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Classroom Social Dynamics Management: Why the Invisible Hand of the Teacher Matters for Special Education

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Abstract

The *invisible hand* is a metaphor that refers to teachers' impact on the classroom peer ecology. Although teachers have the capacity to organize the classroom environment and activities in ways that contribute to students' social experiences, their contributions are often overlooked in research on students' peer relations and the development of social interventions. To address this, researchers have begun to focus on clarifying strategies to manage classroom social dynamics. The goal of this article is to consider potential contributions of this perspective for understanding the social experiences of students with disabilities and to explore associated implications for the delivery of classroom-focused interventions to support their adaptation. Conceptual foundations of classroom social dynamics management and empirical research on the peer relationships of students with disabilities are outlined and the potential of the concept of the *invisible hand* is discussed in relation to other social support interventions for students with disabilities.

Keywords

invisible hand, classroom management, social dynamics, intensive interventions

Students with disabilities have a broad range of social experiences. Across the 13 Individuals with Disabilities Education Act (IDEA) disability classifications, students served by special education are diverse in terms of functional characteristics, developmental experiences, socioeconomic status, ethnic/racial background, and educational/related service needs. Although it is unwise to make blanket statements to categorize the experiences of students across or within disability classifications, factors associated with various disabilities, stigma related to receiving special services, and related constrained social opportunities put many youth with disabilities at elevated risk for peer difficulties at some point during their school careers (Chen, Hamm, Farmer, Lambert, & Mehtaji, 2015; Sale & Carey, 1995; Vlachou, Stavroussi, & Didaskalou, 2016). This does not mean all students with disabilities will experience social difficulties or that students with disabilities do not experience social growth opportunities and successes in school. Nor does it mean that factors that contribute to social difficulties will operate the same for different students with disabilities even if they share the same disability. It does mean there is a need to better understand the social adaptation of students' with disabilities, the classroom ecological factors that may contribute to their social difficulties, and ways teachers may manage the classroom social system to better support their social adjustment and growth.

Social interventions for youth with disabilities tend to center on the student and her or his interpersonal opportunities. This may include social skills training to address social behaviors and/or social cognitive skills (Elksnin & Elksnin, 1998; Erdley & Asher, 1999; Plavnick, Kaid, & MacFarland, 2015) that contribute to the social interactions and relationships students with disabilities develop with their peers. It may also include peer network interventions aimed at increasing the social contacts or ties between students with disabilities and nondisabled peers (Asmus et al., 2017; Kamps et al., 2015; Kasari et al., 2016) and peer support

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strategies that "involve one or more peers without disabilities providing ongoing social and academic supports to classmates with disabilities in a general education classroom" (Brock & Carter, 2016, p. 355).

Although these approaches may help improve the peer relations of youth with disabilities, they typically do not take into account naturally occurring social dynamics. Classroom/school social dynamics include continually evolving peer group processes and structures that have the potential to promote or constrain students' social experiences, roles, and relationships (Adler & Adler, 1998; Farmer, 2007). These dynamics not only contribute to students' school adjustment and long-term adaptation (Ahn & Rodkin, 2014; Cairns & Cairns, 1994; Coie, 1990; Dijkstra & Gest, 2015), but they may also affect the effectiveness of social and behavioral interventions (Dishion & Dodge, 2005; Farmer, Reinke, & Brooks, 2014). Recently, social development researchers have suggested that teachers may operate as an "invisible hand" to manage social dynamics by helping to shape classroom peer group processes, the social structure, and students' social experiences (Audley-Piotrowski, Singer, & Patterson, 2015; Farmer, Lines, & Hamm, 2011). Building on the concept of the invisible hand, the goal of this article is to consider how social dynamics management may contribute to social interventions for students with disabilities.

Conceptual Foundations

Social dynamics refers to how interpersonal contexts are relationally organized and how this organization affects and is affected by the interactions among individuals in the ecology (Farmer, 2000). The conceptual foundations of classroom social dynamics and the invisible hand build on the work of Urie Bronfenbrenner and Robert Cairns (Farmer, Lines, & Hamm, 2011; Kindermann, 2016) and a range of interdisciplinary research on students' social relations and teachers' impact on peer processes (e.g., Adler & Adler, 1998; Coie, 1990; Gest & Rodkin, 2011; Wentzel, 2003).

In a study of peer networks, Bronfenbrenner (1943) observed that clarifying the dynamic interchange between the characteristics of students and the classroom social system is a critical task in social development research. For Bronfenbrenner, social dynamics reflected the ongoing interplay between youth, their social contexts, and the resulting social structures that emerge from these interactions. Based on this work and international comparative studies of adolescent social ecologies, he concluded that educators should learn how to leverage natural peer group processes to foster positive youth development (Bronfenbrenner, 1970; Farmer, Lines, & Hamm, 2011).

Trained in social learning theory with Albert Bandura and Robert Sears, Cairns' focused on clarifying the parameters of social reinforcement and stressed the concept of social synchrony as a mechanism by which social behavior is evoked, established, reinforced, and adapted (Cairns, 1979). Social synchrony is an interactional process in which the behavior of two or more people is organized so the actions of one person support the acts of others. Cairns identified three types of social synchrony: imitation, reciprocity, and complementarity. *Imitation* occurs when an individual engages in a behavior and others use the behavior as a model for their behavior, *reciprocity* occurs when two people in a social interaction respond to each other in similar ways that elicit and reinforce common behaviors, and *complementarity* occurs when two individuals have different levels of status and forms of behaviors, but the behavior of each is necessary for the behavior of the other (i.e., bully–victim, leader–follower).

Classroom Social Dynamics

Social synchrony supports the natural formation of classroom social networks (Cairns & Cairns, 1994). When youth are aggregated together, they synchronize behavior in ways that promote selective affiliation (Hanish & Rodkin, 2007). This means students tend to sift and sort themselves into consistent patterns of social interactions and relationships that promote the formation of distinct peer groups (Adler & Adler, 1998; Cairns & Cairns, 1994). Peer groups tend to form around similarity in social characteristics including academic achievement, bullying involvement, aggression, and popularity (Estell et al., 2008; Logis, Rodkin, Gest, & Ahn, 2013; Olthof & Goossens, 2008). Yet, some students affiliate with peers who complement rather than reflect their characteristics (Adler & Adler, 1998; Estell et al., 2009; Salmivalli, 2014).

With the selective affiliation process, social structures emerge that may be egalitarian or hierarchical in nature. In egalitarian social structures, status and social ties or linkages tend to be generally equalized and relatively evenly distributed across students (Ahn & Rodkin, 2014). In hierarchically organized classrooms, peer status and influence are centralized: A few students and groups have nuclear centrality (i.e., high status, salience), are socially dominant, and set the tone of the classroom culture (Adler & Adler, 1998; Bagwell, Coie, Terry, & Lochman, 2000; Rodkin, 2011; Vaillancourt & Hymel, 2006). In hierarchical classrooms, other youth are secondary or peripheral (i.e., lower salience, status) in their peer groups, and a few students tend to be isolated in the social system and are not members of a peer group (Adler & Adler, 1998; Bagwell et al., 2000; Evans & Eder, 1993; Pearl et al., 1998). The importance of hierarchical social structures is that, depending on the characteristics of the students who have high centrality, classroom social dynamics may contribute to a coercive climate that supports bullying, social exclusion, decreased

instructional engagement, and noninclusive roles for socially vulnerable youth (Adler & Adler, 1998; Ahn & Rodkin, 2014; Dijkstra & Gest, 2015; Rodkin, 2011; Salmivalli, 2014).

Selective affiliation and peer group hierarchies should be considered in light of the broader classroom culture. Beginning as early as preschool, students tend to create their own classroom peer cultures that they collectively negotiate through interactions with each other (Corsaro & Eder, 1990; Hanish & Rodkin, 2007). Although adults establish general societal rules and expectations for classroom behavior, students tend to cocreate their own rules, beliefs, and values about what is appropriate as they synchronize their behavior (Farmer, Lines, et al., 2011). As a result, students may establish their own culture and corresponding norms based on their shared views and these norms may endorse or constrain the social value of specific behaviors including whether there are social risks for academic engagement (Hamm, Farmer, Lambert, & Gravelle, 2014; Kiefer & Wang, 2016) and whether aggression and bullying is acceptable or favorable in the peer system (Adler & Adler, 1998; Evans & Eder, 1993; Rodkin, 2011).

An important consideration for understanding classroom social dynamics centers on how norms are enacted within the peer system. In some cases, descriptive norms, which reflect trends across the classroom, may be most relevant. In other cases, it may be injunctive norms, which are students' perceptions of the social benefit or cost for a specific behavior, and in still other circumstances, norm salience may be operating in which the important/prominent norms are those behaviors associated with being popular in the class (Ahn & Rodkin, 2014; Dijkstra & Gest, 2015; Hamm, Schmid, Farmer, & Locke, 2011). It is important to consider whether the norms that are most relevant for a student reflect the overall classroom culture or center on a group of peers whose views and attitudes are of high value to the student (Farmer, 2000).

Social synchrony, classroom peer groups, social structures, and social norms contribute to the overall social opportunities and experiences of students. Classroom hierarchies tend to reflect socially valued characteristics with high status or nuclear students being those who are perceived to be popular and have high levels of socially valued characteristics (e.g., academic competence, athletic ability, attractiveness, fashionable; Adler & Adler, 1998; Evans & Eder, 1993; Farmer & Rodkin, 1996). In some classrooms, aggression and social dominance may be associated with high status and centrality, which may contribute to higher levels of bullying as youth jockey for status in the hierarchy (Adler & Adler, 1998; Vaillancourt & Hymel, 2006). Research on social structures suggests it is important for teachers to be aware of social dynamics and to manage the peer system in ways that reduce hierarchies or link status with positive social engagement and prosocial behavior (Farmer, 2000; Rodkin, 2011; Vaillancourt, Hymel, & McDougall, 2003). Furthermore, it is helpful when teachers are attuned to the composition of peer groups and monitor inter- and intragroup activities (Dawes et al., 2017; Hamm, Farmer et al., 2011; Salmivalli, 2014).

Students may engage in inclusionary and exclusionary processes to maintain peer group boundaries and/or to protect their placement in the social system. Inclusionary strategies include efforts to recruit peers who reflect the values and features of the group, forming alliances and making social ovations across groups, and creating a group identity that makes the criteria for membership clear to others (Adler & Adler, 1998; Evans & Eder, 1993). Exclusionary processes include ignoring or not engaging with nongroup members and actively using bullying and social aggression to diminish the status of peers who do not have characteristics that are valued by the group or are in some ways considered to be a social liability or a challenge to the group (Adler & Adler, 1998; Pellegrini, 2008). To address inclusionary and exclusionary processes, it is helpful for teachers to be aware of social identities of specific groups and leaders who use aggressive strategies to protect the group composition, students who are socially vulnerable and who are at greatest risk for being excluded from the group, and specific students and groups who have low status and are scapegoated by other groups. Socially marginalized youth may be vulnerable to victimization and engage in bullying to deflect their own social vulnerabilities (Adler & Adler, 1998; Coie, 1990; Rodkin, 2011). Yet, it is also important to be aware that both popular and low status students are socially vulnerable and may be bullied as peers jockey for position in the social system (Adler & Adler, 1998; Evans & Eder, 1993; Vaillancourt et al., 2003).

Teachers can affect social dynamics in two ways. First, they have a direct impact on the peer ecology by virtue of their own behavior. The synchronized interactions and relationships teachers develop with students individually or collectively set the tone for how peers interact with each other. Teachers' interactions with specific students convey information about the student to the other members of the class. Peers' perceptions of classmates are affected by who teachers provide support to and how they provide it (Hughes, Im, & Wehrly, 2014). Furthermore, classmates' perceptions of teacher support and conflict with students are related to peer liking and disliking, degree of social hierarchy, and level of prosocial behavior in the class (Hendrickx, Mainhard, Boor-Klip, Cillessen, & Brekelmans, 2016). Second, teachers contribute to social dynamics with grouping strategies, seating assignments, disciplinary practices, and other methods that affect students' social opportunities (Farmer, Lines, et al., 2011; Gest, Madill, Zadzora, Miller, & Rodkin, 2014). As social dynamics research moves forward, there is a need to develop systematic approaches to harness teachers' contributions to the peer

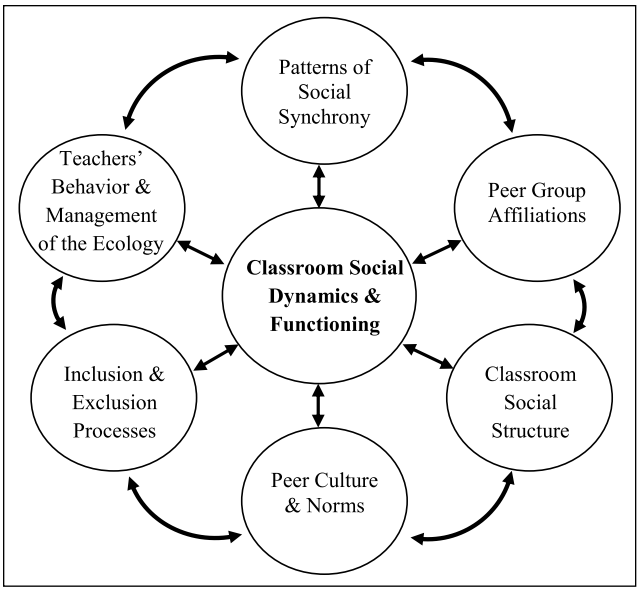

Figure 1. A systems perspective of classroom social dynamics and functioning.

ecology (Audley-Piotrowski et al., 2015; Farmer, Chen, et al., 2016; Hendrickx et al., 2016).

Figure 1 provides a model of social dynamics that is composed of key classroom social factors and processes that contribute to social development. Reflecting the definition of social dynamics, this model illustrates how classroom contexts are relationally organized and depicts processes and structures that both contribute to and are affected by social interactions among individuals in the peer ecology. The outer rim identifies six factors that operate as a system to contribute to the social functioning of the classroom. Classroom dynamics/functioning is at the center of the model and reflects the contributions and interplay of the factors on the outer rim. In turn, the general functioning and dynamics of the classroom are likely to influence each of these factors. Rather than thinking in terms of a unidirectional, linear model with a specific path to a distinct outcome, this model suggests all these factors have the potential to influence each other and contribute to the overall functioning of the classroom social system and individual students' social development. This means when social interventions focus on a specific factor or set of factors, it is possible that other factors in the system may influence the desired outcomes by operating as an intervention ally or a constraint. Social dynamics management can serve as an important part of the intervention process by promoting classroom contexts that are supportive and responsive to individually focused strategies and students' positive social development.

The Teacher as an Invisible Hand

The term "invisible hand" grew from discussions with Cairns and Bronfenbrenner about classroom social dynamics and teachers' roles in students' peer relations (Farmer, Lines, et al., 2011). Cairns referred to the "invisible hand" as a metaphor to describe what he viewed as an oversight in children's social development research. In classroom observations, Cairns noticed teachers routinely make decisions and act in ways that affect the peer climate, but he found few studies focused on teachers' influence on the peer system (Cairns & Cairns, 1994). In discussions about this concept, Bronfenbrenner concluded the "invisible hand" was consistent with his cross-cultural studies on peer relations in Soviet and American schools (e.g., Bronfenbrenner, 1970) and he suggested that efforts to reveal and leverage the invisible hand of the teacher should become a frontier of social development inquiry and intervention (Farmer, Lines, et al., 2011).

The concept of the *invisible hand* has evolved beyond referring to an understudied area of peer relations and serves as a metaphor to suggest teachers have the potential to unobtrusively manage the classroom social context in ways that can promote both a positive classroom culture for all students while supporting individual interventions for socially vulnerable youth (Audley-Piotrowski et al., 2015; Farmer, Lines, et al., 2011). This often involves careful decisions made by teachers that may not be readily apparent without direct information from the teacher. This does not mean such efforts cannot be observed or measured. Most social dynamics management strategies are measurable events but their measurement often requires assessment of teachers' thoughts to clarify intentions and goals in a specific situation (Gest et al., 2014). To determine the impact of a strategy, it may be necessary to collect survey or observational data with students and others in the ecology. Furthermore, some actions by teachers are not intentionally focused on peer relations but may affect social processes and students' social experiences. The "invisible hand" is a complex construct that involves intention, perception, and observable phenomena and requires examining behavior in context (Farmer, Lane, Lee, Hamm, & Lambert, 2012; Hymel, McClure, Miller, Shumka, & Trach, 2015). Although this complexity is likely to contribute to the sparsity of research on the "invisible hand," emerging work suggests research in this area may yield important insight into the management of social ecologies (Audley-Piotrowski et al., 2015; van den Berg, Segers, & Cillessen, 2012) and may be highly relevant for efforts to support the social adjustment of youth with disabilities (Farmer, Chen, et al., 2016).

The Peer Relations of Students With Disabilities

Peer relations of students with disabilities are often treated as outcomes. Assessments of whether a student behaves in socially competent ways, is liked by peers, or affiliates with others tend to be viewed as indicators of social success. But

they are important because they are social dynamic factors that contribute to the developmental pathways, social adaptation, and long-term outcomes of all students, including students with disabilities. The review below focuses on peer relation factors with an emphasis on their contributions to students' developmental experiences.

Peer Acceptance and Sociometric Status

The concept of peer acceptance centers on how well students are liked by peers. Students who are well-liked tend to have positive educational and life adjustment outcomes, whereas youth who are disliked by classmates are more likely to experience a range of difficulties including school failure, dropout, substance use, and mental health problems (Gifford-Smith & Brownell, 2003; Kupersmidt, Coie, & Dodge, 1990). Social acceptance is assessed with rating scales or nominations in which classmates indicate how much they like and dislike peers (Gifford-Smith & Brownell, 2003). Sociometric status classifications are derived from peer nominations of "liked most" and "liked least" to identify students who are socially at risk: Youth with rejected status receive few liked most and many liked least nominations, and youth with neglected status receive few total nominations (Coie, Dodge, & Coppotelli, 1982). These classifications are an index of a student's general likability. Although it is often thought that students who have rejected sociometric status are socially isolated and have no friends, this is not necessarily the case. Most students with rejected status have friends or close associates (Bagwell et al., 2000).

Considerable research has been conducted on the peer acceptance and sociometric status of students with disabilities. Regardless of measurement approach (i.e., nomination, ratings) and age, students with disabilities, as compared with nondisabled classmates, are at increased risk for low acceptance and for being identified as having rejected or neglected status (Bursuck, 1989; Estell et al., 2008; Frederickson & Furnham, 2004; Nowicki, 2003; Sale & Carey, 1995). Not all students with disabilities have low peer acceptance and rates may differ for different disability categories. Nonetheless, youth with disabilities, in general, have an elevated probability to be disliked and to experience associated negative social interactions and relationships with peers.

Peer and Teacher Reports of Social Behavior and Reputations

Students tend to develop distinct roles and reputations within the peer culture of their classrooms and schools (Adler & Adler, 1998; Hymel, Wagner, & Butler, 1990). Students' roles and reputations can promote or constrain their social opportunities and relationships, and students who have negative reputations are at increased risk of becoming rejected scapegoats who are victims of bullying (Coie, 1990; Evans & Eder, 1993). Students' social roles and reputations can be assessed by teacher and peer ratings or nominations. These measures identify youth who best fit distinct social descriptors relative to classmates (Masten, Morison, & Pellegrini, 1985). The assessment of social roles and reputations provides insight into social dynamic processes as well as youth's features that may contribute to their social difficulties. It is common to pair assessments of students' social characteristics with other measures of position in the peer system (i.e., sociometric status, social network placement) to clarify factors that differentiate students who experience specific problems.

Studies using peer and teacher assessments suggest students with disabilities are identified for problem behaviors (e.g., starts fights, disruptive, gets in trouble, seeks help) and social roles (e.g., victim, bully–victim) at higher rates than nondisabled peers (Bursuck, 1989; Chen et al., 2015; Estell et al., 2009; Farmer & Rodkin, 1996; Farmer, Rodkin, Pearl, & Van Acker, 1999; Frederickson & Furnham, 2004; Nowicki, 2003). Investigations using sociometric status and peer or teacher reports of students' social functioning indicate that social roles and reputations often differentiate students with disabilities who have low acceptance from those who do not. For example, peer assessments for aggression and withdrawal are associated with fewer positive sociometric status nominations and more negative ones (Kistner & Gatlin, 1989). Youth with disabilities with high peer acceptance tend to have few negative features, whereas those with low acceptance have higher levels of disruptive behavior, seeking help, and aggression (Frederickson & Furnham, 2004). Another set of social roles/reputations centers on bullying. Students with disabilities have high levels of involvement in peer victimization as compared with nondisabled peers (Blake, Lund, Zhou, Kwok, & Benz, 2012; Chen et al., 2015). They have elevated rates of being victims or bully–victims but may be no more likely than nondisabled peers to be identified as bullies (Estell et al., 2009; Sreckovic, Brunsting, & Able, 2014). This may be because bullies tend to be socially dominant, are more likely to affiliate with popular peers, and use their social competence to control social resources (Pellegrini, 2008; Rodkin, 2011).

Perceived Popularity and Social Network Centrality

Perceived popularity and social network centrality are a set of constructs that reflect high impact reputations and roles in the social system. Perceived popularity refers to students that classmates or teachers view as being among the most popular in the class. Students who are perceived to be popular are likely to be viewed as in control of social resources

and are frequently nominated as being cool, attractive, leaders, athletes, aggressive, and noncompliant or nonconforming to adult rules (Adler & Adler, 1998; de Bruyn & Cillessen, 2006; Estell et al., 2009; Vaillancourt & Hymel, 2006). Perceived popularity and sociometric status are distinct constructs. Although there is overlap between the two, perceived popularity focuses on prominence while sociometric status is an index of likability (Farmer & Rodkin, 1996). For example, some students with high levels of popularity who are dominant bullies may also have rejected or controversial sociometric status (i.e., high like, high dislike; Olthof & Goossens, 2008; Rodkin, 2011; Vaillancourt & Hymel, 2006).

Social network centrality and perceived popularity are also distinct constructs but are highly related. Centrality refers to the social linkages and salience of both students and peer groups in the social system (Adler & Adler, 1998; Farmer & Rodkin, 1996). Students and groups who have nuclear centrality tend to be highly visible and are often considered to be prominent leaders who have ties to other prominent peers. Students with secondary centrality are well integrated in the peer group but are less prominent and have fewer social ties than youth with nuclear centrality. Students who are peripheral have low social prominence or visibility, few stable social ties, and move in and out of groups (Adler & Adler, 1998; Bagwell et al., 2000; Evans & Eder, 1993).

Compared with nondisabled youth, students with disabilities tend to have lower perceived popularity and centrality (Estell et al., 2008; Farmer, Leung, et al., 2011; Pearl et al., 1998). However, some students with disabilities have high levels of perceived popularity and centrality and also tend to have elevated levels of aggression (Estell et al., 2009; Farmer & Rodkin, 1996). Elementary boys with disabilities who are rated by teachers as being popular-aggressive were nominated by classmates as socially prominent (i.e., cool) at higher levels than other students with disabilities and nondisabled students (Farmer et al., 1999). In contrast, students with disabilities who are socially marginalized (peripheral, isolated) tend to have sustained patterns of peer victimization over the school year (Chen et al., 2015).

Social Isolation and Risky Peer Group Membership

Typically, 5% to 10% of youth are socially isolated (not in a group) and these students are at increased risk of peer victimization and related social difficulties (Adler & Adler, 1998; Chen et al., 2015; Evans & Eder, 1993). However, being in a group and having close associates does not inevitably protect youth from social risks. First, some youth with social difficulties affiliate with each other by default; they are not accepted by most peers and form groups with other socially marginalized peers rather than be alone (Bagwell et al., 2000; Coie, 1990). Default relationships may not be emotionally supportive and students in such groups may contribute to each other's vulnerabilities (Kupersmidt et al., 1990; Rodkin, 2011). Second, youth with aggressive behavior may form peer groups with others who are similar to them (Cairns & Cairns, 1994). Through processes of synchrony, these youth may engage in coercive interchanges and deviancy training that strengthen and sustain their problem behaviors (Dishion & Dodge, 2005). Third, groups may form around popularity and members of popular groups may have diverse characteristics to complement each other in the pursuit of popularity (Logis et al., 2013; Olthof & Goossens, 2008). Some groups may involve leaders, followers, and enforcers who support each other's involvement in problematic behaviors including bullying (Rodkin, 2011; Salmivalli, 2014).

From elementary through high school, less than 20% of students with disabilities are isolated (Chen et al., 2015; Farmer, Leung, et al., 2011; Pearl et al., 1998). Although nearly 80% of students with disabilities are in groups, many affiliate with peers who have social difficulties (Chen et al., 2015; Farmer, Leung, et al., 2011). In an elementary sample of students with high incidence disabilities, 11% were in prosocial groups, 21% in antisocial groups, 49% in neutral groups, and 19% were isolated (Pearl et al., 1998). In a sample of 60 elementary students with Autism Spectrum Disorder (ASD) and 60 matched controls, students with ASD were more likely to be peripheral, reported poorer quality friendships, and had fewer reciprocal friendships (Kasari, Locke, Gulsrud, & Rotheram-Fuller, 2011). Yet, 20% did have high network centrality and reciprocated friendships. These studies suggest there is considerable variability in the affiliations of youth with disabilities.

Why the Invisible Hand Matters for Students With Disabilities

The social difficulties of students with disabilities reviewed above should not be viewed as individual outcomes but rather as potential social dynamic factors that may operate as part of a system of social development. To promote the social adaptation of students with disabilities, it is important to consider the interplay among these factors, how they may support and complement each other, and how they may contribute to the overall social functioning of the student. It is also important to consider how these dynamics may affect intervention efforts. The concept of the teacher as an invisible hand is useful for considering how natural classroom social dynamics can be managed and leveraged to support intervention efforts for students with disabilities.

Social behavior and peer relations are not discrete phenomena that can be separated from the actual events of a student's school life. This is true for all students with disabilities regardless of the type or intensity of the disability.

With the increased focus on inclusion, the moment-to-moment activities students with disabilities experience in general education settings become a part of their social learning, identity, and relationships. Yet, when we develop new interventions to address students with disabilities' social needs, we often focus at the individual student characteristic level, the global classroom or school climate level, or perhaps at the level of dyadic or small group interventions that do not necessarily reflect naturally occurring peer processes. What is often missing is a focus on how the ongoing activities of classrooms may affect such efforts and how teachers can manage and organize the classroom social system to facilitate the types of social opportunities that naturally evoke and reinforce new social behaviors and relationships that promote students with disabilities' positive social adaptation and success.

Social dynamics management is distinct from individually focused social interventions (e.g., social skills training, applied behavioral analysis), peer-based social interventions (e.g., peer network strategies, peer support strategies, productive peer group membership support strategies), and peer-centered instructional strategies (e.g., cooperative learning, peer assisted learning). But social dynamics management can help establish a general classroom context to promote positive social experiences and opportunities for students with disabilities, and it can help align intervention efforts with the classroom social system in ways that foster positive social roles, peer affiliations, and interactions that naturally reinforce and promote social adaptation.

To effectively intervene with students' social adaptation, it is helpful for teachers to take into consideration general classroom social dynamics and functioning as depicted in Figure 1. This provides a context for managing a focal student's individual social system. As shown in Figure 2, each student experiences the classroom social ecology in ways that contribute to her or his social behavior and adjustment. The types of factors in an individual student's social system are similar to or the same as those in the classroom social system. From the lens of intervening with a student's individual social system, the focus is on the student's own lived experiences of classroom social dynamic factors and how they contribute to her or his adaptation. Nonetheless, because the student is part of the classroom social system, her or his social experiences are likely to contribute to classroom social dynamics and the experiences of other students.

The concept of dynamics suggests there are moving parts in a system and changes in one factor may alter other factors in the system and the system itself. This is important in three ways. First, as we intervene with youth, other factors in the social system may constrain or promote intervention outcomes. Second, changes in the social behaviors, ties, and roles of students with disabilities may affect the classroom system to promote positive experiences and

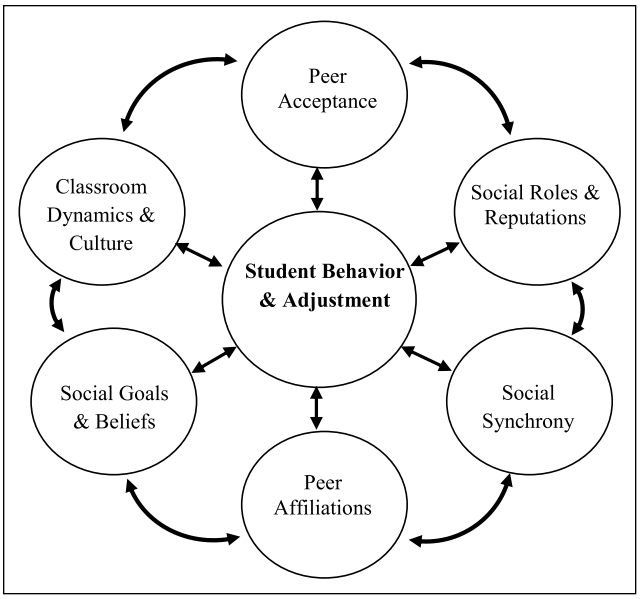

Figure 2. Individual-level system of classroom social factors and student behavior and adjustment.

adaptation for some classmates and negative experiences and adaptation for others. Third, when Figures 1 and 2 are considered together, they imply that as teachers intervene with students' social adaptation they are actually managing two different systems and the interplay between the two systems. The concept of the invisible hand involves monitoring each of these systems and making adjustments and adaptations in moment-to-moment activities as social opportunities and vulnerabilities arise.

This could be a daunting task for teachers and involves juggling between a focus on the behavior and relations of the student, the structure and processes of a dynamic peer system, and the organization and management of classroom activities. It is common for social interventions for students with disabilities to not be effective, be only partially effective, or be effective for the short-term only for the problem to return (Farmer, Sutherland, et al., 2016; Gresham, Sugai, & Horner, 2001; Shores & Wehby, 1999). The long-term effectiveness of social interventions may be enhanced if teachers manage social dynamics in ways that complement and support the aims and processes of specific interventions (Bierman, 2011; Chen et al., 2015; Gest et al., 2014).

Research on the teacher as an invisible hand can be extended to focus on how classroom social dynamics can be managed to support social interventions for students with disabilities. As illustrated in Figure 3, the management of classroom social dynamics is a recursive process that includes continual feedback between teacher attunement, management of the social ecology, students' social opportunities and experiences; synchronous relationships and interactions of focal students; and students' social features and

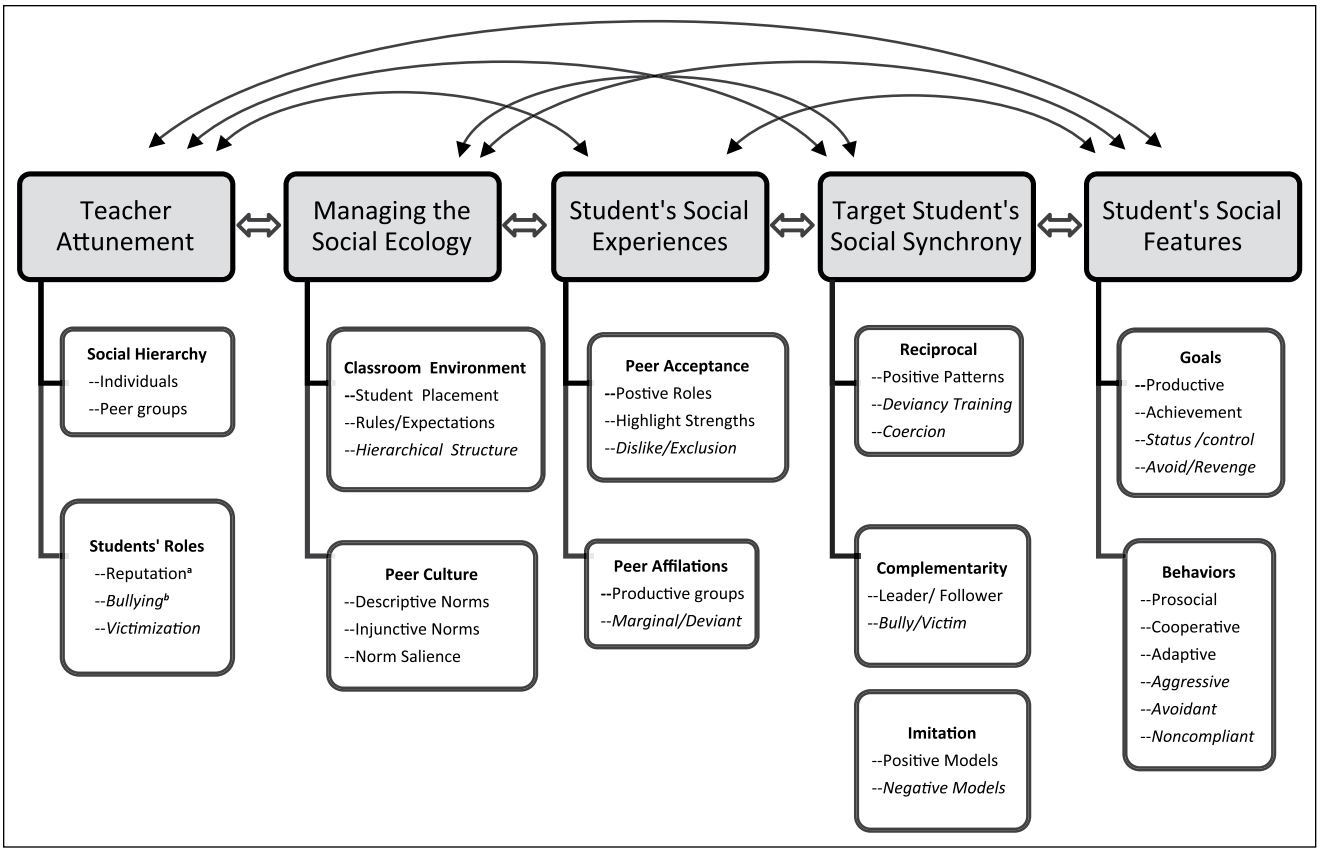

Figure 3. Invisible hand strategies for managing classroom social dynamics.
[a]Terms in standard text are constructs the teacher wants to monitor and promote. [b]Terms in italics are constructs the teacher wants to monitor, prevent, and replace with productive experiences.

skills. An important aspect of this model is that it is not a unidirectional, linear process that infers a specific cause, addressed by a specific intervention, aimed at producing a specific outcome. Instead, this model builds on a systems view that multiple factors work together dynamically and it is possible to intervene over time at multiple domains depending on the specific contexts, issues, and resources that contribute to a student's situation and needs. This means there is not one way but many possible ways teachers may manage the classroom social context, but these efforts should be guided by data.

What is the goal of social dynamics management? In terms of supporting the social adaptation of students with disabilities, the overarching purpose of social dynamics management is to bring the general social structure and processes of the classroom into alignment with the social support and intervention needs of students with disabilities. Regardless of the type and intensity of the disability of a student with disabilities, the ongoing dynamics of the classroom will contribute to her or his social experiences. This means it is necessary to understand the various peer groups in the social system; the social hierarchy in both the overall classroom and in distinct peer groups including the identity of students who are leaders, followers, and on the periphery; other social roles such as students identified as being popular, good students, athletic, bullies, and victims; social norms and goals of the general classroom and of distinct peer groups; and how students tend to interact with each other in relation to their peer group membership, placement in the social hierarchy, and social roles and reputations.

With this information, it is possible to understand how students with disabilities fit in the classroom: whether they are in a group and have a role/identity in the social system that affects how others relate to them. It is equally important to identify how interacting with students with disabilities affects the social system, specific peer groups, and the relations of particular students, especially those chosen as peer support. When engaging in strategies to increase the social contacts or affiliations of students with disabilities, it is not sufficient to simply look at the fit of the dyad. Rather, it is also useful to understand potential ripple effects that extend out to the support peer's own social networks, positions, roles, and reputations. If the support peer is placed in a vulnerable position, there is a potential for negative unintended consequences for the student with disability as well as the support peer. This is why it is necessary to manage social

dynamics while increasing the social contacts and supports for students with disabilities.

What types of strategies are used to manage classroom social dynamics and individual students' social systems? An important aspect of social dynamics management is awareness of the potential social implications of any act in the classroom and proactively structuring activities and responding instream in ways that strengthen formal intervention efforts and the adaptation of students with disabilities. Strategies may include careful consideration, monitoring, and making instream adjustments with regard to how students interact with each other and support each other's behavior, seating arrangements and grouping practices, calling on a student in ways that enhance how he or she is perceived by peers, giving the student leadership and socially valued roles, nonobtrusively removing a student from socially difficult situations, pairing students who complement each other's strengths, providing public reinforcement to peers who will positively draw in students who are not productively engaged in an activity, and generally using the power of the peer group to naturally reinforce positive engagement of focal students. It is also important to carefully monitor and avoid publicly affirming negative social roles of socially vulnerable students (e.g., bringing attention to or allowing actions that marginalize the student, publicly redirecting problem behavior, putting the student on the spot to publicly perform a task they cannot competently complete). It is equally important to be aware that a social intervention for a student with disabilities may have implications for other students and to monitor whether an intervention affects other students' social roles and peer affiliations in ways that may place the peer partners and/or the student with disability at risk for social difficulties. The approaches described below may help guide instream social dynamic management strategies.

Teacher Attunement

The concept of teacher attunement is central to managing classroom social dynamics. Attunement refers to teachers' accurate knowledge of students' peer relations including social roles and reputations, group membership, and placement in the social hierarchy (Hamm et al., 2011). This involves determining the degree to which teachers' perceptions of the social system reflects the collective reports of students in the class regarding the identity of peers who make up specific peer groups and occupy distinct social roles (Norwalk, Hamm, Farmer, & Barnes, 2016). More accurate attunement helps teachers manage ongoing dynamics in the peer ecology and facilitates strategic and informed decisions involving the proximity, pairing, and placement of students in the class (Gest & Rodkin, 2011). Knowledge of peer affiliates, synchronous interaction patterns, and enemy relations can all help teachers manage daily activities in ways that foster engagement in instruction, promote focal students' relations with peers who support positive social behaviors and opportunities, redirect off-task or problematic behavior in more effective ways, and avoid pairings and situations that contribute to problematic social behaviors and peer relations (Hamm et al., 2014; Rodkin, 2011; van den Berg et al., 2012). Attunement can be taught or enhanced by providing teachers with training in social dynamics, promoting their use of logs to track students' affiliations and reputations, and using directed consultation to guide their implementation of strategies informed by social dynamics data (Hamm et al., 2011; Motoca et al., 2014). When teachers are attuned to social dynamics, students with social difficulties (including students with disabilities) are more likely to have positive social experiences (Chen et al., 2015; Farmer et al., 2010; Gest et al., 2014; Hamm, Farmer, et al., 2011; Hoffman, Hamm, & Farmer, 2015; Norwalk et al., 2016).

Managing the Social Ecology

In professional development activities, it is common for teachers to acknowledge that "who is doing what, with whom, and under what conditions" affects whether a collaborative peer activity will be successful. Yet, observational studies suggest there is high variability in the degree to which teachers proactively manage social dynamics (Hendrickx et al., 2016; Motoca et al., 2014). Elementary teachers tend to think that intervening with problem behavior is part of their responsibilities, but fewer believe supporting students' social adaptation and relationships is within their purview (Gest et al., 2014). Both general and special education teachers appear to focus more on behavior management and report that addressing students' social needs requires skills and knowledge that goes beyond their training (Reinke, Stormont, Herman, Puri, & Goel, 2011; Vlachou et al., 2016). When teachers actively take on the role of managing social dynamics, they are more likely to have a stronger sense of efficacy to support socially at-risk students, foster peer cultures of academic support, promote supportive peer groups, and reduce peer support for bullying (Chen et al., 2015; Farmer et al., 2010; Gest et al., 2014; Ryan, Kuusinen, & Bedoya-Skoog, 2015).

How can teachers manage the peer ecology to promote students' social adjustment and reduce risk for difficulties? This not only includes careful seating arrangements and attuned peer pairing strategies (Gest et al., 2014; Kamps et al., 2002; van den Berg et al., 2012), but may also include management of their own behavior to model engagement with youth with disabilities, supported use of associates or influential peers to redirect focal students' behavior, active management of classroom peer group processes, and scaffolding of classroom social norms (Audley-Piotrowski et al., 2015; Bierman, 2011; Farmer, Lines, et al., 2011;

Gest & Rodkin, 2011; Hendrickx et al., 2016; Hymel et al., 2015). Management of the peer ecology should include instream monitoring of social dynamics in ongoing activities and the use of this knowledge to manage the class and the experiences of specific students (Farmer, 2000; van den Berg et al., 2012; Wentzel, 2003).

Promoting Students' Positive and Productive Social Experiences

Promotion of a student's social experiences necessarily depends on the characteristics of the student and the context. The same behavior may have different social functions for different students. Therefore, it is important to determine the interplay between the student's behavior, her or his social roles and relationships, and the general social context of the classroom. There are numerous strategies and approaches for assessing these constructs and determining how the peer context can be leveraged to promote the student's social adaptation (Farmer, Chen, et al., 2016; Farmer et al., 2012; Shores & Wehby, 1999; van den Berg et al., 2012). As part of this process, it is helpful to assess how peers may evoke a focal student's behavior and how the student's social reputation, peer affiliations, and classroom social dynamics converge to support and sustain specific interaction patterns and relations. From this vantage, it may be possible to identify ways to reframe a struggling student's identity in the classroom as well as her or his affiliative partners and social roles by giving the student new responsibilities and opportunities that elicit and reinforce positive behaviors and relationships. It is important to not simply focus on linking the student with the most popular classmate, but rather on identifying sustainable relations with peers who can complement and reciprocate the student's strengths without engaging difficulties.

Monitoring and Intervening With Students' Synchronous Social Relations and Interactions

As efforts to facilitate productive social experiences for students with disabilities unfold, it is important to be aware that this is a dynamic process and that peer relationships naturally ebb and flow. It is helpful for teachers to be attuned to old patterns of behavior that may resurface and to carefully monitor for situations in which either new peers or old associates may act in ways that elicit problematic interaction patterns from the student (Farmer et al., 2012; Kamps et al., 2002; van den Berg et al., 2012). When this occurs, the teacher may change up the context, provide group- or class-level contingencies that reinforce the desired interactions, and provide the student with alternatives that support productive patterns without damaging new relationships. It is also important to remember that what worked yesterday may not work today and that students with intensive social needs may stress their relations even with very tolerant peers. Therefore, it is helpful to carefully monitor the student's synchronous interaction patterns and relationships and to proactively reorganize and rotate her or his social opportunities with the goal of building a network of productive and supportive relationships for the student. It is also necessary to monitor how the focal student may affect the behavior, opportunities, and relationships of peer partners.

Students' Social Features and Skills

Because students' experiences in the peer system are influenced by their social features and goals, it helps for teachers to be aware of how interpersonal factors beyond social skills and competence contribute to a student's social reputation, roles, and relationships. Factors such as academic competence, attractiveness, athletic ability, perceived popularity, and conformity to adult rules and expectations may all affect the social opportunities and level of peer support a student experiences (Adler & Adler, 1998; Cairns & Cairns, 1994; Evans & Eder, 1993; Hymel et al., 1990). Monitoring how such features influence students' relations can help teachers shape a student's social opportunities and experiences as well as the general classroom social dynamics to foster more productive roles and relationships. Also, teachers should be attuned to students' social goals. Social goals involve how students process information about the peer system and how this motivates the aims and strategies that guide their interactions (Erdley & Asher, 1999). Depending on a student's characteristics and how they perceive the peer system, he or she may have goals that reflect a desire for dominance and control in the classroom, avoidance of social discomfort, retaliation for perceived social transgressions of peers, or pursuit of popularity or prestige among favored classmates (Coie, 1990; Dawes & Xie, 2014; Hymel et al., 1990; Olthof & Goossens, 2008; Vaillancourt et al., 2003). When teachers understand the goals that undergird a student's behavior, they may guide the student's experiences and opportunities to support productive goals or realign goals and strategies that are a social liability for the student.

Considerations for Multitiered Systems of Support and Intervention Intensification

Multitiered Systems of Support (MTSS) have emerged as a framework to proactively meet all students' academic, behavioral, and social needs and are a data-informed, systematic approach to provide increasingly intensive strategies to students who do not respond to more general approaches (Lane, Carter, Jenkins, Dwiggins, & Germer, 2015). MTSS is a continuum of three intervention levels: Tier 1 consists of *universal* supports aimed at providing

Table 1. Social Dynamics Management Within a Multitiered System of Support.

Intervention	Universal (Tier 1)	Selected (Tier 2)	Targeted (Tier 3)
Intervention focus	Classroom culture/climate Social structure/hierarchy General norms/norm salience Composition and support needs	Social synchrony–level risks Peer group–level risks Student social role–level risks Student social goal–level risks	Focal student's interactions Focal student's social roles Focal student's social goals Focal student's social skills Focal student's peer affiliations
Intervention strategies	Class rules and routines Class-level contingencies General class management General social skills curricula	Student proximity/placement Positive group contingencies Positive role opportunities Small group social skills training Supportive behavior redirection	Scouting report leverage points SFA Functional behavior analysis Individual social skills Social pattern realignment Peer networks/peer supports Social role realignment

Note. SFA = social function analysis.

strategies that are beneficial to all students and that serve as a foundation for specialized intervention; Tier 2 consists of *selected* interventions to focus on youth with elevated risk for significant difficulties and whose needs are not adequately addressed by universal approaches, which typically involves about 10% to 15% of the population; and Tier 3 centers on *targeted* strategies individualized to the specific needs of the student and are generally used for the 5% to 7% of students who do not respond to Tiers 1 and 2 (Farmer, Sutherland, et al., 2016; Lane et al., 2015; Lewis, 2016).

In MTSS models, Tiers 1 and 2 tend to be evidence-based interventions that follow a manualized protocol. This means there is typically a standardized format for the delivery of the intervention and it is expected to be implemented with fidelity. Yet, within this framework, data are collected on the academic, behavioral, and social performance of students and these data are used to identify and guide the intensification and individualization of the intervention at the Tier 3 level (Kern & Wehby, 2014; Lane et al., 2015). Interventions are typically sparingly adapted until Tier 3 and efforts to make adaptations focus on the support needs of the focal student.

Classroom social dynamics management fits well with the MTSS framework with one caveat. From a social dynamics perspective, the focus is on the person-in-context and it is likely necessary to make ongoing adaptations across all three tiers as interventions focus on aligning the needs of the individual student and the classroom social ecology (Farmer et al., 2014). Table 1 provides an overview of social dynamics management within an MTSS framework. General considerations at each tier are briefly discussed below. It should be remembered that the goal of social dynamics management is not to supplant other interventions but rather to complement and strengthen them. Although the focus and content of intervention may vary depending on the type and intensity of the disability, the person-in-context framework is a universal model of social development and should have application to the needs of all students with disabilities.

Universal (Tier 1): Adaptive Classroom-Centered Supportive Context Level

Social dynamics depend on the composition of the classroom including size, student characteristics, familiarity of students with each other, and amount of time students are together (Farmer, 2000; Müller & Zurbriggen, 2016). Also, social structures will vary from classroom to classroom in terms of how students sort themselves into groups, density of social connections, characteristics of peer leaders, degree to which a social hierarchy is formed, and general social norms. Because social dynamics are fluid, interventions may need to be adapted as the social system changes. This means social dynamics management will vary depending on the classroom. As Table 1 shows, for Tier 1, teachers should be attuned to factors that make it possible to shape universal classroom rules, develop positively focused class-level contingencies, organize and manage the class, and use classwide social skills materials that all center on strengths and needs of the class as a collective while building a foundation of support for individual students. This adaptive universal focus on social dynamics should make it possible to tailor classroom social ecologies to different characteristics and needs of students, including the types and intensity of disabilities represented in the classroom as opposed to a generic universal format that will look the same regardless of the classroom composition and students' social support needs.

Selected (Tier 2): Risk Reduction and Strength Promotion Level

Several classroom social dynamic factors may operate as classroom peer context risks that contribute to the social

difficulties of class members including students with disabilities. How this manifests for students with disabilities will likely look different depending on the types and intensity of the disability. As Table 1 suggests, some students in the classroom may develop risky social roles such as popular-aggressive leaders who bully peers and are dominant in the peer structure. Other students may be scapegoats who are victimized by peers. Also, peer groups may form that reflect social risks (e.g., vulnerable youth affiliating together) or that serve as a social risk (e.g., a group of popular dominant peers) for socially vulnerable students. Such structural factors may help to support and sustain social goals and patterns of social synchrony that consolidate the social risks of both dominant and vulnerable youth. From a social dynamics perspective, it is helpful for teachers to be aware of synchronous behavior patterns that contribute to students' social difficulties and to manage the context in ways that reduce these interchanges and help students build strengths that promote positive social relations. This includes the careful classroom placement and pairing of students who may interact in ways that evoke and reinforce each other's problem behavior, using positive group contingencies to support risky peer groups' engagement in positive social behaviors, reframing social roles and reputations of students who are viewed unfavorably by giving them roles to help classmates see them in a different light, provide social skills training to teach and support competent social skills and goals in vulnerable youth, and redirecting problematic social behavior instream in ways that do not call attention to the student but that provide the student with models and reinforcement for the desired behavior.

Targeted (Tier 3): Person-Oriented Individual Within Developmental Context Level

For students who do not adapt with Tiers 1 and 2 strategies, it is necessary to provide targeted social dynamic supports that correspond with individually focused strategies. To guide intervention intensification, data on the nature of the student's difficulties are needed (Kern & Wehby, 2014). A scouting report can identify person-in-context factors by observing classroom social dynamic processes and the student's responses to them to determine intervention leverage points (Farmer, Chen, et al., 2016). A variety of assessments may be used to determine the social function of the student's behavior by identifying context factors that elicit and reinforce social roles, synchronous interaction patterns, and affiliations that contribute to the student's difficulties (see Farmer et al., 2012; Gest et al., 2014; Shores & Wehby, 1999). Also, functional behavioral assessments may be conducted to identify specific antecedents and consequences that maintain the behavior (Kern & Wehby, 2014). Regardless of disability type, students who require Tier 3 intervention are likely to experience significant difficulties across several domains identified in Figure 2 and will need carefully coordinated interventions to promote systems reorganization (Carter et al., 2014; Farmer, Sutherland, et al., 2016). Although the content might look different across disabilities, multifactored interventions that address social skills, social interactions, social roles, social goals, and peer affiliations at both the individual and classroom context level will be needed that are guided by functional behavioral analysis (Kern & Wehby, 2014), social function analysis (Farmer et al., 2012), and scouting reports (Farmer, Chen, et al., 2016).

Conclusion

In the current era of evidence-based practices, the focus is on standardized interventions that have been empirically demonstrated to address cause and effect sequences associated with students' behaviors and outcomes. Such work is critical in promoting the social adaptation of students with disabilities. Yet, students' social experiences and social development also reflect moment-to-moment activities with any particular moment having the potential to be important in a student's social development trajectory and long-term outcomes. It is not possible to develop interventions for a particular moment or to control all aspects of a student's social life. However, building from our knowledge of classroom social dynamics, it is possible for teachers to organize and manage the social ecology in ways that foster positive social interactions, roles, and relations for students with disabilities while also purposefully complementing more formal interventions. By viewing the teacher as an invisible hand, we do not need to leave moment-to-moment social factors to chance, but instead can leverage a probabilistic knowledge base to unobtrusively shape the classroom social system. As MTSS moves forward, it will be beneficial to include a focus on how classroom social dynamics contributes to specific intervention approaches and how teachers can be supported to manage these dynamics to promote positive classroom social ecologies, the adaptation of vulnerable students, and the effective implementation of social interventions.

Authors' Note

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