidelines for Assessment and Training Procedures

STEPHEN N. ELLIOTT and R.T. BUSSE
University of Wisconsin-Madison, USA

ABSTRACT Children who persistently exhibit social skills deficits experience both short- and long-term negative consequences, and these negative consequences may often be precursors of more severe problems later in life. If untreated, researchers have indicated that social skills deficits in early childhood are relatively stable over time, related to poor academic performance and may be predictive of social adjustment problems and serious psychopathology in adolescence. Procedures for linking assessment and classification of social skills problems to treatments are briefly reviewed. A number of procedures have been identified as effective methods for treating social skills deficits. The myriad of procedures can be classified into three categories: (1) operant conditioning, (2) social learning, and (3) cognitive-behavioral procedures. In practice, behavioral rehearsal is often incorporated into treatments and most of the effective social skills interventions are combined procedures rather than a single technique. Guidelines for implementing major treatment components are discussed and an overall implementation plan is presented.

Behaviors such as sharing, helping, initiating relationships, requesting help from others, giving compliments and saying 'please' and 'thank you' are socially desirable behaviors that almost everyone

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would agree are examples of social skills. In general, social skills may be defined as socially acceptable learned behaviors that enable a person to interact with others in ways that elicit positive responses and assist in avoiding negative responses (Gresham and Elliott, 1984). The development of social skills is one of the most important outcomes of the schooling process. Children with social skills deficit are at risk for social-emotional difficulties and poor academic performances (Parker and Asher, 1987).

The acronym of CARES has been offered by Gresham and Elliott (1990) to facilitate memory for, and the identification of, five major clusters of social skills. The clusters are cooperation, assertion, responsibility, empathy and self-control. Briefly, these clusters of social behaviors can be characterized as follows:

1. Cooperation — behaviors such as helping others, sharing materials with a peer and complying with rules.
2. Assertion — initiating behaviors such as asking others for information and behaviors that are responses to others’ actions such as responding to peer pressure.
3. Responsibility — behaviors that demonstrate the ability to communicate with adults and concern about one’s property.
4. Empathy — behaviors that show concern for a peer’s or significant adult’s feelings.
5. Self-control — behaviors that emerge in conflict situations such as responding appropriately to teasing or to corrective feedback from an adult.

The term social competence has often been considered synonymous with social skills. Social competence, however, is a summary term which reflects social judgment about the general quality of an individual’s performance in a given situation. The concept of social skills, from a behavioral perspective, is premised on the assumption that specific, identifiable skills form the basis for socially competent behavior (Hops, 1983). To assess social competence, a wider range of behaviors and abilities, such as communication skills, physical abilities and physical appearance need to be considered. From a treatment perspective, social skills may be the most malleable of the components of social competence.

Assessment of social skills and identification of children in need of social skills training
A number of methods, including rating scales, checklists and sociometric nomination techniques, have been designed to identify children at risk for behavior problems. Specific assessment procedures are not reviewed here, however Table 1 documents the normative and psycho-
behavioral perspective, the critical characteristic that differentiates identification/classification or intervention/program planning. From a Gresham and Elliott (1984, 1989) and Strain et al. (1986) reviews of social skills assessment methods have been published by and School Adjustment, and Social Skills Rating System. Detailed behavior Assessment, Walker-McConnell Scale of Social Competence metric characteristics of three frequently used rating scales: Social Skills Rating System: Extensive with comparisons to problem behavior scales, other social skills scales and peer-peer sociometrics Extensive with comparisons to problem behavior scales, other social skills scales and peer-peer sociometrics Extensive with comparisons to problem behavior scales, other social skills scales and peer-peer sociometrics

**Table 1** Cont.

<table>
<thead>
<tr>
<th>Test name/author</th>
<th>Internal consistency</th>
<th>Test-retest reliability</th>
<th>Interrater reliability</th>
<th>Content validity</th>
<th>Construct/concurrent validity</th>
<th>Predictive validity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Behavior Assessment Stephens, 1978</td>
<td>&gt; .90</td>
<td>.80-.90</td>
<td>.90*</td>
<td>Feedback from raters during item development and excellent sampling domain Feedback from raters during item development and influenced by special education and developmental literature on social functioning of children at school</td>
<td>Adequate with comparisons to problem behavior scales and peer sociometrics</td>
<td>Limited to known groups of handicapped children</td>
</tr>
<tr>
<td>Walker-McConnell Scale for Social Competence and School Adjustment (Walker and McConnell, 1988)</td>
<td>.90</td>
<td>.60-.90</td>
<td>.53-.77*</td>
<td></td>
<td>Adequate with known groups of handicapped children</td>
<td></td>
</tr>
<tr>
<td>Social Skills Rating System (Gresham and Elliott, 1990)</td>
<td>.94 (Teacher form)</td>
<td>.85</td>
<td>.31* (Teacher-parent)</td>
<td>Extensive with comparisons to problem behavior scales, peer sociometrics and direct observation. Factor structure replications and convergent/discriminate validity studies</td>
<td>Adequate with known groups of handicapped children and peer identified social status groups</td>
<td></td>
</tr>
<tr>
<td>Social Skills Rating System (Gresham and Elliott, 1990)</td>
<td>.90 (Parent form)</td>
<td>.87</td>
<td>.32* (Teacher-student)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Skills Rating System (Gresham and Elliott, 1990)</td>
<td>.83 (Student form)</td>
<td>.68</td>
<td>.23* (Student-parent)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Skills Rating System (Gresham and Elliott, 1990)</td>
<td></td>
<td></td>
<td>.80* (Teacher-teacher/aide)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Both raters were teachers and observed child in the same environments.

* Raters rated different roles (e.g., teacher, parent, student) and observed target student in different environments. Based on a meta-analysis by Achenbach et al. (1987) of 119 interrater studies, a criterion of .18 is considered a median correlation for agreement between two raters.

* Raters were teachers and teacher aides.

* Validity data are characterized as limited, adequate and extensive and are indicative of the quantity and quality of the available data and the judgment of the article's authors.

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Table 2: Assessment sequence for social skills

|----------------------------------|----------------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|

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proceeds in the opposite direction, moving from behavior-specific outcomes to more global analyses of important social outcomes.

To increase the likelihood of accurate identification/classification decisions, we recommend the use of direct observations of the target child and non-target peers in multiple settings; behavioral interviews with the referral source and possibly the target child; rating scale data, preferably norm-referenced, from both a social skills scale and a problem behavior scale completed by the referral source; and sociometric data from the target child’s classmates. Regarding intervention decisions, data contributing to a functional analysis of important social behaviors are imperative. These types of data usually result from multiple direct observations across settings; behavioral role plays with the target child; and teacher and parent ratings of socially valid molecular behaviors. Behavioral interviews with the treatment agent(s) also will be important to assess the treatment setting, the acceptability of the final treatment plan and the integrity with which the plan is implemented. Table 2 (from Elliott et al., 1989) provides a summary of an heuristic sequence for the assessment of social skills.

**Basic assumptions and procedures for promoting social skills**

Social skills interventions focus on positive behaviors and use non-aversive methods (e.g. modeling, coaching and reinforcement) to improve children’s behavior. These also are the characteristics that teachers and parents report they like in interventions (Elliott, 1988). Therefore, utilization of these methods may enhance treatment integrity. In addition, these programs can be built into the existing structure of a classroom or home environment, thus minimizing the time required for successful implementation and maximizing treatment generalization. Finally, social skills interventions can be used with individuals or groups of students, and because they primarily concern increasing prosocial behaviors, all students can participate and benefit from the interventions.

Teaching children social skills involves many of the same methods as teaching academic concepts. Effective teachers of both academic and social skills model correct behavior, elicit an imitative response, provide corrective feedback and arrange for opportunities to practice the new skill (Cartledge and Milburn, 1986). A large number of intervention procedures have been identified as effective for training social skills in children. Table 3 illustrates common social skills training tactics that are (1) therapist directed, (2) therapist and peer directed or (3) peer directed. These procedures can be further classified into three theoretical approaches that highlight common treatment features and assumptions about how social behavior is learned. These approaches are operant, social learning and cognitive-behavioral. Table 4 provides a comparison of these three approaches along several common dimensions.

In practice, many researchers and practitioners have used procedures that represent combinations of two or more of these basic approaches. However, we will use the three groups of interventions to describe the basic procedures and to organize a review of their effectiveness. First, however, we believe it is instructive to review five assumptions proposed by Michelson et al. (1983: 3) which are fundamental to the conceptualization of social skills assessment and intervention plans.

**Assumption 1:** Social skills are primarily acquired through learning which involves observation, modeling, rehearsal and feedback.

**Assumption 2:** Social skills comprise specific and discrete verbal and non-verbal behaviors.

**Assumption 3:** Social skills entail both effective and appropriate initiations and responses.

**Assumption 4:** Social skills are interactive by nature and entail effective and appropriate responsiveness.

**Assumption 5:** Social skill performance is influenced by the characteristics of an environment.

Collectively, these pragmatic assumptions provide direction to both assessment and intervention activities by stressing the multidimensional (verbal-non-verbal and initiating-responding), interactive, situation-specific nature of social skills. Thus, regardless of intervention approach, effective interventions will need to address target behaviors which involve both verbal and non-verbal communications used to initiate or respond to others. With this in mind, we now

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**Table 3** Common social skills training tactics and selection factors

<table>
<thead>
<tr>
<th>Category</th>
<th>Tactics</th>
</tr>
</thead>
<tbody>
<tr>
<td>Therapist directed</td>
<td>a. Modeling (positive and negative; live and symbolic)</td>
</tr>
<tr>
<td></td>
<td>b. Coaching</td>
</tr>
<tr>
<td></td>
<td>c. Operant (manipulation of antecedents and consequences)</td>
</tr>
<tr>
<td></td>
<td>d. Problem solving exercises (role play)</td>
</tr>
<tr>
<td></td>
<td>e. Self-system (self-talk, self-monitoring, self-evaluation)</td>
</tr>
<tr>
<td>Therapist and peer directed</td>
<td>a. Group therapy (includes modeling, problem-solving, guided practice)</td>
</tr>
<tr>
<td>Peer directed</td>
<td>a. Peer-mediated initiation and reinforcemt</td>
</tr>
</tbody>
</table>

**Treatment selection factors**

1. Type of problem and accompanying interfering behaviors
2. Resources available
3. Setting and situations
4. Treatment effectiveness and acceptability findings
Elliott and Busse: Social Skills Training

examine the procedures that are germane to the operant, social learning and cognitive-behavioral approaches to social skills interventions.

Operant intervention procedures

Operant conditioning procedures focus on overt, observable behavior and the antecedent and consequent events that surround the behavior. Control of a behavior is most often achieved through the application of reinforcement or punishment contingent on the observance of the behavior. However, many social behaviors can also be modified through the control of antecedent conditions, such as a friend appearing at your door or a teacher prompting students to observe a playground conduct rule before leaving for recess. Thus, the manipulation of both antecedents and consequences are valuable procedures for interventions in a wide variety of settings and with almost any performance deficit.

Some children experience difficulties in interpersonal relationships because the social environment is not structured to facilitate positive social exchanges. Antecedent control of social behavior can set the occasion for positive social interactions and has the advantage of requiring less teacher time and monitoring than other procedures (e.g. reinforcement-based procedures). Antecedent control procedures, however, implicitly assume that the child possesses the requisite social skills but is not performing them at acceptable levels. Strain and his colleagues (Strain, 1977; Strain et al., 1977; Strain and Timm, 1974) used an antecedent control procedure termed peer social initiations to increase social interaction rates of socially withdrawn children. The general procedure involved having a trained peer confederate initiate positive social interactions with a withdrawn child in a free-play environment. Peer confederates were coached, prior to the intervention, to appropriately initiate and maintain social interactions. This procedure effectively increased rates of social interactions of withdrawn children. Strain and Fox (1981) provide a comprehensive review of these procedures for pre-schoolers and for older children.

Cooperative learning

Cooperative learning is another method which focuses upon manipulating antecedent conditions to set the occasion for positive social interactions (Madden and Slavin, 1983). Basically, cooperative learning requires students to work together in completing an academic task. The group, rather than the individual, receives a grade on the completed academic product. This procedure requires that students cooperate, share and assist each other in completing the task and, as
such, represents an effective technique for increasing the likelihood of positive social behaviors.

A number of operant-learning procedures (i.e., manipulation of antecedents and consequences) have been used to increase the frequency of positive social behaviors and decrease the frequency of negative social behaviors. All of these procedures are based on the assumption that low rates of positive social interaction and high rates of negative social interaction result from reinforcement contingencies (positive or negative) occurring subsequent to behavior. The implicit assumption when using these procedures is that the child knows how to perform the social behavior in question but is not doing so because of the lack of reinforcement for appropriate social behavior.

Contingent social reinforcement
Contingent social reinforcement involves having a teacher, parent or other significant person to a child publicly reinforce appropriate social behaviors. For example, Allen et al. (1964) had a teacher socially reinforce a four-year-old socially isolated girl whenever she interacted with other children. This procedure led to a six-fold increase in social interaction rates over baseline levels. Variations of this basic procedure have been successful with elective mute and severely and profoundly mentally retarded populations (Mayhew et al., 1978). Although contingent social reinforcement increases rates of positive social interaction, it requires a great deal of teacher/parent involvement on a consistent basis to be effective. Therefore, it is perhaps best used to maintain social interaction rates once they have been established through other social skills intervention procedures.

Differential reinforcement
Differential reinforcement of other behavior (DRO) and differential reinforcement of low rate of responding (DRL) have also been used to modify social skills. DRO involves presenting reinforcement after any behavior except the target behavior. Thus, the individual is reinforced only when he or she does not perform the target behavior after a certain amount of time has elapsed. For example, to decrease aggressive behavior and increase positive social interactions, any behavior that is exhibited by a child except aggressive behavior, is reinforced. This procedure would have the effect of increasing all other responses and extinguishing aggressive behavior. Pinkston et al. (1973) used a DRO procedure to decrease the aggressive behavior of a boy and contingent social reinforcement to increase his positive social interaction. DRL involves reinforcing reductions in the performance of a target behavior. Reinforcers may be delivered for reduction in the overall frequency of a response within a particular time period, or for increased elapsed time between responses (interresponse time). For example, to decrease the frequency of talking-out behavior in a classroom, a reinforcement contingency could be specified such that reinforcement would only occur if the frequency of behavior was at or below a given criterion level. Dietz and Repp (1973) used a DRL schedule to reduce the inappropriate talking of an entire EMR classroom. During the DRL contingency, students could earn reinforcement if the entire class made five or fewer 'talk-outs' in a fifty-minute period.

The studies just reviewed illustrate that DRO and DRL are effective in decreasing the frequency of negative social behaviors. These procedures, however, are perhaps best used as adjuncts in social skills interventions as a means of decreasing negative social behaviors while, at the same time, teaching positive social behaviors.

Social learning intervention procedures
Social learning procedures have their roots in the social learning theory of Bandura and Walters (1963) and Bandura (1977), who suggest that social behavior is acquired through two types of learning: observational learning and reinforced learning. Social learning theorists differentiate between the learning of a response and the performance of that learning. This enables social learning theorists to develop the role of modeling influences apart from their use in the acquisition of new behavior. Modeling also affects the performance of previously learned responses through its disinhibitory or cueing effects. Therefore, socially acceptable behavior can be elicited through the presence of a person modeling a particular behavior. For example, if one student volunteers to help the teacher, he or she will often elicit similar volunteering behaviors in other students in the class. The consequences for a modeled behavior are hypothesized to influence the future occurrence of the same behavior. Observers tend to inhibit responses which they see punished in others, whereas they are likely to perform the behavior if it is reinforced. This process of observing the consequence for a modeled behavior is referred to as vicarious punishment or vicarious reinforcement, depending on the effect of the consequence.

Modeling has broad empirical support for teaching new social skills to children and youths (Gresham, 1985; Wandless and Prinz, 1982). In social skills training, modeling can be divided into two types: (1) live modeling, in which the target child observes the social behaviors of models in naturalistic settings (e.g., the classroom) and (2) symbolic modeling, in which a target child observes the social behaviors of a model via film or videotape. Both types of modeling have been effective in teaching social skills, although the majority of empirical studies
have used symbolic modeling because of the experimental control afforded by the consistent presentation format. Live modeling, however, may be a more flexible technique for classroom settings because of the opportunity to modify the modeling sequences based upon behavioral performance. Table 5 provides basic guidelines for using modeling.

Table 5 Guidelines for using modeling procedures

| 1. Establish and explain the need; set the stage |
|---|---|
| a. Stories |
| b. TV or movies |
| c. Personal experiences of group members |
| d. Role models |
| 2. Identify skill components |
| a. Task analysis |
| b. Group participation |
| c. Sequencing of skill components |
| d. Evaluation of critical components and sequence |
| 3. Modeling a social skill |
| a. Salience of modeled skill components |
| b. Model/observer similarity |
| c. Coping vs mastery models |
| d. Situational relevance of modeled behavior |
| 4. Behavioral rehearsal |
| a. Soliciting participants |
| b. Review of skill components |
| c. Situational relevance |
| d. Constructive feedback |
| e. Instant replay (if necessary) |
| 5. Program for generalization |
| a. Use sufficient stimulus exemplars |
| b. Use sufficient behavior exemplars |

Gresham and Nagle (1980) conducted the only published study to date in which modeling has been compared to coaching (a cognitive-behavioral procedure discussed in detail in the next section). Students were exposed to one of four conditions: (1) modeling, (2) coaching, (3) modeling and coaching, and (4) attention controls. The three treatment conditions were equally effective in increasing sociometric status and increasing the frequency of positive social interactions. Interestingly, the treatments containing a coaching component were more effective than modeling in decreasing rates of negative social interactions.

Cognitive-behavioral intervention procedures

The cognitive-behavioral approach to intervention is a loosely defined group of procedures which place significant emphasis on an individual's internal regulation of his or her behavior. In particular, cognitive-behavioral approaches to social skills training emphasize a person's ability to problem solve and to self-regulate behavior. Two of the most frequently used cognitive-behavioral social skills procedures are coaching and social problem solving.

Coaching is a direct verbal instruction technique that involves a 'coach' (most often a teacher or psychologist, but occasionally a peer), knowledgeable as to how to enact a desired behavior, and the student in need of acquiring the desired behavior. Most coaching interventions require three steps. First, the child is presented with rules for or standards of behavior. Second, the selected social skills are rehearsed with the coach. Third, the coach provides specific feedback during the behavior rehearsal and offers suggestions for future performance. In some rehearsal situations modeling procedures may also become part of the coach's training, and if the coach praises the accurate performance of a behavior by the student, reinforcement will also be evidenced. Thus coaching, although conceptualized as a verbal instruction procedure that requires cognitive skills of the student to translate the instruction into desired behaviors, can be easily supplemented with behavioral and/or social learning procedures. Table 6 provides basic guidelines for enacting coaching procedures.

Table 6 Guidelines for using coaching procedures

| 1. Present social concept based on skill to be learned |
| 2. Ask for definitions of social skills |
| 3. Provide clarification of definitions |
| 4. Ask for specific behavioral examples of concept |
| a. ‘What would someone have to do to show they were cooperating?’ |
| b. ‘What things would you have to do to show you were helping others?’ |
| c. ‘How could you show that you disagree with someone without getting into an argument or fight?’ |
| 5. Ask for specific behavioral negative examples of concept |
| 6. Generate situations and settings where skill is appropriate and inappropriate |
| 7. Behavioral rehearsal |
| 8. Constructive feedback and instant replay |

Coaching has received empirical support as a social skills training procedure. Oden and Asher (1977) used coaching to teach participation, communication, cooperation and peer reinforcement to students. The coaching procedure involved the three steps of verbal instructions, opportunity for skill rehearsal and feedback on skill performance. This procedure was also effective in increasing the sociometric status of the students who successfully acquired the new social skills. Ladd (1981) and Gottman et al. (1976) obtained similar results using coaching procedures.

Several applied researchers have developed interventions that...
stress teaching children the process of solving social or interpersonal problems. As Weissburg (1985) pointed out, some of these intervention programs, which are largely classroom based, have been called social problem solving (SPS) whereas others have been called interpersonal cognitive problem solving (ICPS) programs. Although the ICPS approach places more emphasis on the conditions that accompany cognitive problem solving (ICPS) programs, whereas others have been called interpersonal programs, which are largely classroom based, have been called social problems. As Weissburg (1985) pointed out, some of these intervention consequences for each alternative reaction and (4) select the reaction that is 'best' or most adaptive. Social problem solving methods of social skills training can be used with individual children or entire classrooms and have become common parts of several classroom social skills curriculums. It should be noted, however, that such an approach does not focus on discrete social skills training and that learning social skills generally requires more skill focused, externally reinforced procedures than offered by this cognitively oriented approach. Table 7 illustrates basic guidelines for using social problem solving strategies to improve social functioning.

Table 7 Guidelines for using social problem solving procedures

<table>
<thead>
<tr>
<th>Step</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Define and formulate problem</td>
</tr>
<tr>
<td>2.</td>
<td>Generate alternate solutions</td>
</tr>
<tr>
<td>3.</td>
<td>Specify consequences regarding alternatives</td>
</tr>
<tr>
<td>4.</td>
<td>Select 'best' alternative</td>
</tr>
<tr>
<td>5.</td>
<td>Specify requirements/stepsto implement solution</td>
</tr>
<tr>
<td>6.</td>
<td>Verify outcomes of solution</td>
</tr>
<tr>
<td>7.</td>
<td>Discuss and reinforce the problem solving process</td>
</tr>
</tbody>
</table>

Effectiveness of social skills interventions and suggestions for practice

Several major reviews have been written concerning the effectiveness of social skills training procedures with children (see Cartledge and Milburn, 1986; Gresham, 1985; Ladd and Mize, 1983; Schneider and Byrne, 1985). With regard to child characteristics, Schneider and Byrne, who conducted a large meta analysis of social skills training studies, indicated that social skills interventions were more effective for pre-schoolers and adolescents than elementary children. No gender differences in the effect sizes were noted (although few studies have treated gender as an independent variable). In addition, social skills training was found to be more effective for withdrawn and learning disabled students than for aggressive students. Conversely, to what often is expected, the duration of interventions was related negatively to the outcome. That is, interventions of fewer than five days were, on the average, more effective than interventions lasting more than fifty days. This result was interpreted as consistent with the overall finding that modeling and operant procedures were more effective than social-cognitive procedures, since the former procedures are usually much briefer and are likely to involve a smaller number of students.

Based on reviews of research by Gresham (1981, 1985), Schneider and Byrne (1985) and Mastroianni and Scruggs (1985–6), there appears to be substantial support for the effectiveness of social skills training procedures in general, and in particular for operant and modeling procedures. Social-cognitive procedures were found to be less effective, especially with young children. The focus of most social-cognitive procedures on generalizable problem solving strategies as opposed to more discrete, observable behavioral skills makes it difficult to measure post-intervention improvements in social performance accurately.

Practical suggestions from the research literature for teachers, parents and other individuals interested in facilitating the development of social skills in children include the extensive use of operant methods to reinforce existing social skills. The basic operant tactics include (1) the manipulation of environmental conditions to create opportunities for social interactions which prompt/cue socially desired behavior in a target child and (2) the manipulation of consequences so that socially appropriate behavior is reinforced and socially inappropriate behavior, whenever possible, is ignored rather than punished. In addition, modeling of appropriate social behavior supplemented with some coaching, feedback and reinforcement should be a primary tactic in developing new social behaviors in children.

Facilitating generalization of social skills

Berler et al. (1982) recommended that social skill interventions not be considered valid unless generalization to the natural environment could be demonstrated. Stokes and Baer (1977) and Michelson et al. (1983) identified several procedures, referred to as generalization facilitators, which enhance generalization beyond the specific aspects of an intervention. Examples of generalization facilitators include: (1) teaching behaviors that are likely to be maintained by naturally occurring contingencies; (2) training across stimuli (e.g. persons, setting) common to the natural environment; (3) fading response contingencies to approximate naturally occurring consequences; (4) reinforcing application of skills to new and appropriate situations; and (5) including peers in training. By incorporating as many of these facilitators as possible into social skill interventions, and by offering
intervention 'booster' sessions at regular intervals, maintenance and generalization of skills will be enhanced.

Classifying social skill difficulties and selecting interventions
Most authors agree that social incompetencies observed in children can result from difficulties in response acquisition or response performance (Bandura, 1977). Gresham and Elliott (1990) extended this two-way classification scheme to include areas of social skills problems, social skills strengths and possible concurrent interfering problem behaviors. As shown in Figure 1, this scheme of social skill difficulties distinguishes between whether or not a child knows how to perform the target skill and the presence of interfering behaviors (e.g., anxiety, aggressiveness). In addition, embedded in Figure 1 are lists of treatments that often have been found effective for the various problem types. This classification scheme and its suggested treatments are part of Gresham and Elliott's (1990) Social Skills Rating System. The components of this classification scheme are as follows:

Social skills acquisition deficits
This social skill problem characterizes children who have not acquired the necessary social skills to interact appropriately with others or those who have failed to learn a critical step in the performance of the skill. Direct instruction, modeling, behavioral rehearsal and coaching are frequently used to remediate social skill acquisition deficits.

Social skills performance deficits
Children with a social skills performance deficit have appropriate social skills in their behavior repertoires, but fail to perform them at acceptable levels or at appropriate times. Typically, a social skills performance deficit has been modified by manipulating antecedents and consequences. Interventions have included peer initiations, contingent social reinforcement and group contingencies.

Social skills acquisition deficits with interfering problem behaviors
This social skills problem describes a child for whom an emotional (e.g., anxiety, sadness) and/or behavioral (e.g., verbal aggression, excessive movement) response(s) prevents skill acquisition. Anxiety is one such emotional arousal response shown to prevent acquisition of appropriate coping behaviors, particularly with respect to fears and phobias (Bandura, 1977). Hence, a child may not learn to interact effectively with others because social anxiety inhibits social approach behavior. Impulsivity (a tendency toward short response latencies) is another emotional arousal response that can hinder social skill acquisition (Kendall and Braswell, 1985). Interventions designed to remediate anxiety that interferes with social skills primarily involve emotion-arousal reduction techniques, such as desensitization or flooding, paired with self-control strategies, such as self-talk, self-monitoring and self-reinforcement (Kendall and Braswell, 1985; Meichenbaum, 1977). Interventions that can help reduce overt behaviors such as physical or verbal aggression, inattentiveness or excess movements are often referred to as reductive procedures (Lentz, 1988). These

<table>
<thead>
<tr>
<th>Social skills acquisition deficits</th>
<th>Social skills performance deficits</th>
<th>Social skills strengths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Direct instruction</td>
<td>Operant methods to manipulate antecedent or consequent conditions to increase the rate of existing prosocial behaviors</td>
<td>Reinforcement procedures to maintain desired social behavior</td>
</tr>
<tr>
<td>Modeling</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Behavioral rehearsal</td>
<td></td>
<td>Use student as a model for other students</td>
</tr>
<tr>
<td>Coaching</td>
<td></td>
<td></td>
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</tbody>
</table>

Figure 1 A scheme for classifying social behavior problems and suggesting treatment techniques for such problems
include the use of reinforcement techniques (e.g. DRO and DRL),
group contingencies and mild aversive techniques (e.g. reprimands,
time-out, response cost, overcorrection). Thus, for social skills acquisition
deficits that are accompanied by significant interfering behaviors,
the intervention objectives are to teach and increase the frequency of a
prosocial behavior and concurrently to decrease or eliminate the
interfering problem behavior.

Social skills performance deficits with interfering problem behaviors
Children with a social skill performance deficit accompanied by
interfering problem behaviors have a given social skill in their
behavior repertoires, but performance of the skill is hindered by an
emotional or overt problem behavior response and by problems in
antecedent or consequent control. Self-control strategies to teach
inhibition of inappropriate behavior, stimulus control training to teach
discrimination skills and contingent reinforcement to increase display
of appropriate social behavior are often used to ameliorate this social
skill problem. Occasionally, when the interfering behaviors persist,
reductive methods may also be necessary.

An implementation framework for social skills assessment and
intervention
A general framework for social skills training can be described by the
acronym DATE (Define-Assess-Teach-Evaluate). First, behaviors are
defined and stated in observable terms. In addition, the conditions
(antecedent and consequent) surrounding the behavior are also
defined. Second, behaviors are assessed, preferably via multiple
methods, including rating scales, direct observations of the child, interviews
with teachers and/or parents and occasionally a structured role play
to confirm deficits and to refine intervention plans. Third, teaching
strategies are prescribed to fit the student’s needs as determined by the
assessment results and the classification that best characterizes the
social skills deficit(s). Fourth, the effects of the teaching procedures are
evaluated empirically with the assessment methods used to select
students and target behaviors. The DATE model is applied continu-
ously to each deficient social behavior that the student exhibits.

The DATE model can be implemented by a teacher, psychologist or
other specialist through five steps: (1) establishing the need for
performing the behavior, (2) identifying the specific behavioral compo-
nents of the skill or task analysis, (3) modeling the behavior using
either live or filmed procedures, (4) behavior rehearsal and response
feedback and (5) generalization training. These five steps represent an
easily implemented and generic approach to teaching social behavior
using the intervention procedures which have consistently been found
to be most effective. The intervention options available for young
children with a social skills deficit are numerous, but the majority of
effective interventions combine the manipulation of antecedents or
consequences with modeling/coaching procedures. When a child’s
social difficulty results from a lack of knowledge of a particular skill, it
is generally necessary to use a direct intervention that involves
modeling, coaching and role playing techniques. Conversely, when a
child fails to perform a social behavior he/she is capable of, it is likely
that interventions involving the manipulation of antecedents and/or
consequences will be successful.

Summary
In this article, we have outlined how one’s assessment of social skills
can be linked conceptually and practically to an intervention plan, and
have described and reviewed research on three approaches to social
skills intervention or training. These approaches were the behavioral
approach, the social learning approach and the cognitive-behavioral
approach. The behavioral and social learning based approaches have
been shown to lead to the most effective interventions for developing
skill building interaction behaviors. The article concluded with the
presentation of a model, the DATE (Define-Assess-Teach-Evaluate)
model, for implementing social skills interventions.

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