

## SIX STEPS IN USING THE M.O.V.E. CURRICULUM

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In this article the MOVE curriculum will be summarized in sufficient detail to enable the reader who may be unfamiliar with it to gain a working understanding of the program. All information in this section, unless specifically referenced to another source, is derived from the curriculum itself, with permission.

### Definitions

It will be helpful initially to define some terms as they are used in the curriculum.

**Activity Based** – practicing and using a series of skills while performing an activity.

**Developmental Model** – a model based on learning motor skills in the same sequence as children without disabilities.

**Functional Sitting** – leaning slightly forward from the hips while sitting. This position is used for activities such as eating, working at a desk, speaking, and toileting.

**Leisure Sitting** – allowing the trunk to lean against the backrest of the chair while sitting. This position is used while receiving information or while resting.

**Prompts** – physical assistance given to the student. Prompts can be provided by another person or by a mechanical device and are designed to help a student perform a task while learning new skills.

**Rate of Learning** – the number of trials or practice sessions it takes for a person to learn new material.

**Top-Down** – a model based on defining skills necessary for adult functioning and directly teaching these skills without necessarily following the sequence of skill acquisition demonstrated by children without disabilities.

There are six steps in the MOVE program, as listed to the right. Following these steps provides a systematic approach to deciding which skills are most important to practice, teaching the skills consistently, and keeping a record of progress. Each of these steps is discussed below. There are more exact instructions given in the MOVE curriculum itself for performing these six steps.

Prior to beginning the first step, it is essential to create the team that will be responsible for implementing the MOVE program with the child. At the very least the team

should include the student, a parent, the classroom teacher, and the child's physical or occupational therapist. The teaming of education and therapy is a very important part of making the MOVE program work. Great value is placed on input from the parents or caregivers, especially in choosing goals for the child. To avoid placing an additional burden on the home situation, parents are not pressured to do the actual teaching of motor skills at home unless they wish to.

### **Step 1 - Testing**

The first step of the program, *Testing*, uses the Top-Down Motor Milestone Test (TDMMT), which is described in the curriculum. The name of this test emphasizes that it is not a developmental test, but rather an assessment of the basic motor skills that are needed to function in school, home, community and vocational environments. Essentially this test is a measure of the current functional ability of the child across sixteen different movement skills. Within each skill there are several levels ranging from totally dependent to independent function. The current abilities of the child are assessed based on information from the parent or teacher, or from directly observing the child attempting to perform the movement skill. Beginning implementation of the MOVE program with such functional testing enables a baseline to be established to which future performance can be compared. The sixteen movement skill areas assessed are:

- |   |   |
|---|---|
| A. Maintains a sitting position         | I. Transitions from walking to standing |
| B. Moves while sitting                  | J. Walks backward                       |
| C. Stands                               | K. Turns while walking                  |
| D. Transitions from sitting to standing | L. Walks up steps                       |
| E. Transitions from standing to sitting | M. Walks down steps                     |
| F. Pivots while standing                | N. Walks on uneven ground               |
| G. Walks forward                        | O. Walks up slopes                      |
| H. Transitions from standing to walking | P. Walks down slopes                    |

These simple divisions of sitting, standing, walking, and transitional movements are crucial components of many different functional activities. These sixteen divisions are used in subsequent steps of the MOVE program as well. See figure 1 [next page] for an illustration of the summary of test results from the curriculum.

### **Step 2 – Setting Goals**

The second step is *Setting Goals*, and it is described as the most important step in the MOVE program. Selection of appropriate goals guides everything else that we do. It

## *The Six Steps of MOVE*

1. *Testing*
2. *Setting Goals*
3. *Task Analysis*
4. *Measuring Prompts*
5. *Reducing Prompts*
6. *Teaching the Skills*



**SUMMARY OF TEST RESULTS**

NAME \_\_\_\_\_  
 DATE \_\_\_\_\_

1. Fill in squares representing the current skill levels.  
 2. Fill in all squares to the right of the current skill levels.  
 3. Circle skills to be addressed next.

	GRAD LEVEL		LEVEL I				LEVEL II				LEVEL III		
A. MAINTAINS A SITTING POSITION	A.1		A.2	A.3		A.4	A.5	A.6		A.7			
B. MOVES WHILE SITTING	B.1	B.2	B.3	B.4	B.5	B.6	B.7	B.8	B.9	<i>B.10</i>	B.11	<i>A.7</i>	
C. STANDS	C.1		C.2				C.3	C.4			C.5	C.6	
D. TRANSITIONS FROM SITTING TO STANDING	D.1	D.2	D.3	D.4			D.5	D.6			<i>C.5</i>	<i>C.6</i>	<i>A.7</i>
E. TRANSITIONS FROM STANDING TO SITTING	E.1	E.2	E.3	E.4			E.5	E.6			<i>C.5</i>	<i>C.6</i>	<i>A.7</i>
F. PIVOTS WHILE STANDING	F.1		F.2				F.3				<i>C.5</i>	<i>C.6</i>	
G. WALKS FORWARD	G.1	G.2	G.3				G.4	G.5			G.6	<i>C.5</i>	<i>C.6</i>
H. TRANSITIONS FROM STANDING TO WALKING	H.1		H.2				H.3				<i>G.6</i>	<i>C.5</i>	<i>C.6</i>
I. TRANSITIONS FROM WALKING TO STANDING	I.1		I.2				I.3				<i>G.6</i>	<i>C.5</i>	<i>C.6</i>
J. WALKS BACKWARD	J.1		J.2				J.3				J.4	<i>C.5</i>	<i>C.6</i>
K. TURNS WHILE WALKING	K.1	K.2	K.3	K.4			<i>F.3</i>				<i>C.5</i>	<i>C.6</i>	
L. WALKS UP STEPS	L.1		L.2				L.3	<i>G.4</i>	<i>C.3</i>				
M. WALKS DOWN STEPS	M.1		M.2				M.3	<i>G.4</i>	<i>C.3</i>				
N. WALKS ON UNEVEN GROUND	N.1		N.2				N.3	<i>G.4</i>	<i>C.3</i>				
O. WALKS UP SLOPES	O.1		O.2				O.3	<i>G.4</i>	<i>C.3</i>				
P. WALKS DOWN SLOPES	P.1		P.2				P.3	<i>G.4</i>	<i>C.3</i>				

PREREQUISITE SKILLS FROM OTHER SECTIONS ARE INDICATED BY ITALICIZED LETTERS AND NUMBERS

**Figure 1.** Summary of Test Results. (Reprinted with permission from the MOVE (Mobility Opportunities Via Education) Curriculum, copyright 1990, 1999 Kern County Superintendent of Schools, licensed to MOVE International, pg. 77.)

is emphasized in the MOVE curriculum that historically our expectations and goals for children with severe disabilities have been too low. This has the effect of severely limiting which behaviors we encourage children to try. There is a strong emphasis in the MOVE curriculum on choosing goals based on what the child wants and needs to do, and on the family's wishes, rather than on developmental level. Selecting functional goals that have usefulness and value to the student right away, as well as in adulthood, ensures motivation on the part of the student and caregivers. Linda Bidabe, the founding author of MOVE, compares goal setting to the process of baking a cake. We don't randomly add ingredients together and hope to produce something delicious, but rather we start with an idea of what the finished cake should be like and determine what ingredients we need.

In the same way we should ask, "What will this child need to do, in order to function as an adult?" Our answer for a school-aged child who is currently non-ambulatory and dependent for transfers and feeding might be, "This child will need to bear weight on his feet reliably for short periods to make transfers and toileting easier, will need to maintain a sitting position on a regular chair for up to half an hour without support, and will need to have some functional use of at least one upper extremity." It is easy to see how attaining these goals will improve the chances of this student living in a less restrictive environment, having access to community services and becoming employed as an adult. In this case the goals would be described by the desired activity, "Jonathan will transfer from his wheelchair to a regular classroom chair with both hands held, sit for 30 minutes at the table with his peers, and feed himself with minimal assistance."

This process of goal setting is similar to that described by Rainforth and York-Barr in their description of ecological curriculum “...many educational teams now start their planning by envisioning a desirable future for the student with disabilities and then focusing on ways to achieve or approximate the vision as they design the educational program.” (Rainforth & York-Barr, 1997, p. 95) Note that goals in the MOVE program are expressed as activities, not simply “walking” or “sitting independently,” but sitting independently *for what functional activity?* If the child is able to express his or her desires, these are used for developing goals; otherwise the parents are asked what they would like the child to be able to do. Using goals based on child and family desires is consistent with current family-centered practices: “The focus of intervention practices is based on family-identified desires, priorities and needs.” (Rainforth & York-Barr, 1997, p. 81)

The MOVE curriculum describes four “levels of success” for each of the motor skill areas. These levels are defined in such a way that mastering the skills to move to the next level will dramatically improve the quality of life for the student. These four levels are:

- **Grad Level** – Completion of the skills at this level means that the child has achieved independent mobility in the home, and only requires minimal assistance in the community. These students no longer require a wheelchair and can now expand their motor skills.
- **Level I** – Completion of these skills ensures that caregivers will not need to lift the individual, and that the student is able to walk with both hands held or with a walker for at least 300 feet. A wheelchair will only be needed for long distances.
- **Level II** – Completion of the skills at this level means that the student will be able to walk at least 10 feet with help to maintain balance and shift weight. Lifting by the caregivers will be minimal. A wheelchair will be needed for distances over 10 feet.
- **Level III** – Completion of these skills should improve bone health, decrease the likelihood of deformities, and improve the functioning of internal organs by promoting upright positioning.

These four levels of success are based specifically on functional skills in each of the sixteen motor skill areas that the student needs to practice and achieve in order to complete one level.

### Step 3 – Task Analysis

The third step of MOVE is the *Task Analysis*. This consists of breaking down the functional goal into the basic movements needed to accomplish it. The example of a goal given in the section above consists of the following movement skill areas:

Transitions from sitting to standing (D)  
Stands (C)  
Pivots while standing (F)  
Transitions from standing to sitting (E)  
Moves while sitting (B)  
Maintains a sitting position (A)  
and then a repeat of B, D, C, F, and E.

Using this information, we can see which movement skills Jonathan will need to practice in order to accomplish his goal. From the TDMMT we know Jonathan's current functional abilities in these 6 areas, and we can see which areas are limiting him the most. Task analysis is not difficult, and it soon becomes a way of thinking that can help us to decide which movement skills need the most practice.

#### Step 4 – Measuring Prompts

*Measuring Prompts* is the fourth step. Remember that in the MOVE program prompts are defined as physical support or assistance (provided by a person or by equipment). The curriculum outlines ways to measure the amount of support a child needs right now to perform a movement task. For example, Jonathan currently needs prompts at the pelvis, knees, feet, lateral and anterior trunk, to maintain a sitting position. The MOVE curriculum provides detailed measures for prompts for sitting, standing, and

**M.O.V.E. PROMPT REDUCTION PLAN**

NAME \_\_\_\_\_ GOALS AND PARAMETERS \_\_\_\_\_  
 BEGINNING DATE \_\_\_\_\_  
 ENDING DATE \_\_\_\_\_

**STANDING OR WALKING**

	ENTRY LEVEL Date _____	ACHIEVED Date _____	ACHIEVED Date _____	ACHIEVED Date _____	TARGET GOAL Date _____
	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5	0 1 2 3 4 5
A. TOP DOWN					
B. CENTER OUT TRUNK					
C. BODY SEGMENT					
D. AMOUNT OF PROMPT					
E. TYPE OF PROMPT					
F. PROMPT POSITION					

**A. TOP DOWN PROMPTS**   **B. CENTER OUT PROMPTS**   **C. BODY SEGMENT CONTROL**   **D. AMOUNT OF PROMPT**   **E. TYPE OF PROMPT**   **F. PROMPT POSITION**

**TOTAL BODY** 5  
**SHOULDER** 4  
**TRUNK** 3  
**HIPS** 2  
**LEGS** 1

**5 - SHOULDER OR TRUNK**  
**4 - UPPER ARM**  
**3 - ELBOW**  
**2 - FOREARM**  
**1 - HAND**

**1** GUIDANCE   **2** BALANCE   **3** SUPPORT   **4** FLEXIBLE PROMPT (CLOTHES OR STRAP)   **5** ANOTHER PERSON'S HAND   **6** MECHANICAL PROMPT (SOLEID)

**1** BESIDE   **2** IN FRONT   **3** BEHIND

walking. Prompt location, amount of support, and the type of prompt are recorded. [figure 2] The use of physical prompts allows a child to practice a skill even when he or she does not yet have enough postural control to maintain the position independently. This is very necessary in order for children with severe disabilities to learn motor skills, because if practice is postponed until adequate postural control “develops,” they may never get the opportunity to practice the skill!

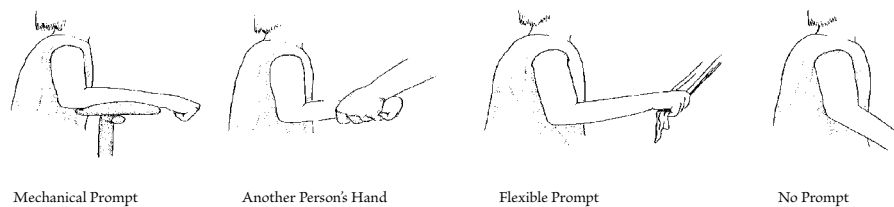
**Figure 2.** Prompt Reduction Plan for Standing or Walking. This shows how a specific plan may be developed for reducing support and assistance as a child gains skill.

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In the curriculum there is a clear distinction made between prompts that substitute for a function that the child lacks (such as an anterior trunk harness for a child who lacks active trunk control), and educational prompts that are used to teach a skill. Prompts in the MOVE program are designated as educational prompts. Their purpose is to help in teaching skills and they are seen as temporary supports that will eventually be reduced and removed to the greatest extent possible. This is a unique and powerful conceptual approach.

### Step 5 – Reducing Prompts

The fifth step follows closely, and is called *Reducing Prompts*. Since the goal of the program is to teach skills, and not merely to substitute for skills that the student lacks, a systematic method for reducing the amount of support is provided. A clear plan



**Figure 3.** Prompt Reduction. The type of prompt can be changed to systematically reduce the amount of support provided.

is outlined for each child showing how the amount of support will be reduced as the child gains strength, control, and independence. This is recorded in the “Prompt Reduction Plan.” This plan for reducing support gives an optimistic formula for functional gains, and allows a clear documentation

of progress for each child. Note that this step is a powerful means to promote progress. Omitting it would lead to a static repetition of the same activity with the same amount of support. In motor control terminology, when support is reduced, the task context is changed and additional learning must take place.

Prompts can be reduced by several methods. A support may be adjusted so that the child has a greater range of motion available. In this way a prompt is “faded” as a child gains more independent muscular control over part of her body. A prompt can also be reduced by changing the type of prompt from a rigid support to something more flexible (like another person’s hand or a cloth strap). [figure 3] And, finally, a prompt can be removed altogether when it is no longer needed. It cannot be emphasized enough that there must be a specific plan for reducing the amount of support for each activity. In this way progress can be maximized.

### Step 6 – Teaching The Skills

The sixth and final step, *Teaching The Skills*, is one of the most important, for obvious reasons. One key for teaching skills is giving frequent opportunities for the child to practice, but direct training is also needed. Bidabe states, “Our students with severe physical disabilities have repeatedly proven to us that they cannot acquire motoric skills without systematic instruction.” (Bidabe, 1999, p. 14) The curriculum has many

practical strategies and suggestions for teaching each level of the sixteen movement skills described above. Whenever possible the skills should be taught in the context of a meaningful activity, rather than simply repeating a movement. For example, if a child is expected to maintain a sitting position and hold his head up, there should be a *reason* for him to hold his head up, such as something interesting to see.

One point in particular needs to be mentioned. MOVE requires teamwork, and the training in functional motor skills should ideally be done by all members of the education / therapy team in order to expand practice opportunities for the child. As therapists we sometimes have the tendency to hold onto our own “turf” and to avoid sharing information and skills with others. For children with severe disabilities this is a matter of critical importance that to a large extent will determine whether they learn the skills or not. Typically developing children practice motor skills all day long. If we limit children with severe disabilities to practicing their skills only during formal therapy sessions, it is hardly surprising if they make little progress. As therapists we need to help by sharing our knowledge with other team members, and to help them use safe and appropriate techniques in teaching motor skills. The concept of “role release” is discussed at length by Rainforth and York-Barr (1997) and they rightly emphasize the need for therapists to remain closely involved after delegating interventions to other team members.

## REFERENCES

- Barnes SB, Whinnery KW. Mobility opportunities via education (MOVE): Theoretical foundations. *Physical Disabilities*. 1997;16(1):33-46.
- Barnes SB. *The MOVE Curriculum: An Application of Contemporary Theories of Physical Therapy and Education*. [dissertation] Pensacola, FL: University of West Florida; 1999.
- Bidabe L. *MOVE: Mobility Opportunities Via Education*. Bakersfield, CA: Kern County Superintendent of Schools; 1999.
- Bradney M, Pearce G, Naughton G, et al. Moderate exercise during growth in prepubertal boys: changes in bone mass, size, volumetric density, and bone strength: a controlled prospective study. *J Bone Miner Res*. 1998;13(12):1814-1821.
- Campbell PH. Evaluation and assessment in early intervention for infants and toddlers. *Journal of Early Intervention*. 1991;15:36-45.
- Carr JH, Shepherd RB. A Motor Learning Model for Rehabilitation. In: Carr JH, Shepherd RB, eds. *Movement Science: Foundations for Physical Therapy in Rehabilitation*. Maryland: Aspen Press; 1987:31-91.
- Carr JH, Shepherd RB. *Neurological Rehabilitation: Optimizing Motor Performance*. Oxford: Butterworth-Heinemann; 1998.
- Elkins KM. *A Comparison Between the Achievements of Students with Severe Multiple Disabilities Using a Functional Mobility Curriculum versus Traditional Programs*. [dissertation] La Verne, CA: University of La Verne; 1994.
- Gentile AM. Skill Acquisition. In: Carr JH, Shepherd RB, eds. *Movement Science: Foundations for Physical Therapy in Rehabilitation*. Maryland: Aspen Press; 1987:93-154.
- Horak F. Assumptions underlying motor control for neurologic rehabilitation. In: Foundation for Physical Therapy. *Contemporary Management of Motor Control Problems, Proceedings of the II STEP Conference*. Alexandria, VA: Foundation for Physical Therapy; 1991:11-27.
- Liepert J, Bauder H, Wolfgang HR, Miltner WH, Taub E, Weiller C. Treatment-induced cortical reorganization after stroke in humans. *Stroke*. 2000;31(6):1210-1216.
- Montgomery PC. Organizing Treatment Sessions and Establishing Behavioral Objectives. In: Connolly BH, Montgomery PC, eds. *Therapeutic Exercise in Developmental Disabilities*. 2<sup>nd</sup> ed. Hixson, TN: Chattanooga Group Inc; 1993:35-50.
- Olney SJ, Wright MJ. Cerebral Palsy. In: Campbell SK, ed. *Physical Therapy for Children*. Philadelphia, PA: WB Saunders Co; 1994:489-523.
- Rainforth B, York-Barr J. *Collaborative Teams for Students with Severe Disabilities*. 2<sup>nd</sup> ed. Baltimore, MD: Paul H. Brooks Publishing Co; 1997.
- Shumway-Cook A, Woollacott M. *Motor Control: Theory and Practical Applications*. Baltimore, MD: Lippincott, Williams & Wilkins; 1995.
- Taub E, Uswatte G, Pidikiti R. Constraint-induced movement therapy: a new family of techniques with broad application to physical rehabilitation – a clinical review. *J Rehabil Res Dev*. 1999;36(3):237-251.
- Taub E. Constraint-induced movement therapy and massed practice. *Stroke*. 2000;31(4):986-988.
- Taub E, Ramey SL, DeLuca S, Echols K. Efficacy of constraint-induced movement therapy for children with cerebral palsy with asymmetric motor impairment. *Pediatrics*. 2004;113(2):305-312.

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Thomson G. *Children with Severe Disabilities and the MOVE Curriculum: Foundations of a Task-oriented Approach*. Chester, NY: East River Press; 2005.