

# Teaching Self-Determination to Early Elementary Students: Six-Year-Olds at the Wheel

Wendy W. Murawski  
Nancy Wilshinsky

---

*An Article Published in*

*TEACHING Exceptional Children Plus*

*Volume 1, Issue 5, May 2005*

---

# Teaching Self-Determination to Early Elementary Students: Six-Year-Olds at the Wheel

Wendy W. Murawski  
Nancy Wilshinsky

---

## Abstract

This article describes a simple, concrete and engaging model for teaching self-determination skills (such as self-awareness, goal-setting, choice-making, problem solving and self-monitoring) to early elementary students. The model was designed to increase appropriate behaviors, academic performance and positive self-concept in students with and without disabilities. An awareness of student strengths and weaknesses was created through a demystification process. Self-determination skills were taught through the use of a teacher-constructed, desktop, simulated car. Specific examples are provided of how the car was created and used to increase the success of students in an inclusive classroom.

---

## SUGGESTED CITATION:

Murawski, W. W. & Wilshinsky, N. (2005) Teaching Self-Determination to Early Elementary Students: Six-Year-Olds at the Wheel. *TEACHING Exceptional Children Plus*, 1(5) Article 3. Retrieved [date] from <http://escholarship.bc.edu/education/tecplus/vol1/iss5/3>

*Independent work time (IWT) was supposed to be an opportunity for Miss Janie to work with some of the struggling readers in her first grade general education classroom. As the students sitting in front of her began to read, Miss Janie surveyed the other students in the class. Tommy, who found sitting still nearly impossible, was already out of his seat and showing his broken pencil to Jose. Chan, a student with autism, was perseverating orally over an incident that occurred during recess with Luke. Lily and Kendra were off task because they were drawn into Chan's drama. Noah, a student receiving speech services, grabbed a paper from Chloe because grabbing was easier than trying to produce the proper words. Chloe then raised her voice to Noah. Within three minutes, the noise level and Miss Janie's frustration level were at a point where she had to stop IWT. As she waited for her anger to subside and looked at their young faces, she realized that these students had no understanding of their weaknesses and how their weaknesses could interfere with their learning and behavior. No one had ever taught them how to take charge of their own learning. Miss Janie realized that she could not expect these students, with and without disabilities, to steer clear of the roadblocks created by their weaknesses and to work independently without the proper training.*

Regardless of how determined a teacher may be to meet the needs of a diverse group of students, determination can easily turn to frustration – even as early as first grade! Teacher frustration, as well as student frustration, can escalate as teachers attempt to maintain control of young students while trying still to teach to academic standards. In the very first year of what will be many years of such frustration, some students have already experienced a lack of success in school

and even developed a negative self-concept. It is important to intervene before negative self-concepts become generalized. This article describes an intervention that uses a motivating, hands-on-the-wheel “Drivers Training Program.” The program shifts determination from teacher to students. The Drivers Training Program not only reduces the tension of the teacher, it creates an opportunity for students, with and without disabilities, to set out on the road to success using self-determination skills as a vehicle.

### **What is self-determination?**

Self-determination is a process in which students take charge of their learning, attitudes and behaviors. Field, Martin, Miller, Ward and Wehmeyer (1998) describe self-determination as “a combination of skills, knowledge, and beliefs that enable a person to engage in goal-directed, self-regulated, autonomous behavior” (p.2). Knowing one's strengths and limitations allows a person to feel more capable, to take control of one's own actions, and to develop a stronger self-esteem – even for young children. Some of the components of self-determination described by Wehmeyer (1999) include self-awareness, self-knowledge, choice-making skills, decision-making skills, problem solving skills, and self-reinforcement skills.

It is possible to teach self-determination skills to early elementary school students (Palmer & Wehmeyer, 2003). However, sometimes the students who could benefit most from self-determination instruction miss out. They lack the necessary controls, such as problem solving skills or attention controls, for this instruction to be effective. With this in mind, we borrowed parts and concepts from popular self-determination models (i.e., Palmer & Wehmeyer's (2003) early elementary version of *The Self-*

*Determined Learning Model of Instruction* and Levine's (1997) *The Mind That's Mine: A Program to Help Young Learners Learn About Learning*) to create a new hands-on intervention that could work with young students with and without identified disabilities. This intervention promised to be simple, concrete, and engaging – just the right type for struggling students! We took the model for a test drive in an inclusive early elementary class and found favorable results.

### **A hands-on intervention**

Our intervention begins with a demystification process as outlined by Levine (2002a). Demystification, according to Levine, is the process of helping students to learn about the ways that they think and learn. After talking to students about the fact that everyone learns differently, we were able to follow up this discussion with simple lessons about the mind and brain. These lessons and discussions were particularly important as our class contained general education students and gifted students, as well as individuals who had learning disabilities, attentional issues, and other identified concerns. The key, however, in keeping with Levine's philosophy of addressing learning and not labels, is that all students were able to participate – not just selected individuals. The lessons about the mind were simple and included pictures of the brain and open discussions about how the brain helps students think and act and make choices. A good place to go for a lesson for students on how the brain works is *The Mind That's Mine: A Program to Help Young Learners Learn About Learning* by Levine (1997) (also available online at [www.allkindsofminds.org](http://www.allkindsofminds.org)). (Older students might benefit from Patt Walsh's approach to explaining the brain (Walsh, 2000)). The end of the brain lesson culminated with students

discussing how their brains were unique and might function differently than their friends'. Once that was accomplished, students began the drivers training program. Talk about motivation! All students at the early elementary levels were thrilled at the chance to "learn" how to "drive"!

During our "drivers training," students were taught to take control of their thinking, actions and learning just as they would a car. As they literally sat in the driver's seats we created, they were able to take control of the wheel as they set goals, self-advocated, made choices, problem solved, self-monitored, self-regulated, and self-reinforced. Our drivers were determined to have no crashes!

### **Implementing a Drivers Training Program**

#### *Setting the stage*

Before commencing the Drivers Training Program, a letter was sent home to inform parents of the project and to create a home-school connection.

Parents in our project responded very favorably. For some, it provided an opportunity for parents to communicate concerns about their child, as well as to identify student strengths. One parent was curious about Levine's work so a copy of *The Myth of Laziness* (2003) was provided for the parent to review.

**Figure 1. Letter to Parents**

March 16, 2004

Dear \_\_\_\_\_:

As a graduate student at California State University, Northridge, I am currently working on a project that is designed to teach self-determination skills to young students. Self-determination means that students will be learning how to take control of their own actions and learning. Using Dr. Mel Levine's *The Mind That's Mine: A Program to Help Young Learners Learn About Learning*, students will develop an awareness of individual learning strengths and weaknesses. Once this phase has been completed, a desktop simulated car will be introduced. Students will then be taught to take control of their thinking, actions and learning just as they would take control of a car. The program promises to be optimistic, supportive and motivating.

I am requesting permission to teach portions of the program to your child in small groups and individual settings. Instruction will take place in the mornings. There will be approximately five 30-minute lessons in all.

If you would like more information regarding the proposed program or Dr. Levine's work, please feel free to contact me. You may also want to visit his website at [www.allkindsofminds.org](http://www.allkindsofminds.org).

I am enclosing a permission slip for you to return. I appreciate your attention and look forward to a rewarding experience for all.

Respectfully,

Nancy Wilshinsky  
1<sup>st</sup> grade teacher

Prior to implementing the project, students were asked informally by the teacher how they felt about themselves in school. Two students said that they were “bad”. One said that he wasn’t sure but he did know that he always got in trouble. Another student didn’t know. However, once they completed the demystification process described below, every student reported that they felt better about themselves and each student committed to change.

### *Beginning the demystification process*

Once the prior arrangements were made, the first phase of our project began - the self-awareness training. Levine (2002a; 2002b) lays out a demystification process that helped to create this awareness. The processes of letting students talk about, and learn about, how they learn was done on an individual basis and, as Levine prescribes, in an optimistic and supportive tone. The discussion was in vocabulary that early elementary students could understand.

With each individual student, the demystification began with a reassurance that everyone has weaknesses, or “roadblocks,” that can get in the way of learning. Next, there was a discussion of the student’s strengths. Student strengths were recorded on one side of a paper and the paper was kept for future reference. Keeping the list allowed students to add to it as new strengths were discovered. With younger children, it was important to use specific, concrete examples. After focusing on strengths, an open discussion of roadblocks helped students understand why they may experience difficulty in school.

Levine suggests the use of the *Concentration Cockpit* (1995, p.64) to help young students. While we found that the Concentration Cockpit form that Levine espouses a bit too complex for our young learners, the idea of the

cockpit lent itself nicely to our focus on driving. Thus, we simply used a form in which the list of roadblocks was recorded on the other side of the paper with the strengths. Again, students were told that this list would be used as a reference when setting goals or looking for “road-blocks”. An example of a student’s list of strengths and roadblocks is provided in Figure 2.

**Figure 2.** Example of Strengths and Weaknesses

<h2>My Strengths</h2> <p>Open Road</p>	<h2>My Weaknesses</h2> <p>Roadblocks</p>
I can easily.....	It is difficult to.....
jump rope	① sit quietly on rug
color	② remember to raise
run	my hand
sneak	
do math	
care for animals	
make Dad happy	
make friends	
help with chores	
solve problems	
do puzzles	
speak 3 languages	

Following the strength/weakness discussion, optimism was introduced as phase two of the project. Students were told that their weaknesses were not considered faults, and that each individual holds tremendous potential. The teacher cited her own weakness, which is poor memory control. She discussed techniques, such as keeping lists, which she uses to compensate for her poor memory. Each student was reassured that there are tools that can help him or her to compensate for every weakness.

Finally, again borrowing heavily from Levine's steps of demystification, an alliance was formed. During the alliance formation (Levine, 1995), students were reassured that they were not alone and that they would receive help from adults at school (e.g., teachers, volunteers). The teacher stressed the respect that she had for the student and for what the student could accomplish.

#### *Teaching about the mind*

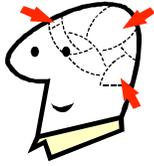
The third part of the project was a small group lesson about the mind and brain, based on the work of Levine (2002b), in order to improve students' self-awareness. This lesson was designed to help students develop an understanding that there are different parts of the mind that control different functions. This lesson was split into two 30-minute sessions. It began with a viewing of the first eight minutes of *The Mind That's Mine: Student Video* in which Levine uses the creatures of his own affinity, geese, to introduce the concept of different kinds of minds and provides information on how the brain works. The lesson continued with a summary of *The Mind That's Mine's* first topic which is *Thinking About Thinking*. Students came to realize that everyone has a different kind of mind and that there are strong parts and weak parts in every brain. This helped to reinforce the conversa-

tion we had had earlier with students regarding demystification, strengths, and roadblocks. Students were also taught that there are strategies that can be used to make our minds stronger and that our brains become stronger as we use them, just as our muscles become stronger when we exercise them.

#### *Learning to drive*

The third step in the process was to introduce the drivers training course. The teacher compared using a mind to driving a car. Students were told that, just as they must learn to drive a car, students must learn to use their mind to be successful in school. A poster with the similarities between driving a car and using one's mind was created, discussed, and posted (Figure 3).

**Figure 3. Mind = Car**



- When I start my car, I must know where I want to go.

When I use my mind, I must set a goal.

- When I drive I must know directions.

I use my mind to remind myself of directions. I can ask for help if I feel lost.

- I must think about my driving. I must think about my thinking.
- I must avoid distractions when I drive and when using my mind.
- I am responsible for what happens in my car and in my mind.
- I take care of my car and I take care of my mind.
- I drive my car every day. I give my mind exercise. I use my mind so that it will get stronger.
- I give my car gas so that it will have energy. I go to bed on time so that my mind will have energy.
- I use my trunk for storage. I use my mind to remember important information.
- I can monitor my performance when I drive my car and when I am using my mind.
- I must pay attention to roadblocks when I drive and my weaknesses when I use my mind.
- It is fun to drive a car and it is fun to use our minds. We can discover big surprises.

*The parts of a car.*

Once the comparison was made, the teacher introduced a simulated car to the student (see Figure 4). The teacher demonstrated writing a goal for the day on the wipe-off visor. Students were told to refer to the strengths and weakness worksheet when setting goals. The back of the visor held a mirror with an “I like me!” label under it (Figure 5). This label is designed to help students

value themselves as they become self-aware of both strengths and weaknesses. Next to the mirror, students tacked a sticky note, which contained previous goals. The previous goals were a reminder of progress made in a certain area and efforts that must continue in order to find even more successes.

**Figure 4.** Picture of simulated car



**Figure 5.** Picture of backside of visor



Students were also taught to use a timer to self-regulate. The teacher explained that since students were the drivers, it was their job to determine how long they would stay on task. Students were instructed to set the timer accordingly. They used the visor wipe-off board to keep track of their successes. Below their posted goals, students wrote brief descriptions of progress and pitfalls. (Based on the varying degrees of academic ability, differentiated instruction was used so that some students kept tally marks while others wrote brief sentences). Doing so helped students think through their actions and provided a simple means of communication since the teacher could easily read the comments as she circulated in the classroom.

Students were also given a choice of social skill guidelines that they could attach to the indicator gauges. A brad was used as a needle on one indicator gauge to help students with self-evaluation. If students felt that they were making big progress, they pushed the needle to the BP (big progress) indicator. However, if students felt that they were struggling, they set the needle to the LP (little progress) mark.

Finally, the steering wheel provided focus. Just as a driver must keep his mind on his driving, the steering wheel was a reminder to keep minds on work. Since the wheel was situated directly in front of the student, it was a place for students to place their classwork and to place hands when listening. Table 1 lists the car parts and how they were created.

**Table 1.** Assembly and Functions of the Desk-Based Car Model

***THE DESK-BASED CAR MODEL***

<b>Car Part</b>	<b>Assembly</b>	<b>Function</b>
Windshield	<p>Cut a piece of 1/8" Plexiglass® slightly smaller than student's desktop. Slightly round corners. Do not remove backing.</p> <p>Cut another piece of Plexiglass® 8"x5" for the visor and set aside.</p>	<p>Looking at windshield gives students a feeling that they are taking control and responsibility.</p>
Steering Wheel and Dashboard	<p>Using a compass, draw a large circle (approximately 9" diameter) in center of Plexiglass® on the backing.</p> <p>Using the same center, draw a larger circle with a diameter 2" greater.</p> <p>Scalloped the outside edge if desired.</p> <p>Draw a horizontal line which runs 3 1/2" parallel to the bottom of the Plexiglass® for the dashboard. Curve the ends of this line to the left and right bottom corners of the Plexiglass®.</p> <p>Using a single edge razor blade, cut on the lines outlining the steering wheel and dashboard.</p> <p>Remove the backing between the two circles to expose the steering wheel.</p> <p>Remove the backing of the dashboard.</p> <p>Spray the exposed areas with black spray paint made especially for plastic.</p>	<p>The steering wheel provides a focal point where students can place written work, reading materials, and hands during listening exercises.</p> <p>The dashboard provides a background for self-monitoring gauges.</p>
Visor	<p>Remove backing from the 8"x5" Plexiglass®.</p> <p>Attach a piece of self-stick dry erase paper to the top side of the visor.</p> <p>Attach to top left corner of car with colored duct tape.</p> <p>Flip up the visor to attach a small mirror and a positive affirmation.</p>	<p>Goals are written on the wipe-off section of the visor. Students can also communicate progress toward goals on the visor as well as the roadblocks they encounter. As new goals are written, previous goals are recorded on sticky notes and stuck to the inside of the visor.</p>

Car Part	Assembly	Function
Gauges	<p>Cut semi-circles from yellow or red paper. Write a BP on the lower left of one semi circle and LP on the lower right side of the same semi-circle. Push a brad through the paper between the BP and LP to serve as the indicator needle.</p> <p>Write key success strategies on the other semi-circle. Tape the gauges to the dashboard with removable tape.</p>	<p>One gauge serves as a self-monitoring gauge with a needle which students can use to measure their performance. Example: a self-monitoring gauge resembling a gas gauge but the needle indicates the levels of performance. BP represents big progress and LP represents little progress.</p> <p>Another gauge serves as a caution gauge. Key words on this gauge reinforce strategies to avoid roadblocks. Examples: take my time, concentrate on my own work, avoid distractions, put it in my memory, look for the big idea.</p>
Timer (fuel supply)	Attach small student-friendly timer to upper right corner of car with velcro or colored duct tape. Some timers may be digital, depending on student need.	Provides clear expectation for how long a student should allocate for any particular activity; helps teach time management and time-telling.

### *Driving rules*

Rules were established for the use of the simulated car:

- Hands are to be kept off the timer except when setting it.
- Writing should be on paper only.
- Glue sticks must be used carefully.
- The car should be kept clean and neat.
- The “simulated car” must be removed from the desk for painting or eating.

### *Driving terms*

Teachers and paraprofessionals agreed to use driving terms as often as possible. Statements such as, “Fasten your seatbelt” and “Keep your mind on the road” were used to remind students of appropriate behaviors. “Put it in your trunk” was a cue to store information in memory for future recall. Students were encouraged to pretend that they were in their car during transition times. An

example of this would be pretending to stay in the traffic lanes and not to bump others as students lined up for lunch.

### *Reinforcing appropriate behaviors*

Appropriate behaviors in the classroom were reinforced with good driver points to spend at the classroom store. The teachers stocked the store with miniature cars. Another reinforcer was praise. When using praise, teachers praised specific behaviors that support self-determination, rather than simply telling a student that he did a good job. Students were given time at the end of the day to report successes (sometimes orally and sometimes in writing) and to add to their strengths’ sheet. They also had the opportunity to write about their experiences and deposit them in the “drive-through box” on the teacher’s desk. In an effort to foster intrinsic

motivation, teachers questioned students on how they felt about their successes.

## Results

When introduced to the simulated cars, every participant demonstrated a motivation to learn about learning and driving. This motivation also held true for teachers and paraprofessionals. Everyone appeared eager to begin the project. Since all of the students had experience being driven around in cars, they readily adjusted to the concept of being a driver. They were familiar with vocabulary and driving terms, which made generalizing easy. For example, when they were told to buckle up, they immediately sat straight in the chair with their feet on the floor. Another example was forming a line for lunch. They knew what “staying in their lane” meant and enjoyed steering themselves in the right direction. Some even came up with even more ways to expand the driving references on their own; they pretended that their work was a map and that their lunch tickets were driver’s licenses! On the occasions when the simulated car was removed from the desk for messy projects, students were eager to set up the car once their messy project was completed.

One difficulty arose with a student who had difficulty keeping his hands off the timer. This particular student (who was identified with an emotional and behavioral disturbance) was known to have attentional issues and was frequently out of his seat. Toward the beginning of the project, he played with the timer to make it ring early or frequently. The teacher and paraprofessional used positive reinforcement, in addition to discussing this with the student as one of the “challenges or roadblocks” his mind was giving him, to help him learn to change his behavior. After a week of frequent reinforcement, the overall

benefit for this student can be summed up in an exclamation he made when the teacher surveyed the class for tables that were ready and quiet. The teacher said that the only person ready and quiet at Table 3 was Jamie. Jamie exclaimed with a beaming smile, “Hey, that never happened before!”

An unexpected positive result was the increased interest of parents. When the parents received the permission letter describing this project, communication between teachers and parents increased. Parents who had previously never called or visited the school (unless it was a scheduled meeting or Back to School night) initiated contact with the teacher to discuss the project and to describe the positive comments made by their children at home. The parent who read *The Myth of Laziness* (Levine, 2003) (after it was recommended to her by the teacher) reported a better understanding of her child. The teacher stressed to parents that, while this project might not be an answer to all of their children’s problems in school, it was certainly an excellent way to create self-awareness and begin teaching self-determination skills – skills that will be of great necessity as students continue in their academic careers.

## Discussion

In this project, an attempt was made to teach self-determination skills to first grade students with attention control deficits. The project was based on the need to teach self-determination at an early age as described in the literature and the needs of students, as well as teachers in one particular elementary school. Modifications were made to existing self-determination models so that young students would comprehend the importance of self-determination and become active, engaged participants. Preliminary informal results indicate overall positive results for stu-

dents, paraprofessionals, teachers and parents. Students developed a better understanding of themselves. They gained the ability to “put borders around their deficits and come to recognize that, like everyone else, they have strengths and weaknesses” (Levine, 2002b, p.283). They began to think about thinking and develop strategies to improve their weaknesses.

There are many possible uses for this type of project. For example, students with reading problems could use the visor to record important vocabulary words. (An example of how to modify the car for struggling readers is provided in Figures 6 and 7). Other students could use the visor to set goals for themselves. Specific contracts can be set up with individual students for academic or behavioral needs. Self-monitoring can be increased through the use of the timer and tracking sheet.

Second grade teachers (as well as other elementary faculty) must also be trained to use this model. Participants may graduate from the simulated car, but will continue to need support in setting goals, developing self-awareness and developing strategies for success. An attitude of optimism must be conveyed to students and they must know that educators are on their side. Weaknesses

should be hailed as simply part of life and as an opportunity to work on compensatory strategies, rather than behaviors to label.

The positive outcomes of this project supported teaching self-determination skills in early elementary school. However, first grade is only the beginning. Students must be taught to generalize. They should be encouraged to take an imaginary car with them as they drive the road to success. They need to learn to navigate using their strengths to avoid possible roadblocks. In doing so, not only will they succeed in elementary school, they will be more likely to find success in adulthood.

**Figure 6.** Comprehension Car for Struggling Readers

The Comprehension Car can be used by students as young as first grade and as old as seventh grade. The car serves as a reminder of reading strategies that can be used to further comprehension and as a means to help students who have difficulty monitoring and focusing on their reading goals.

### Using the Comprehension Car



1. Students receive drivers training in which they read and discuss the driver's manual.
2. Students record their reading goal (e.g., find the main idea, sequence of events, or cause-effect relationships) on the wipe-off visor.
3. Students preview text to determine unfamiliar vocabulary words. Students record these words on small cards and choose a strategy listed on the card (e.g., context clues, glossary, dictionary, teacher explanations or using word parts). Students then choose the strategy and circle the strategy on the card. Once students discover the meaning of the word, they record it on the card and store cards in the vocabulary trunk.
4. Students set timer to correspond with their goals for maintaining focus on the text.
5. Students use the summarization sensor as a reminder to stop and summarize what they have read. If they cannot summarize, they must use the imaginary rearview mirror (a look-back) in order to clarify what they have read.
6. Students record cause/effect relationships on T-chart work-sheet at the end of the reading "drive".
7. Students can use the drive-through box to ask questions for clarification. Other uses of the drive-through box might include communicating how the student relates to the text and the progress or frustration that the student encountered in the reading process.

**Figure 7.** Rules for the Comprehension Car

## *Good Readers Are Like Good Drivers*



### **Sponsored by the Comprehension Car Company**

- Good drivers think about their driving. Good readers think about their reading.
- Good drivers know where they are going. Good readers set a purpose for reading.
- Good drivers avoid distractions. Good readers avoid distractions.
- Good drivers are in charge of their driving. Good readers take charge of their reading.
- Good drivers act responsibly while driving. Good readers act responsibly while reading.
- Drivers get better with experience. Readers get better with practice.
- A good driver keeps the car well oiled and lubed. A good reader gets plenty of sleep and has proper nutrition to stay alert.
- Drivers use the trunk for storage. Good readers use a vocabulary trunk and memory to store important information.
- Drivers pay close attention to gauges in order to monitor performance. Good readers use summarization sensors, cause/effect gauges, and sequencing navigation systems to monitor reading.
- Good drivers watch for roadblocks and find a way around them. Good readers develop strategies to get past roadblocks when trying to understand what they are reading.
- Good drivers use rearview mirrors to look back. Good readers use look-backs to clarify and understand text.
- It is fun to drive and it is fun to read. We can discover wonderful things!

## References

Field, S., Martin, J., Miller, R., Ward, M., & Wehmeyer, M. (1998). *A Practical Guide for Teaching Self-Determination*. Arlington, VA: Council for Exceptional Children.

Levine, M. (1995). *The Concentration Cockpit*. Cambridge, MA: Educators Publishing Service.

Levine, M. (2002a). *A Mind at a Time*. New York, NY: Simon and Schuster.

Levine, M. (2002b). *Educational Care* (2<sup>nd</sup> ed.). Cambridge, MA: Educators Publishing Service.

Levine, M. (2003). *The Myth of Laziness*. New York, NY: Simon and Schuster.

Levine, M., Swartz, C.W., & Wakely, M.B. (1997). *The mind that's mine: A program to help young learners learn about learning*. Chapel Hill, NC: All Kinds of Minds.

Palmer, S.B., & Wehmeyer, M.L. (2003). Promoting self-determination in early elementary school. *Remedial & Special Education, 24*(2), 115-126.

Walsh, P. (2000). A hands-on approach to understanding the brain. *Educational Leadership, 58*(3), 76-78.

Wehmeyer, M. L. (1999). A functional model of self-determination: Implementing instruction. *Focus on Autism and Other Developmental Disabilities, 14*(1), 53-61.