

McGee, Gail G., Morrier, Michael J., & Daly Teresa. (1999). An incidental teaching approach to early intervention for toddlers with autism. *JASH*, 24(3), 133-146.

Reviewed by Catriona Johnson

The Walden Program is located at Emory University in Atlanta. It is a full day, 12 month per year program that includes children with autism and typical peers. In addition to the center-based program, families receive up to 4-hours per week of intervention demonstration in the home by an experienced teacher. Parents are asked to provide 10 hours of intervention in the home, however the authors state that by blending home and community teaching with instructional time, most children receive more instructional time than the 10 hours (p.134). In addition to this instructional training, parents receive training in advocacy and access to a parent support network. Seminars on various topics are provided, some of which are disability specific and some of which are more general. Social activities are also planned to develop friendships between parents of children with and without disabilities.

McGee et. al. state that the Walden model has been packaged in detailed curriculum and model manuals, and that training sequences have been prepared to assist staff of other programs to replicate the model. In the article, McGee , Morrier, and Daly state that full replication sites have been established in Savannah, Georgia and Auburn, Alabama. A Maryland program (Howard County's Multiple Intense Needs Classes) is described as "partial replication" (p. 134). The authors describe the program as based on an earlier model developed for daycare of typically-developing infants and toddlers (Herbert, Jackson, O'Brien, Porterfield & Risley, 1977; O'Brien, Porterfield, Herbert-Jackson, & Risley, 1979), however significantly adapted to meet the needs of infants and toddlers with autism and to address their social inclusion (p. 134).

McGee and her coauthors describe 6 principles that serve as a foundation for the Walden program. The first is that early intervention is essential (p. 135). McGee's program has been developed to work ideally with children between the ages of 15 to 30 months. Her curriculum is considered appropriate for children with autism for one full year from program entry; typically developing peers are generally challenged by the curriculum until 36 months of age.

Like most successful early intervention programs for children with autism, the Walden program works on the principle that "more is better" (p. 135). McGee et. al. cite Lovaas (1987) and Dawson and Osterling (1997) with regards to research demonstrating that the more hours of engaged behavior, the better the child with autism's outcome. The authors say, however, that quality of intervention can not be measured only in hours per week, but also in terms of how effective the program is in engaging the child in learning opportunities (p. 135). McGee, Morrier, and Daly work from the assumption that a minimum of 30 hours per week is necessary for effective programming and outcomes and that a child must be engaged for a minimum of 80% of planned intervention time. They note that between home and center based instruction, children in their program received up to 47.5 hours per week of intervention.

The third underlying principle of the program is that family involvement is critical to a child's success. The authors state that the home component of the Walden program is essential. Parents, they say, are generally more active during the toddler years, and by training parents both about autism and advocacy, "they may become more discriminating and effective consumers throughout their child's important early childhood years and beyond." (p. 135).

The fourth principle states that in order for children with autism to develop socially, they must interact with typical peers. Say the authors, "...impacting children's ongoing social behavior requires that social intervention must be intensive and carefully planned." (p. 135). Social intervention, say the authors, is more that "how to" interact with typical peers, but making children with autism develop a social interest that will

serve them in their communities throughout their lives. Delaying social interaction causes developmental gaps that expand with time, primarily due to the dramatic social growth seen during the typical development of young children. The Walden program maintains a ratio of two typically-developing peers for each child with autism (pp. 135-136).

The fifth principle states that early childhood should be fun. McGee et. al. state that the Walden curriculum was influenced by “societal expectations regarding the care of young children.” (p. 136). The program is designed to teach through play and attempts to provide systematic behavioral intervention by mixing positive and naturalistic teaching with a developmentally appropriate curriculum.

Finally, McGee, Morrier, and Daly state that incidental teaching must be planned. Citing an earlier study by McGee, Daly, and Jacobs (1994), the authors state that, “Incidental teaching offers the advantages of a technical grounding in applied behavior analysis (ABA) with the benefit that accrues from delivering intervention in the context of regular early childhood activities.” (p. 136) McGee’s interest in the incidental teaching approach was prompted by concerns over generalization skills that have been cited as problems in other types of behavioral approaches. According to the authors, “children with autism do learn to speak with highly structured discrete trial instruction. However, research has shown that children are better able to transfer their language to new settings and people following instruction with incidental teaching.” (p. 136).

According to the authors, the curriculum developed for the Walden program was derived from three questions that address goals, the learning environment, and teaching procedures.

Question	Curriculum Areas	Key Components
What do toddlers need to learn?	Interdisciplinary selection of toddler goals	<ul style="list-style-type: none"> • Expressive verbal language • Engagement with toys • Social responsiveness to adults • Social tolerance/imitation of peers • Independence in daily living
What environmental arrangements are most conducive to teaching various skills to toddlers?	Environmental arrangement	<ul style="list-style-type: none"> • Zone based teacher schedule • Goals embedded in natural activities • Supplemental one-to-one instruction in natural contexts • Child selected teaching materials • Systematic display and rotation of toys
What do caregivers need to do to promote learning in toddlers?	Incidental teaching procedures	<ul style="list-style-type: none"> • Vigorous speech shaping • Active social instruction • Wait-ask-say-show-do • Promotion of engagement • Checklist based performance appraisals

Adapted from Table 1: McGee, Gail G., Morrier, Michael J., & Daly Teresa. (1999). An incidental teaching approach to early intervention for toddlers with autism. *JASH*, 24(3), p. 137.

McGee et. al. describe the process of developing curriculum goals using a multidisciplinary team. The resulting curriculum has five key objectives:

- 1) To teach children without verbal language how to vocalize when they want things, and to provide them access to desired events contingent upon their vocalization;
- 2) To teach children how to meaningfully engage with toys for sustained periods of time;
- 3) To teach children social responsiveness to adults through their orientation and eye gaze;
- 4) To increase social tolerance and imitation of peers through social proximity; and
- 5) To teach independence in daily living, such as washing hands, putting on shoes, and toilet training. (p. 138)

In order to accomplish the outlined objectives, McGee et. al. propose the development of a highly organized and well-planned environment, designed to elicit language and social reciprocity. Among the environmental arrangements are:

- 1) Zone based teacher deployment – The room is organized into 3 overlapping teaching zones to which teachers are deployed (p. 139).
- 2) Goals embedded in natural activities – Recognizing that there needs to be enough teaching episodes within and across days for children with autism, only one or two learning topics are assigned to each activity zone. The program embeds goals into teaching zones and home schedules, thereby providing instruction across teachers and locations (p. 139).
- 3) Supplemental one-to-one instruction – One-to-one instruction is used primarily when it is difficult to “ensure that a sufficient number of teaching episodes for a given skill can be blended into the natural environment.” (p. 139).
- 4) Preferred toys provide the fuel for toddler learning – Children receive a regular sensory preference assessment to determine what types of toys are preferred, and thus motivating (p. 139).
- 5) Systematic display and rotation of toys – Toys are systematically rotated in order to maintain child motivation, maintain novelty, or to target specific goals (p. 140)

Finally, the Walden program depends upon incidental teaching procedures within the environment. Incidental teaching occurs when the child initiates an interaction by showing interest in a toy or activity. When a child initiates, a teacher prompts for an elaboration from the child. After an appropriate response, the teacher confirms the response and pairs it with praise or another reinforcer (p. 141). This approach to teaching is coupled with vigorous speech shaping, active social instruction, a backward chaining faded guidance procedure (wait-ask-say-show-do), promotion of engagement through redirection and other means, and checklist based staff training procedures to ensure consistency (p. 142).

McGee and her co-authors report successful outcomes with their program. In the research, 28 children with autism participated in the Walden program for at least 6 months. The average entry age was 2.5 years and the average exit age was 3.5 years. The program was evaluated using measures of child outcomes, parent outcomes, and consumer satisfaction. The authors state that a report is in preparation, however preliminary data from two of the child outcome areas have been reported: child language and social behavior during activities at the center-based program.

The authors state that upon entry into the program 36% of the children with autism were verbal, however much of the language used was echolalic or perseverative. Upon exit, 82% of all of the children were verbalizing using meaningful words. In addition, the authors state that social behavior increased as measured by social proximity with 71% of the children showing increased time in proximity to peers. According to McGee et. al., all but one of the children showed increased or acceptable levels of proximity to peers (pp. 143-144).

In the article, McGee, Morrier, and Daly seek to explain 2 areas considered controversial in the Walden program: using a verbal only approach to teaching language and using only incidental teaching procedures. The authors state that parents place high priority on their children with autism learning to talk and they believe that “if vigorous language instruction began from the outset of early intervention, children would develop language earlier.” (p. 144). While the authors recognize that this differs from other researchers’ approaches (specifically Bondy and Frost who developed the Picture Exchange Communication System or PECS), they say that “prior experience with incidental teaching suggests that children with autism will be

most motivated to develop speech if they need to talk to access the many desirable toys and activities that fill their environment.” (p. 144).

Finally, McGee, Morrier, and Daly do not recommend mixing other instructional formats with incidental teaching. As an example, they say that “the compliance training needed to do effective discrete trial instruction can be counterproductive to the use of procedures that require spontaneous child initiations.” P. 144). The authors also cite sensory integration therapy as an intervention procedure that does not mix well with the incidental teaching approach.

McGee, Morrier, and Daly recommend that parents find an intervention approach that remains consistent and that, “Innovative administrators need to divert the funds they used to invest in litigation *against* parents into substantive program improvements and real intervention choices *for* parents.” (p. 145).

Sources:

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