The ASD Nest Program is the New York City Department of Education's (DoE) flexible inclusion program for higher functioning children with autism spectrum disorders in kindergarten through grade 5, middle school and high school. The ASD Program is designed to help children learn how to function well academically, behaviorally and socially in their school and community. One of the vital aspects of the program is providing intervention and support to students with ASD to help them learn and grow alongside their typically developing peers. In order to do this, we address the challenges in social development that are common to all students with ASD as well as utilize individual strengths. A 2007 analysis of school-based social skills interventions stated that: "Social skills are critical to successful social, emotional, and cognitive development. As such, effective social skills programming should be an integral component of educational programming for children with ASD."[1] Therefore, the ASD Nest program contains an important component for these students: a social therapeutic intervention.

Social Development Intervention

(SDI) is the social therapeutic intervention of the Nest, implemented in tandem with academics. It is based on the developmental language model, relationship-development and social cognitive theories. SDI was designed to encourage the development of engagement, pragmatic language, and social cognition in children with ASD. Put simply, SDI is a dynamic intervention that allows students in the ASD Nest program to experience, explore, and navigate the fluid world of social interaction.

As outlined on the following pages, the delivery of this model is layered. The groups of four ASD children attend focused SDI time throughout the week to strengthen their social and pragmatic language abilities. Because the classroom teachers work in collaboration with the Speech and Language Therapists (SLP), they are then responsible for carrying over the SDI goals to the classroom when our students are with their typically developing peers. Through weekly case conferencing, the multidisciplinary team discusses social functioning and progress in order to tailor interventions to each student's need.

We have created a progress-tracking tool, which is utilized by all educators working with each child. The SDI goal-planning sheet (GPS) is used to determine and follow the social and pragmatic functioning of each student. This will reveal where a child's specific social challenges lie, so that developmentally appropriate social and pragmatic objectives can be written. The objectives generated from the GPS are represented on the IEP and inform the individualization of social supports both during focused SDI sessions and in the classroom. The GPS provides a framework for professional dialogue, encouraging team members to discuss the child's social development needs and how to address them consistently, throughout the day, in a variety of contexts.

Additional tools have been provided to aid in the planning and collaboration of SDI. The SDI Team Planning Map organizes the academic year into five SDI Units. Each unit focuses on a social aspect of the school environment. This is a planning tool, which allows staff to differentiate social instruction to each unique group. The goals and objectives generated from the GPS are targeted throughout the five map units, which address core challenges of a child with ASD. Three goal areas drive each unit and are broken down into specific objectives on the GPS: pragmatic language, problem solving and social relational development/social cognition. The targeting of each goal is considered for both focus time and generalization. The activities chosen and the manner in which they are presented during SDI focused time will be determined by the developmental levels of the students as assessed on the GPS by each team.

The ultimate goal of SDI is to provide a dynamic, realistic and accessible therapeutic component throughout the school day, which gives the student with ASD the communicative tools and support necessary for engaging in the school environment. Careful consideration has been given to the structure, the multidisciplinary approach, the tracking component, the strategies and the overall philosophy that is SDI. If the model is

[1] Bellini, S. Peters, J. K., Benner, L., Hopf, A. (2007) A meta-analysis of school-based social skills interventions for children with autism spectrum disorders. Journal of Remedial and Special Education, 28, 3, p. 153

development intervention will be maximally effective in supporting the social and pragmatic language abilities of our students, and therefore aid in their ultimate school success.

SDI: Focused Time & Generalization

The focused time of the SDI therapeutic curriculum is considered "lab time" where the ASD students with similar challenges are encouraged to engage in social pragmatic interactions. Groups are comprised of four Nest students where the intervention addresses a common overriding core challenge: social pragmatic communication. For the foundational work targeting social relational development, smaller groups of two students are utilized to build attending and engagement. The intervention addresses various potential social exchanges by working in dyads, small groups and carrying over concepts to the full classroom group. The facilitators of the focused therapeutic sessions are the speech language pathologist and two classroom teachers (cluster teachers may rotate with the GE teacher in order to promote generalization to cluster areas). Kindergarten classes attend this lab time five days per week, while first grade and up attend three days per week.

SDI focused time is a speech mandate as driven by the IEP, led by the SLP to provide social pragmatic language therapy. Because the Nest model promotes an interdisciplinary approach and generalization across environments, the collaboration between the SLP and teachers is tailored to best fit the schedules and environments of both the elementary and the middle school models. While the SLP provides a language-based knowledge of communication for the teachers, the teachers provide relevant classroom knowledge of each student which encourages targeted social supports.

In elementary, classroom teacher involvement in planning, *during* this therapeutic time and in case conferences supports the carryover of these skills into the larger group inclusion setting with typically developing peers. Similarly in middle school, teachers are periodically involved in sessions, while collaborating intensively in case conferences in order to weave and layer social supports into their various classrooms. Recent research has shown "that a major weakness of social skills interventions is a failure to produce adequate maintenance and generalization effects"[2]. Teachers are an active part of focused SDI and/or the implementation of relevant social supports in order to provide a bridge to the inclusion classroom from the therapeutic session. Generalization of skills across contexts can be a great challenge for students with ASD. We believe that by targeting therapeutic goals in a small group with an SLP in collaboration with the classroom teachers who carryover goals throughout the day, we are promoting true generalization. Our case conferences support a team understanding of the present functioning and progress of each child, which in turn promotes carryover of support strategies across environments.

We have broken down this focused time into three goal areas that are all essential to social development of students with ASD. Pragmatic Language, Problem Solving, and Social Relational Development/Social Cognition together promote relationship development and social functioning. Although each area has distinct objectives, the goals overlap and are best targeted in communion with each other. Two or even three goal areas can be addressed in a single activity. The rationale and implementation of the three goal areas is as follows:

1. Pragmatic Language

The modification and use of language in a social context is referred to as pragmatic language. "It is the use of language or pragmatics (functions, conversations, speaker-listener roles, nonlinguistic communication) that is particularly difficult for many children on the autistic spectrum"[3]. Therefore, to encourage interactive communication we focus on strengthening these pragmatic aspects of

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[2] Gresham, F.M., Sugai, G., & Horner, R.H. (2001). Interpreting outcomes of social skills training for students with high-incidence disabilities. Teaching Exceptional Children, 67, 331-344

[3] Gerber, Sima A Developmental Perspective on Language Assessment and Intervention for Children on the Autistic Spectrum in Topics in Language Disorders Vol. 23 No 2. 2003 p. 74

language. Typically developing children are adept in many aspects of pragmatic language that are essential to shared learning such as: reading other's body language to interpret the overall message, reading facial expressions to infer the subtext of actual words, staying on topic, asking relevant questions, following the flow of conversation to support acquiring and sharing knowledge in the classroom, or providing the appropriate background information to a listener unfamiliar to the topic. In both the academic and social contents of the school environment, pragmatic language knowledge is required for true engagement and success and therefore is a primary component of SDI for the Nest student.

We target each child's pragmatic language goals by building an awareness of non-verbal language and through conversation. We model naturalistic interactions, facilitate interactive experience sharing activities, build conversation skills based on each child's interests and preferences, highlight how we alter our language based on the listener and environment to encourage self-awareness and we build a cognitive understanding of why and how we do and do not provide certain information. We provide opportunities for conversation that aim to spark a motivation and a desire to share information. Pragmatic language goals are targeted through a naturalistic and dynamic approach because while 'pragmatic rules' exist they are flexible, highly dependent on context, ever-changing and demand cognitive flexibility. We model, we encourage, we highlight, we facilitate.

2. Problem Solving

Problem Solving is an involved and complicated task. Most academic work, as well as successful social interaction, is contingent upon developing problem solving skills. Both require flexible thinking and the ability to see the 'gestalt' of a situation, which explains why this skill is particularly difficult to the student with ASD. These students "appear to have a problem determining what is relevant and what is redundant and deciphering the overall pattern or meaning to create a mental framework"[4] (A difficulty in seeing the whole picture or gestalt is related to Central Coherence Theory). To adjust or problem solve in a social interaction, one is required to take in new information continuously and to then integrate it with known information, to consider one's own point of view as well as the other's perspective (Theory of Mind), to respond and then do it all over again. Focusing on the details rather than the whole without considering another's perspective or relating them to the overall context of the situation can compromise one's ability to problem solve rapidly in a social exchange and environment.

Through SDI, we build problem solving first by increasing relevant conceptual knowledge. We then target the child's ability to reason verbally by providing support in recognizing problems, in making predictions, and in providing solutions. At a higher developmental level we support lexical flexibility and its application to social and academic problems.

Our approach to problem solving is practical and naturalistic. When targeting this area, we take into consideration the challenges of children with ASD that interfere with rapid problem solving. As Winner states, "Most people with social cognitive deficits have some level of difficulty in their ability to create organizational structures that allow for flexibility and prioritization".[5] Therefore social thinking is necessary for social problem solving and visa versa. In SDI focused time, we identify problem situations and brainstorm potential solutions. We support the appraising of a situation and the ability to flexibility think through a problem by providing the tools one needs to work through problems. Supports include encouraging experience sharing as well as building perspective-taking concepts. Both are necessary for problem solving in a social context. The tools that we develop with each child are based on their personal learning preferences, communication profiles, interests, and tolerance abilities.

3. Social Relational Development (and Social Cognition)

[4] Atwood, T (2007) The Complete Guide to Asperger's Syndrome p. 242

[5] Winner, M (2002) Thinking About You Thinking About Me p. V

Social Relational Development is a vital component of the SDI curriculum. The rationale behind this goal is that it supports the development of both communicative relationship skills and flexible processing. This goal area draws from the work of Steven Gutstein who explains, “Relationship Skills are used when social contact is an end in itself… They are used to create and deepen connections between people, share excitement and joy, and participate in joint creative efforts. Relationships, like friendships and children's play encounters occur in a rather unpredictable, non-scripted, improvised manner."[6]

Social Relational Development encourages the growth of a dynamic system of flexibility, experience sharing and self-regulation. The student with ASD often relies on rote skills and procedures that are helpful in getting one’s needs met but not reliable or even useful in interactive exchanges. These static skills do not support thinking through social interactions and relationships. Without practice in dynamic thinking there are limitations in communication, social functioning, problem solving, flexibility, self-regulation, emotional development and executive functioning. Therefore, SDI aims to build social abilities not by teaching procedures or scripts, but through social relational goals that encourage the development of dynamic skills.

Flexible processing is necessary in targeting all SDI goals. For example, we encourage dynamic thinking for emotional referencing (“checking in” to see if what you are doing is "on the right track"), cognitive flexibility, and the recall of shared memories to reflect, connect with others, and to inform future exchanges. This thinking process is necessary to engage in true social interactions, to have a conversation, and to problem solve.

As a child matures both cognitively and socially, having built a foundation for true emotion sharing and self-awareness, we focus on social cognitive development. Michelle Garcia Winner suggests that; “… these relatively high functioning students can only truly become more socially competent if they understand how the social world works, and why specific social skills are important in differing contexts.”[7] Social cognition is centered on the ability to take another’s perspective and so aims to develop perspective taking, an awareness of social world, and an ability to think through social interactions. Continuing to draw from a foundation of experience sharing and motivation to interact, SDI aims to flex our students’ ability to think socially and to utilize this thinking in and outside of the school environment.

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[6] Gutstein, S.E. & Sheely, R.K. Relationship Development with Young Children, p.20-21

[7] Winner, M. G. Think Social: A Social Thinking Curriculum for School-Age Students, p. 1