Chapter 4
Setting up the G-ESDM Team and Learning Environment

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Thus far, we have highlighted the science and the principles of the G-ESDM. From this chapter forward, we will detail strategies and procedures to successfully implement the G-ESDM in the context of ordinary group settings such as day care centers, preschools, and similar early childhood programs. In this chapter, we will focus on two major steps that serve as the foundation for the rest: assembling and then building the transdisciplinary team, and setting up the physical and temporal environment.

Designing the G-ESDM Team

The combination of professional backgrounds of the team members in the G-ESDM is dictated by the different areas of needs that characterize learners with autism. A G-ESDM team typically involves professionals from early education, psychology, behavior analysis, speech and language pathology, and occupational therapy. Some families will also need supports from child psychiatry and developmental and behavioral pediatrics.

Early childhood educators contribute expertise on the teaching program and classroom schedule, including development of a group curriculum that addresses each child's objectives. Additionally, they contribute expertise to the management of resources, including the setup of the environment and the allocation of staff roles and responsibilities across the curriculum. Early childhood educators often assume the role of 'Leaders' in their particular classroom; they are responsible for developing and supervising the implementation of the classroom curriculum, liaising with families and specialists regarding individual children, and supporting and supervising other classroom staff.

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The psychologist contributes information about the behaviors and skills that should be expected at different developmental stages, learning processes and profiles of individual children, social–environmental influences in an individual child's development, family structure and dynamics, emotional regulation, attachment relations, and the developmental domains and processes that must be targeted to fill in the learning gaps.

Knowledge from applied behavior analysis is critical in three domains: (1) implementation of empirically derived strategies for effective teaching; (2) measurement of child progress, and (3) use of functional assessment and behavioral plans to manage challenging behaviors.

Speech and language pathology provides crucial input on the sequence of verbal and nonverbal communication development, the varied functions of communication, and when and how to use augmentative and alternative communication approaches.

Occupational therapy informs objectives and procedures in the areas of motor and self-care skills, personal independence, optimization of arousal to facilitate attention and engagement, and strategies to help children to adapt to their physical and sensory environment.

Support from professionals in developmental and behavioral pediatrics and child psychiatry might be necessary to address the health and behavioral concerns of individual children that can interfere with successful participation in the intervention (e.g., epilepsy, gastrointestinal problems, severe anxiety; Rogers & Dawson, 2010).

Transdisciplinary Team Approach

While the G-ESDM team consists of professionals from a diverse range of backgrounds, there are significant common areas of practice among team members. In order to ensure that the intervention meets the needs of each individual child, a collaborative team culture consistent with a *transdisciplinary team approach* is used to optimize resources and efficiently integrate areas of knowledge across the team.

The transdisciplinary approach utilizes collaboration, consensus building, and expanding, sharing, and releasing disciplinary roles to plan and integrate services for children and families (Woodruff & McGonigel, 1988). While this involves significant challenges, there is a general consensus regarding the benefits of this practice. Specifically, the use of a transdisciplinary team structure confers benefits in the following areas (King et al., 2009; McWilliam, 2010);

- Limits service fragmentation
- Emphasizes the centrality of the family as contributing members of the team

- Reduces demands on the family (i.e., support primarily provided from one person)
- Promotes service efficiency
- Promotes service cost-effectiveness
- Facilitates professional development among professionals

Delivering autism-specific services to a group requires far more teamwork than providing 1:1 programs. A group setting is a dynamic context changing from moment to moment, requiring multiple adults to work with multiple children all together to accomplish preplanned goals. The skills of the team at coordinating their behaviors, cognitions, and affect determine the success of the learning environment moment to moment and day by day. How does a team develop this kind of transdisciplinary, role-sharing culture and skill? Critical factors include clinical supervision and work processes that support both individuals and the team to work within active two mindsets: (1) as part of a collaborative role-sharing team, and (2) as an expert responsible to families and team members for their professional expertise.

Transdisciplinary Practice in Action—Going Beyond the 'Specialist Role'

The majority of the team members that work within the G-ESDM program are early childhood educators (or similar) who are assigned to a specific classroom (group) to optimize delivery of teaching for children within that setting. Often, professionals from education play the role of team leader, or key worker (Boyer & Thompson, 2014). This role involves the management and responsibility for a particular child's program. Additionally, the team leader is the primary contact both for the child's families and for the professionals involved in the child program and facilitates active collaboration among the team members.

While the role of the specialist therapists (i.e., psychologist, speech pathologist, occupational therapist) can be more fluid in the G-ESDM (i.e., they will not be assigned to only one specific classroom or child), they do not work separately on objectives relevant to their specific areas of expertise when delivering intervention within the group setting. Everyone in the team is expected to target a diverse range of ESDM objectives within all activities. Therefore, individual team members within the G-ESDM therefore need to commit to expanding and releasing roles across professional boundaries, thus acquiring new skills (with training and support) from a broad range of disciplines. The sharing and integration of team members' expertise is a defining feature of a transdisciplinary team. Additionally, specialist therapists can also play the role of team leader/key worker.

Nevertheless, the unique skill set of each staff member is needed when particular therapeutic issues arise. For example, decisions around issues in toilet training or self-feeding issues might be primarily handled by the occupational therapist in the team, and the management of challenging behaviors will rely on the expertise of the behavior analyst. Thus, each staff member provides both disciplinary and transdisciplinary support to the team and to each child.

Taking on more than a purely 'specialist role' and going beyond the traditional boundaries of specialist training can be anxiety provoking for some, frustrating for others, and puzzling to many at first. However, in our experience, the transdisciplinary team approach fosters team members' abilities to work together in a cohesive and cooperative ways, with positive effects on work satisfaction and motivation (Duncan & Vivanti, 2013). A key ingredient to building a strong transdisciplinary G-ESDM team involves establishing procedures and practices to support team communication and planning. Practices we have used are described in Chap. 9. However, the availability of various disciplinary staff members varies widely from one program to another, and each group program using G-ESDM will work out how the team staffs and organizes itself.

Designing the G-ESDM Classroom

The arrangement of the physical environment is perhaps the most obvious difference between the naturalistic G-ESDM and structured teaching approaches for autism that are often used in early childhood autism classroom settings. Often, autism-specific teaching settings modify the classroom environment by using a great deal of visual support and by reducing sensory inputs in the environment. One often sees visual schedules to communicate to the students 'what happens next' or 'how to accomplish a task independently', physical barriers, e.g., tall shelves facing away from the rest of the room, noise-reducing headphones, cubbies, tables and chairs, and relatively sparse surroundings to protect children from distraction in order to facilitate their concentration on tasks. Additionally, it is common to see 'calming centers' or 'sensory friendly' rooms to help children avoid stress associated with the social and sensory demands of the learning environment. Paradoxically, it is also not uncommon to see programs that use sensory-rich experiences that are not typically found in typical preschool settings, such as ball pits, rolling children up in blankets or carpets, deep pressure and brushing, to provide 'sensory input'. These adaptations are made in order to reduce verbal, sensory, and social demands that are typically present in preschool settings and replacing them with visually focused, object focused, routines focused, and sensory controlled 'autism-friendly experiences'.

In G-ESDM, we understand that children with autism may at times be motivated to by nonsocial, sensory stimulating, and nonlanguage mediated activities, but our approach is to provide the child with a meaningful and rewarding *social learning* environment to increase rewards and skills, and therefore motivation, for social learning. The physical arrangement of the classroom reflects this philosophy and is designed to support social learning from peers and adults across all developmental domains and across all activities of the day.

One's first impression when walking into a G-ESDM playroom is that of a well-organized typical early childhood education setting. The requirements for the physical space are those embedded in early childhood best practices, and the toys and materials present in the playroom are the same that one would expect to see in a typical preschool.

Organization of materials and spaces is critical, and 'naturalistic' does not mean 'disorganized'. A chaotic environment can be detrimental for children's learning and socialization. Moreover, the specific characteristics of young children with autism require careful attention to two aspects of the environment: (1) setting up learning areas and materials that cue the child about 'what is going to happen' in that particular area (2) and managing the quantity and quality of 'competing stimuli' that are present in each area. These two aspects are discussed below (Fig. 4.1).

Fig. 4.1 Physical set-up of a G-ESDM classroom

Organizing Physical Spaces Around Clear Purposes and Motivation

Consistent with the pedagogical principles introduced by Schopler and colleagues (1995), in the G-ESDM learning environment, different areas have different purposes, and the physical arrangement and the materials presented in the area should signal to the child what the purpose is, in order to facilitate children's intentional, goal-directed behavior. For example, a 'symbolic play corner' may be organized, involving play items that highlights the theme of cooking dinner, including pots and pans on the oven, plates, cups and cutlery on the table or shelf, and food and drinks in the cupboard or refrigerator. To facilitate peer interaction, multiples of particular items (e.g., plates, cutlery, and cups) will be provided. Similarly, a 'block corner' may be set up in a different area (away from areas such as the book corner where quieter play is encouraged) with materials limited to items such as blocks, cars, and people. The items should be highly organized (e.g., into tubs) to facilitate children putting the items away after they have finished playing with them.

However, while the different areas in the playroom and the materials involved in each area have clear purpose, the specific activity to be done in each area is not entirely predetermined. Therefore, there are no 'work schedules' telling the student what to do with each toy. Rather, consistent with principles first established by Montessori (1948), within each area the child needs to be able to choose between different materials and actions that are made available to them and are consistent with the theme of the activity, purpose of the area, and the individualized objectives to be addressed in this activity for this child. This approach capitalizes on the child's motivation, embedding the spontaneous interest of the child in the framework of purposeful play activities.

- Duplos have recently become a popular activity amongst the children in Jack's class. Jack has difficulties with his fine motor skills and avoids playing with construction toys such as Duplos. Jack's mother reported that Jack has been interested in roosters since a recent trip to a farm. To motivate Jack to engage in the Duplo activity with his peers, the teaching staff introduced Duplo roosters and other Duplo farm animals to the Duplo activity table. Jack came to the Duplo table and put a few blocks together to make some 'food' for the rooster.
- Clare (teacher) is running a play dough activity in her playroom. Three children in her class have chosen to join her; Hugo, Beth and Lachlan. Clare knows that Hugo enjoys engaging in pretend play, and she is aware that he has learning objectives around peer pretend play skills. Clare notices that Hugo is rolling his play dough into a ball, so she rolls her play dough into a ball, puts it on top of her rolling pin and pretends to lick it like an ice cream. Hugo laughs and copies her, making his own 'ice cream'. Clare remembers that it was Beth's birthday last week. She gets out some sticks and shows Beth how she can stick them in the play dough. She encourages Hugo to join in too. She then sings 'Happy Birthday' and Beth and Higo take turns blowing out the candles. Lachlan enjoys sensory social games such as 'tickles'. Clare picks up the long, thin piece of play dough that Lachlan has rolled and uses it as a 'tickle snake' to tickle Lachlan and herself. She then uses the snake to start to 'eat' Hugo's 'ice cream'. She hands the snake to Lachlan and he also uses the snake to 'eat' Hugo's 'ice cream'.

Importantly, while these examples focus on organizing the physical space to facilitate children's engagement, the ultimate goal of each activity and interaction is to systematically target each child's learning objectives. Procedures to implement teaching strategies are detailed in the following chapters. These, however, are unlikely to be effective is the physical arrangement of the learning environment is not organized around the naturalistic principles of the ESDM—activities are planned and well organized, but child actions are never completely predetermined. As we mentioned earlier, child engagement in activities that are planned to address learning needs and are meaningful and rewarding to the child are keys to successful learning.

Decreasing the Competition for Attention

Children with autism are often very distractible (Murphy et al. 2014). As we mentioned in Chap. 1, they may find it difficult to stay focused on one task and to tune out unnecessary information. As a consequence, one of the 'mantras' in the G-ESDM learning environment is 'decreasing attentional competition' by limiting stimuli that distract the child from learning. This is accomplished by organizing the playroom so that the stimuli and materials that are most relevant to the current activity are highlighted for the child.

Each learning area should be close to storage spaces that can contain materials that are accessible to the staff but not distracting for the child. All materials that are not relevant to the current activity are placed out of children's visual fields, whether in closed cabinets and drawers, or hidden with a curtain or blanket. The elements that need to be present in the visual field of the child are the play partners and the materials involved in the activity. If unrelated materials do not 'disappear' from view, they can disrupt the play activity and prevent learning opportunities.

Likewise, children (and staff) are encouraged to put away materials once they have completed each activity before moving on to another activity, so that two unrelated sets of materials are not present at the same time in the same space. This way, children do not have to process multiple competing stimuli and can orient all their attention resources to the one set of stimuli that are central to the learning activity.

The Different Learning Areas in the G-ESDM Playroom

The G-ESDM is based on a generalist model of intervention delivery, which means that there is one comprehensive treatment plan that is delivered by all the professionals and that covers goals across all developmental domains and skill areas, including those that are typically addressed by specific disciplines. For example, goals in the communication and in the fine motor domains are not addressed

separately by a speech therapist and by an occupational therapist in distinct sessions —rather, those goals are embedded in a comprehensive plan implemented by a transdisciplinary team.

This approach is reflected in the physical arrangement of the G-ESDM learning environment. Rather than being arranged around distinct spaces dedicated to specific therapies (e.g., occupational therapy room and speech therapy room), the classroom learning environment is organized around typical play and self-care activities. All the educational objectives in the G-ESDM are addressed within these activities. To accomplish this goal, the physical organization of the learning environment involves the arrangement of several different areas, described below.

Play-Activity Centers

Play-activity centers consist of designated floor areas or table areas that involve a variety of naturalistic, age-appropriate play materials, set with the aim of building learning opportunities and encourage participation in cooperative play based on children's motivation, common interests, and treatment plans. These areas are visually delimited but are not necessarily 'enclosed' within physical barriers, and children have full access to the set of play materials that are arranged in each center. The spatial arrangement of each area should be set up so that 3–4 children can play together and will face one another.

Each center has a specific theme, which is clearly defined by a set of materials arranged in the area. There are multiple centers within the group classroom, as in any typical preschool: a puzzles table, a book corner, a cause-and-effect toys table, a construction and blocks area, a toy kitchen/shopping or other symbolic play area, a drawing/coloring center, and so on. Only materials that are relevant to the theme of the center are made accessible at a particular day and time in each area. The selection of the specific play materials within each activity center is based on three principles. First, they have to be typical early childhood materials—toys and objects that can be found in any typical preschool setting. Second, they need to be conducive to goal-directed and social play. Therefore, toys that lead to meaningful actions and cooperative play (e.g., blocks and cars) are better than toys that provide a lot of sensory stimulation but do not necessarily elicit purposeful behavior and shared engagement (e.g., iPads). Finally, while different themes involve different level of play complexity and sophistication, there should be play materials suitable for addressing treatment objectives for each child in each center, so that any child can join in and play with something that is meaningful and appropriate for his or her play level and will address that child's learning objectives. Importantly, materials and themes are varied often throughout the year, generally every 3–4 weeks, to avoid that repetitive or inflexible object routines are established (Figs. 4.2 and 4.3).

Fig. 4.2 Example of a play-activity centers

Fig. 4.3 Another example of a play-activity centers

Small Circle and Large Group Areas

Many learning objectives in the G-ESDM are targeted within small group activities, such as book-based or song-based routines, involving one therapist leading groups of 3–4 children. The lead therapist is usually supported by an adult that sits behind the children and intervenes when needed to facilitate the activity, a role that we call 'the invisible support' (see Chap. 5 for further details on staff roles and responsibilities). These types of every day playroom routine activities provide an ideal framework to target expressive and receptive language, gestural and vocal imitation, turn taking, joint attention, cognitive goals (e.g., matching, counting), social (e.g., giving and sharing materials), and play skills.

The physical set-up required to run the small groups involves a clearly defined space that is visually delimited by 'natural' boundaries (e.g., movable furniture, walkways, walls, and doors). Within that space, chairs and play materials are positioned so that the therapist sits in close proximity to the children, facing them and can have easy access to the toys or materials needed for the activity without leaving the chair (these, however, need to be inaccessible to the children). The primary goal in setting up a small group is to make the adult the primary focus of the child's attention, so that children are driven to register, appreciate, and learn from the rich information conveyed by the adult's actions and communication.

To eliminate the competition of distracting stimuli, groups can be arranged so that 'nothing is going on' behind the leading adult that can capture the children's attention. This can be achieved by arranging the groups in areas facing the playroom walls, corners, or areas that include 'natural' barriers. If multiple groups are being conducted at the same time, they should be spaced apart from each other as much as possible. Typically, the small circle groups are set up for periods of around 10–15 min and then deconstructed to allow for other activities and learning to occur (e.g., meals and activity centers). Examples of the physical arrangement of small group activities are illustrated (Fig. 4.4).

Large group activities (i.e., those that involve all or the majority of children in the classroom) provide opportunities for children to generalize the skills that they have mastered in individual learning opportunities and small group activities. This is important as large group activities are common in educational settings throughout a person life—especially within school environments. Encouraging children to sit at chairs during large group activities (like in small groups) serves as an environmental cue and during the activity provides physical supports that promote the capacity to attend and participate in the activity. Depending on age expectations, children can be supported to learn to sit on the floor by progressing from sitting on chairs, to large blocks, through to mats, and then to sitting on the floor. Just as in small circle group activities, large group activities also consist of one 'lead' therapist and a number of therapists who are 'invisible supports' (see Chap. 5). The lead may identify specific children that require additional support and seat an 'invisible support' in close proximity so that they can provide prompting as appropriate. These procedures are illustrated in the following vignette:

Fig. 4.4 Example of small group activities

John (teacher) is leading a whole group 'Music and Movement' routine based on the pre-school song 'Everybody Shaking'. John plans to lead the activity in a large, open part of the Classroom, where whole-group Music and Movement activities typically take place. Before the activity begins, John arranges all the chairs in a circle and covers all the nearby toys or puts them away, to reduce any potential distractions. John, the children and other teachers all sit in a circle on the chairs, while one teacher sits behind Becky and a second teacher sits beside Kane, to provide both students with additional support throughout the activity as required.

The interests and skills of each of the children are carefully considered in large groups, with activities designed so that each child in the group is able to actively participate in some way. The length of the activity and amount of waiting for each child is adjusted to meet the needs of all the children in the group; children who are able to attend for a longer period may remain in the activity longer than children who have limited attention span, as highlighted in the second half of the vignette.

John begins the activity by handing out the bells, with the assistance of Liz, a second teacher (John is conscious that the bells need to be passed out quickly, to reduce the amount of time that the children are waiting to begin). As John and Liz pass out the bells, they target individual communication objectives, for example John holds two bells up while he labels the colours and waits for George to point to request one. John also facilitates peer

interactions by asking Kelly (child) and Holden (child) to pass the bells to the peers sitting beside them, thus addressing language goals and social interaction goals. As soon as everyone has a bell, John sits down in the circle and begins singing 'Everybody Shaking' with an upbeat affect and tempo, while modelling a shaking action with his bell. The children are motivated to attend to John because of his playful affect, the pauses that John adds to the song, their anticipation of what is coming next, since this is a familiar song, and the clear shaking action that John is modelling with the bell. Soon many of the children are participating (i.e., singing and/or shaking their bells), with the other teachers support children to participate (for example, to imitate John's actions with their bells) as required. John adds new actions to the song across the activity to maintain the interest of the children, watching to see what his children are especially interested in or when they are beginning to lose motivation. John also actively incorporates the children's actions and choices into the song routine. For example, John sees Kyle stamping his feet and John points to Kyle and says 'Look, Kyle is stamping! Let's stamp like Kyle…. Everybody Stamping…' and as the stamping verse is finishing, John invites Carly to participate by offering her a choice on how to stamp, asking 'Carly, stamp fast or sloooow? Carly said fast…. stamp fast!', John observes that Becky is no longer imitating and appears to have lost interest in the song and signals to her 'invisible support' teacher to help Becky to transition to the next activity, while he and the other children continue singing.

This example illustrates how the physical set-up—in this case, the arrangement of the chairs is critical to 'engineer' socially engaging activities that provide teachers with the opportunity to target learning objectives.

Other Areas

Many preschool settings involve an outdoor area, which can include climbing equipment, trampolines, sandpits, ride-on toys, and other playground facilities. Outdoor areas are ideal settings to target motor and cognitive goals within large group activities and do not require any specific physical rearrangement for being used successfully in the G-ESDM. For example, obstacle course activities can be set up in outdoor areas to provide learning opportunities across different domains. To target gross motor objectives equipment such as hoops (to jump/hop between), a soccer ball/goal (to kick into), climbing equipment, and balls/beanbags (for throwing) may be included. To address individual cognitive objectives children may be encouraged to count the number of objects (e.g., number of hoops), match identical objects (e.g., pack the balls away into the correct box), and identify colors (e.g., the color of equipment). Social skills objectives may be addressed through providing opportunities for children to imitate each other as they go through the obstacle course and take turns using the equipment.

- Example 1—The children in Clare's (teacher) class have been demonstrating an interest in the outdoor obstacle course. Clare considers how she can target each child's individual learning objectives through this activity. Several children have a learning objective about jumping and hopping. Clare puts out some hoops for the children to jump and hop between, making sure that they are different colors so that they can also

be used to target cognitive objectives color recognition. For children who have the objective of kicking a ball, Clare sets up a soccer goal. Additionally, she includes tricycles to target the tricycle-riding objectives and provide opportunities for peer imitation (following each other on the tricycles).

Some areas do not require any physical modifications, but a number of measures can be taken to optimize social learning opportunities. For example, during meals times the bowls and utensils are placed on a table as would be the case in any typical environment. Children are encouraged to sit with up to 6 peers and at least one adult whose role is to facilitate communication and peer interactions during the activity.

- It is time for lunch in Clare's (teacher) playroom. She has four children at her lunch table; David, Tom, Nick and Sophie. She sets up the lunch table so that all the bowls and spoons are in front of Tom. Clare gives the children the instruction to 'sit down' and helps them to sit down at the table. Once the children are seated, they are each supported to request a bowl and spoon from Tom. Clare encourages each child to request the pasta and sauce from her. Each time they request, she gives them a small amount of food so that they have multiple opportunities to communicate with her. Some of the times she purposefully offers them food/items that she knows they do not want to encourage them to say 'no'. Nick begins to sprinkle some cheese on his meal; Clare points towards Nick's bowl and says 'Look, Nick's putting cheese on his pasta'. David follows Clare's point and looks towards Nick's bowl and then reaches towards the cheese. Clare helps David to point at the cheese to request it from Nick. David sprinkles the cheese onto his pasta just like Nick and begins to eat it. Clare also eats a bowl of pasta and comments 'I like pasta', Sophie copies her and says 'I like pasta!' David says 'I like cheese!' Clare points to Nick and says 'Nick likes cheese too!'. Tom begins using his hands to eat the pasta so Clare provides him with some prompting from behind to use his spoon. Clare notices that Nick is having some difficulty with opening his drink bottle, she looks at him and waits. After a few seconds, she puts her hand out and prompts him to pass it to her and ask for 'help'. At the end of the meal, David, Tom, Nick and Sophie are supported to put their food scraps into the bin, and to put their dirty bowls in one tub and dirty spoons in another. In this example, learning opportunities are provided across a number of different domains including receptive communication (following instruction to sit), expressive communication (requesting the pasta/cheese, commenting 'I like pasta'), social skills (requesting 'help') social skills with peers (requesting the plates/spoons from peer, imitating peers), joint attention (following a point), cognition (sorting identical spoons and bowls) and personal independence (using a spoon).

Transitions Between Areas

It is important to establish clear paths between the different areas dedicated to different activities, and the physical arrangement of the playroom is the key to facilitate smooth and independent transitions. For example, the areas where the small circle group activities are set should be fairly close to the play-activity areas where the group is scheduled to go next, and the table for snack should be close to the where the dishes are placed after the meal. This way, children can navigate

independently and purposefully from one activity to the next within clear and accessible routes.

Questions that Can Help Arranging the Physical Space

These are questions that can help with planning and evaluating the physical set-up of the learning environment

(1) Are there any safety issues in the physical arrangement of the learning environment? While safety requirements are usually highly regulated in preschool settings, additional adaptations might be necessary to ensure safety with students with autism (for example, moving light switches or door handles out of children's reach).
(2) Does the physical space adequately support large group activities, small circle groups, and play-activity centers?
(3) Are the materials in the learning environment typical for a preschool setting, age-appropriate, supportive of goal-directed play, and supportive of social learning?
(4) Is each area organized around a clear purpose/theme?
(5) Are the materials and the areas organized so to 'decrease attentional competition'?
(6) Does the physical set up of the environment facilitate independent transitions?

Conclusions

A classroom learning environment rests upon its physical, temporal, and social structure. This chapter has described a physical structure that supports the attention, interest, and provision of learning opportunities of both young children with autism and young children with typical development. G-ESDM practices are based on the idea that teaching is more powerful when embedded in the context of the real life daily routines. In this context, social communication, cognitive, motor, and language abilities are the tools by which children manage the demands of everyday life. The G-ESDM therefore has a focus on organizing spaces, with 'real life', common objects, play materials, and play areas that would be normally used in a playroom for typically developing children. Within this framework, areas are arranged to facilitate focus on relevant tasks, decreasing competition with distracting stimuli, and support social attention and social learning.

The social environment is orchestrated by the adults in the room and their interactions with each other, with the children, and with their ability to facilitate

child–child interactions. The adults in the program must have at their disposal the varied expertise needed to address the multiple complex needs of preschoolers with autism. The team that is assembled to address those needs comes together to work in a specific way, a transdisciplinary, collaborative team that includes caregivers as team members and clearly defined roles and responsibilities. The team is held together and organized for each individual child by the team leader, or key workers, that works collaboratively with the child caregivers and other team members to develop and implement individualized teaching objectives in the work environment.

References

Boyer, V. & Thompson, S. D. (2014). Transdisciplinary model and early intervention: Building collaborative relationships. *Young Exceptional Children, 17*(3).

King, G., Strachan, D., Tucker, M., Duwyn, B., Desserud, S., & Shillington, M. (2009). The Application of a transdisciplinary model for early intervention services. *Infants and Young Children, 22*(3), 211–223.

McWilliam, R. (2010). *Routines-based early intervention: supporting young children and their families*. Baltimore: Brookes Publishing.

Montessori, M. (1948/2004). *The discovery of the child.* Aakar Books.

Murphy, J. W., Foxe, J. J., Peters, J. B., & Molholm, S. (2014). Susceptibility to distraction in autism spectrum disorder: Probing the integrity of oscillatory alpha-band suppression mechanisms. *Autism Research.*

Rogers, S. J., & Dawson, G. (2010). *Early Start Denver Model for young children with autism: Promoting language, learning, and engagement*. New York: Guilford Press.

Schopler, E., Mesibov, G. B., & Hearsey, K. (1995). Structured teaching in the TEACCH system. In *Learning and cognition in autism* (pp. 243–268). Springer US.

Woodruff, G., & McGonigel, M. J. (1988). *Early intervention team approaches: The transdisciplinary model*. Reston, VA: Council for Exceptional Children.