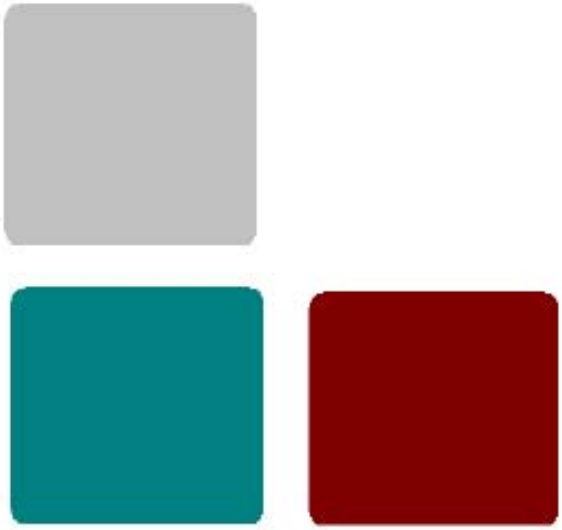

SPECIJALNA EDUKACIJA I REHABILITACIJA – NAUKA I/ILI PRAKSA

- TEMATSKI ZBORNIK RADOVA –

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SPECIJALNA EDUKACIJA I REHABILITACIJA – NAUKA I/ILI PRAKSA

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Sadržaj:

IMPROVING QUALITY OF LIFE THROUGH THE *MOVE* PROGRAM

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SUMMARY

The main goal of the MOVE program is to change the lives of people with disabilities, working against the physical and other barriers that affect disabled persons. Its task is to promote full participation in the home, school, work and society and to encourage them and promote independence and dignity which are included and result of the participation. Basic principles and approaches to learning are based on therapeutic modalities combined with the development model shaped through six consecutive steps. The need for development of this type of program arises from the negative experience in the U.S.A., where non-mobile students in the school system ended up with several more abilities than when they started. The MOVE program gives children more opportunities and choices to learn what is important and should overcome for the period of adult life and mature age. The purpose of this article is to provide a review of that how the MOVE program affects on improving the quality of life of persons with disabilities and limited mobility, regardless of their age, more detail presenting specific case report in which MOVE program has already been applied. Taking into account the short time limit of application of the MOVE program, we reach the realization of 4 out of 6 steps, and we wanted to present the how important is who sets the goal. The goal much faster and easier will be reached if is personal motivation of the participant. Application of the MOVE program helps people with impaired mobility capabilities easier to realize their ambitions.

Key words: MOVE, assessment devices, personal goals, mobility, skills

HISTORY OF THE MOVE PROGRAM

MOVE program for the first time appeared more than 30 years in the U.S.A, thanks to Linda Bidab. The objective of this program is to improve the overall quality of life for people with complex disabilities, their families and professionals who care for them.

In the early 1980s, Linda Bidab, special educator, was frustrated by the lack of progress in many of her students with severe multiple disabilities. Education, therapy, theory and practice at that time promoted programs based on individual deficits, but progress in this type of programming has been poor. As a result, students often at the end of the educational process had not developed the basic skills needed for life outside of school.

In response to these deficits, after the conducted analysis of the previous way of working, Linda comes to the conclusion that most of the time lost during the transfer of pupils from one to another place and maintain the basic cultural and hygienic habits, then Bidab suggests pilot program that will teach students to be upright and mobile in order to participate fully in life activities. In the new program, rather than physiotherapists to take a student in a special room to develop posture and balance for preparing it for going, all involved in work with students were encouraged to work together in order to teach walking skills during the day through routine activities. In 1986, eleven students participated in seven weekly pilot study in which educators and therapists working together to achieve a common goal. Incredible success of students in the pilot study led to a request for this program in other classrooms in the county. As the achievements of students spread, Linda was encouraged to write the MOVE curriculum. Today MOVE is spreading throughout the United States, translated into 11 languages and is used in at least 26 countries.

It is designed to meet the needs of children, young people and adults who have developed or are working on restoring the physical skills necessary to sit, to support the weight of their feet or making alternate steps, as

like as to enable them to participate fully in life by increasing their functional mobility skills in sitting, standing, walking, and transfer.

MOVE program is also designed for individuals who have developed basic motor skills, but who need to develop other skills such as expressive speech, self-care and working opportunities. It is not a cure, but provides an opportunity for progress and for its application no one is too old to learn, or too disabled by physical or psychological reasons. But not too utopical, so there are some conditions that affect its application: fragility bones or severe orthopedic problems. Precisely for those reasons it is necessary in the team to be involved and physiotherapist, who will monitor every step of the program.

CONCEPT OF THE MOVE PROGRAM

The term MOVE is an acronym where each letter has a precise meaning:
- M = (Movement) - Movement as a basis for learning;
- O = (opportunities) - all children can learn if they are given the opportunity and
- VE = (Via Education) - through Education.

MOVE program is conducted by a team composed of those experts who know the individual best.

They are experts in education and therapy that are prepared to work as part of the team, which know the needs of the persons in all areas- academic, communicative, social, mobile and so on.

MOVE team includes:
- Disabled person and his family;
- Teachers;
- The therapeutics and the other medical staff which is involved in the rehabilitation of the disabled person;
- Support staff and
- Peers.

MOVE program can be effectively used in mainstream and special schools, units connected in different situations, because they are advocating that individuals should be able to use their skills in a different context, as well as individuals who do not have disabilities. It is important to create a multitude of opportunities that persons will use and develop the physical skills to achieve the set requirements.

Application of the MOVE program states guidance according to two models of development:
- Model **bottom - up:** based on the study of motor skills in the same order as in children who do not have physical disabilities and
- Model **top - down:** based on defining the specific activity or ultimate goal, which is significant or important to the child or his family, directly study of the skills needed to achieve that goal.

Often in the therapies at first are learned those skills that the student has failed, from the list of skills that acquire infants and small children. Therefore, students learn skills that are not important and related to everyday needs, which lead to the conclusion that there is not always an important area of further development.
- Everyone should ask themselves "**How often do adults crawl?**"
- If the answer is "**not very often,**" you should ask ourselves whether this skill is a priority or not.

Many can often take years to teach a child with profound intellectual disabilities to roll or crawl. (Children without difficulty 600-1200 repetitions are needed and children with developmental problems and difficulties in learning are needed even to 2000 repetitions).

STEPS IN THE REALIZATION OF THE MOVE PROGRAM

MOVE program is implemented through six steps:

1. Assessment (assessment interview with the child and main carer);
2. Setting goals (selection of specific functional activities important for the child);
3. Analysis of tasks (selection of necessary skills required to carry out activities);
4. Measurement of assistive technology devices (exhaustion of assistance necessary to participate in the activity);
5. Reduction aids (preparation of a plan to systematically reduce aid over time) and
6. Developing skills (including the study of each skill, in the daily activities of the child).

Parallel with the steps explanation, the same one will be followed through our case report[20].

1. Assessment

An evaluation of 16 categories of activities is made, motor reference indicators, which are considered crucial in performing daily living activities. Although these motor skills are a continuum, however, are divided into four levels of success, while not every child can reach the highest level, but little progress in relation to the next level, greatly changing the lives of the child and people around him. The assessment is made by direction "from top to bottom" and from the hardest level and has following motor skills:

A) Maintaining the sitting position;
B) Movement during the sitting;
C) Standing;
D) Transition from sitting to standing position;
E) Turning during Standing;
F) Going forward;
G) Transition from a standing position in walking;
H) Transition from walking to standing position;
I) Walking backwards;
J) Turning during the movement;
K) Climbing stairs;
L) Descent the stairs;
M)Walking on uneven surface;
N) Walking on rising;
O) Walking on downhill.

Table 1. Assessment in the case M.S

Top-down motor milestone assessment																		
Name and Surname								M. S										
Start date								15.07.2009										
1. Fill in squares representing current skills levels																		
2. Fill in all squares to the right of current skills level																		
3. Once step 3 is completed circle the sills to be addressed																		
																Level I		
												Level II						
						Level III												
	Graduate level																	
A. Maintains sitting position	A 1					A 2	**A 3**			**A 4**	**A 5**	**A 6**		**A7**				

[20] *M.S was born on 07.03.2002 year, as a first and only child in the family. She was preterm born, and after the birth she showed symptoms of asfiction, and in the early developmental period she got the diagnosis Paralysis Cerebrals. Current situation distinguishes with that that M.S is not mobile by herself is fully dependent by the other person, the speech is understandable, and for eating and providing the basic hygienic habits she needs help.*

B. Moves while sitting	B 1	B 2			B 3	B 4	B 5	B 6	**B 7**	**B 8**	**B 9**	**B 10**	**B1 1**	**A7**	
C. Sands	C 1				C 2				C 3	C 4			C5	**C6**	
D. Transition from sitting to standing	D 1	D 2			D 3	D 4			D 5	D 6			C5	C6	A7
E. Transition from standing to sitting	E 1	E 2			E 3	E 4			E 5	E 6			C5	C6	A7
F. Pivots while standing	F 1				F 2				F 3				C5	C6	
G. Walks forward	G 1	G 2			G 3				G 4				G6	C5	C6
H. Transition from standing to walking	H 1				H 2				H 3	G 5			G6	C5	C6
I. Transition from walking to standing	I1				I2				I3				G6	C5	C6
J. Walks backwards	J1				J2				J3				J4	C5	C6
K. Turns while walking	K 1	K 2			K 3	K 4			K 3				C5	C6	
L. Walks up steps	L 1				L 2					G 5	C 3				
M. Walks down steps	M 1				M 2					G 5	C 3				
N. Walks on uneven ground	N 1				N 2				N 3	G 5	C 3				
O. Walks up slopes	O 1				O 2				O 3	G 5	C 3				
P. Walks down slopes	P 1				P 2				P 3	G 5	C 3				

Table 2. Assessments in sitting position

Top-down motor milestone assessment			A	
Maintaining sitting position				
	Graduate level	Level I	Level II	Level III
A1. Can sit on a flat surface such as a bed or in a bath for a minimum of 30 minutes without prompts	☐ date			
A.2 Can sit on the edge of the bed or on a stool without using a foot or a beck rest for a minimum five minutes		☐ date		
A.3 Can sit on conventional classroom chair at least 30 minutes without rompts		☐ date		
A.4 Can maintain sitting balance on a conventional classroom chair for a mininum of 30 seconds without prompts			☐ date	
A.5 Can maintain an erect head position for a minimum od 30 second while sitting with prompts at the trunk, hips, and feet as needed			☐ date	

A.6 Can tolerate sitting in an upright position for a minimum of 30 minutes with prompts at the trunk, hips, and feet, as needed			☐ date	
A.7 Can tolerate being placed in a sitting position with a minimum of 90 degrees flexion in the hips and knees				☐ date

Table 3. Assessment of the movements during sitting

Top-down motor milestone assessment Movement while sitting	Graduate level	Level I	B Level II	Level I
B1. Can pivot entire body a minimum of 90 degrees while sitting in a bath or on a flat surface such as bed	☐ date			
B.2 Can pivot entire body a minimum of 90 degrees while sitting on a conventional classroom chair	☐ date			
B.3 Can pivot legs a minimum of 90 degrees while sitting when arms are rotated to the left or right		☐ date		
B.4 Can push self to a sitting position form a reclining position on a flat surface such as a bed or floor		☐ date		
B.5 Can keep trunk in a alignment when legs are pivoted a minimum of 90 degrees to the left or right while sitting		☐ date		
B.6 Can realign trunk to an erect position after leaning forward, to the left and to the right a minimum of 45 degrees		☐ date		
B.7 Can realign trunk to an erect position after leaning forward, to the left and to the right a minimum of 20 degrees			☐ date	
B.8 Can raise head to an erect position when head is tilted back while sitting with upper trunk support			☐ date	
B.9 Can bring head to an erect, midline position when head is turned to the left or right while sitting with upper trunk support			☐ date	
B.10 Can raise head to an erect position from a chin to chest position while sitting with upper trunk support			☐ date	
B.11 Can tolerate movement of head and limbs while in fully supported sitting position				☐ date
Can tolerate being placed in a sitting position with a minimum of 90 degrees flexion in the hips and knees, see A7				☐ date

Table 4. Assessments during standing

Top-down motor milestone assessment Standing	Graduate level	Level I	C Level II	Level

				III
C.1 Can stand in one place without support for a minimum of 60 seconds	☐ date			
C.2 Can stand in one place with one or both hands held for a minimum of five minutes		☐ date		
C.3 Can maintain hip and knee extension to allow weight bearing for a minimum of three minutes while another person or appropriate equipment keeps the participant's body in alignment			☐ date	
C.4 Can tolerate weight bearing on feet for minimum of 45 minutes per day when knees, hips, and trunk are held in alignment by a mobile stander or similar standing device			☐ date	
C.5 Can tolerate fully prompted extension of hips and knees				☐ date
C.6 Can tolerate being placed in a vertical position				☐ date

In M.S according to the current situation, a top-down assessment was made, and were assessed only three first motor abilities, maintaining the sitting position, movement during sitting and standing, so we can notice that M.S refer to sitting riches the A3 phase, which means that she is not able to sit at the edge of the bed or chair without usage of support for relaxation of the back or legs, but she is able to seat and maintain balance on classical classroom chair for minimum thirty minutes without support. Refer to movement during sitting, she riches B7 phase, which means that she can turn back (realign trunk) to an erect position from the leaning forward, or she can rotate to left or right side for 20 degrees, but she is not able to erect the body after flexion leaning for 45 degrees. During the assessment of the standing, she realized only C6 phase, which means that she tolerates being placed in vertical position, but that still does not mean that she is able to tolerate fully extension of hips and knees supported by prompts (Tables 1, 2, 3, 4).

2. Setting goals

Setting a goal is the most important part of the MOVE program. Allows us to determinate the specific goals that are important for children, adults, their carers and support teams. Established goals that are selected by the participants will be very different, because everybody has different ideas, different desires.

MOVE goals are functional activities necessary for everyday life, and associated with independent care, individual independence, academic learning, leisure and society skills.

The goals are set by asking the following question: "What would you like to do in the future, and what you cannot do today?". After what we ask why the goal is difficult to achieve at the moment.

Such goals or dreams are usually long-term, but the fact that they were selected by the person makes them important for the same one and is an additional motivation for their realization.

During the goal setting, it is necessary to answer the following questions:
- What will you do to achieve the goal;
- What assistance will be needed to achieve the same;
- When will you find time for it;
- How will you apply this and more importantly
- How will you know when you've made?

The goal would be realized through its initial dividing in target activities, which should be: specific, measurable, achievable, realistic and on time.

The main goal in our case (set by the mother): "M.S to walk alone from one to another end of the room".

3. Task analysis

Long-term goals in step three should be separated in component tasks required for performing of the activity.

The most important information provided by the analysis of the tasks is the recognition of the task, that individual must learn to perform the activity.

By balancing the abilities of the person (determined in step one: assessment) with the physical skills required for the task (here set out in step three: analysis of the tasks) we get information needed for determination of that what should be learned.

The analysis of the tasks is important for prioritizing of the focal areas on what should be paid attention to the systematic way if we want long-term goal to be achievable.

Actually this step determinate functional activities necessary to achieve the goal and based on we make a list of skills which should be developed at the child.

If we analyze the purpose of our case, we will see that walking (as goal) is composed of several component activities, which should be implemented to achieve the goal

= Walking =

1. Repositioning from sitting to standing position;
   - Replacing the legs near the chair and transfer the body weight bearing in order to make the repositioning from sitting to standing position more easier;
   - Leaning forward the upper part of the body to facilitate the standing;
   - Erecting body and legs in the hips and knees
2. Maintaining the balance during the standing and carry of the own weight;
3. Repositioning from standing to walking position
   - Replacing body weight bearing on one leg;
   - Flexion of the other leg in the knee and hip, raising her from the floor and move her forward;
   - The same time pivot of the opposite arm in order of balance maintaining.

4. Measuring prompts

The next step in the MOVE program is to take into account the amount of support that is required of the individual to be successful.

The purpose of the prompt is to give sufficient support to the child enables it for implementation of the task;

Prompts are mobile, flexible and designed to provide mininum support for the shortest possible time. They can be in the form of equipment, furniture or other person and are designed to be removed later.

Regarding the use of equipment, there is a certain difference between classical application and MOVE.

Classical usage of the equipment:
- Substitute for lack of skills;
- Usually permanent;
- The position do not encourage learning;
- Social interaction;
- Encourages static positions.

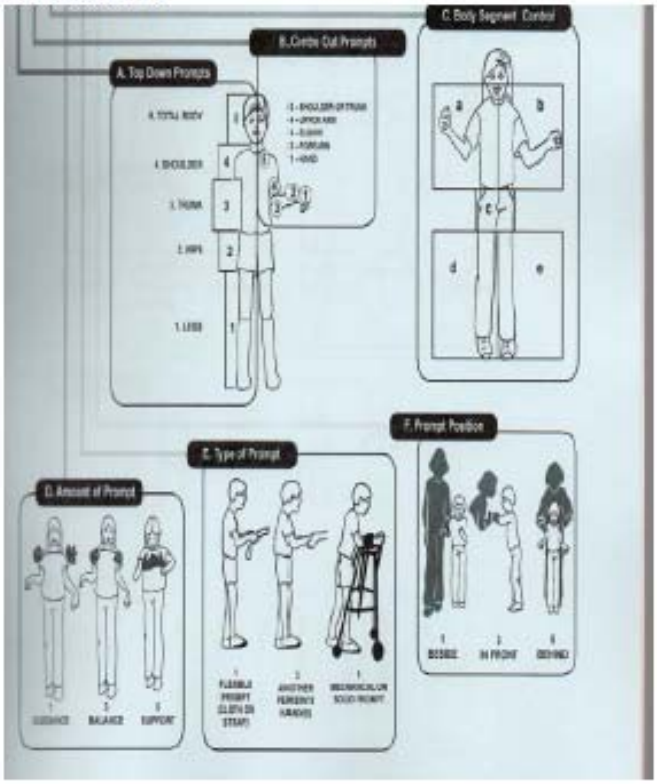
MOVE usage of the equipment:
- It is used for learning skills;

- It is temporary;
- Enables more easier learning;
- Social interaction;
- Encourages dynamic movements.

In this step, estimates are made in accordance with the established goal, and may be assessments for maintaining control of the head, trunk, hips, feet and are associated with estimates of 16 categories of motor skills. Then we assess how many body parts are supported by devices and which part is at most supported, whether device is for guiding, maintaining balance or support and so on.

According to our case report, an assessments were made during sitting and standing (Picture 1):
- Assessment top-down (which part of the body has the biggest support, with the number from one to five are noted different body part, where one points the legs, two points the hips, three is for trunk, four noted shoulders of participant and five pointed hall body);
- Center-out assessment (noticing the body segments which are supported, here we also use number determination, where one pointed support of the hands, two is for support of the forearm, three is for elbows, for included upper arm and five is for shoulder or trunk);
- Determination of the number of supported body segments (the body is divided on five segments noted by letters, a and b are for both hands, c is for the trunk, d and e are for both legs. According to the included parts, we count the supported segments);
- Determination of the support level (amount of prompt- one means that the prompt uses for guidance, three means that the prompt uses for maintaining balance and five means that the prompt is for support);
- Determination the type of the prompt (the prompt can bee from flexible material, human factor, mechanic prompt);
- Determination of the prompt position (beside, in front, be hide).

Picture. 1. Assessments done at M.S



Picture. 2. M.S placed in pacer by the frontal side

Picture. 3. M.S placed in pacer by the postern side

Table 5. Measuring the prompts at M.S

Standing or walking	Date of noticing data					
	0	1	2	3	4	5
A. Top-down				X		
B. Center-out		X	X	X		
C. Control of body segments						X
D. Prompts amount						X
E. Type of prompts						X
F. Prompt position						X

In our case (Table 5), the assessment from top to bottom shows that the greatest support is provided for the trunk, in assessing proximal – distal the support covers three parts, hands, joints, forearm and elbow. Doing analysis of control of body segments have seen coverage of five segments, both legs at the feet, trunk and both arms. In relation to the prompts amount in M.S can be meet support on the front side, which prevents bending forward, the type of the prompt is mechanical, and his position is set back to be held in an upright position.

5. Prompt reduction

Setting too many prompts and giving too much support may mean that the student was not given the opportunity to acquire new skills, necessary for realization of the goal. Step directly related to family goal, set in step 2;

Planned reduction of prompts is the only way children learn to take greater control over his movement and achieve its goals, when we remove the prompt for the first time, the child may show less ability, to be unstable for a while, but should not stop in the prompts removal because we want our child always to look perfect. If we do this, the child will never learn the necessary skills by its own.

At this stage it is necessary to make a plan for reduction of prompts, which will consist of: determining the prompts to be reduced by the improvement of the child, determination of the length of instructive process, removing prompts.

According to the goal in our case report, M.S to walk by her self from one to another side of the room, and in relation with moment condition in M. S (picture 2, 3), the user has need for support and help from other person or prompt for moving in the room, and when she is in pacer she uses forward prompt, to keep her in erect position, the hands and forearms, elbows and legs are held, it is necessary to make a plan for reduction the prompts, which will allows her to move by her self. That means that making during making the plan for prompts reduction it s necessary to pay attention on the liberation of the hands, which will allows her to hold by her self for the prompt and to push it forward, also there is need for plan for liberating the legs, in order M.S to stand on the full foot and to push her self forward and reducing prompt for trunk support, which will lead to enabling M.S to increase her ability for body weight bearing.

6. Teaching skills

In this stadium the team members have to determinate tasks which are relevant and when they have to be practiced during the day life of the user. The chosen tasks should be appropriate to the curriculum, match students goal, to form reasonable part from each students day, and to be related with the family or careers culture and traditions.

The teaching skills is provided in 4 stadiums:

1. Stage of acquisition (we get the new skill)- during this phase, the user acknowledges, exercise and tries to understand the new task, to learn which is the goal of its realization and what is it like it's realization. In this stadium using MOVE program the new skills are practiced on basis one to one, individually or in a

group, and there is need for plan for providing more opportunities for enabling routine practice on the user;

2. Stage of accomplishment (we become accomplished in the skill that we use in the situation)- when the task is once understood and the user can realize the task by it self with support of added prompts, that means that he entries in the phase of accomplishment. In this phase the user gains strength and control in new skills, use her longer time, practices her and applied in different situations. After reaching the phase of accomplishment there is need for implementing the new task in everyday user's work plan, in order to stop its loosing after un usage;
3. Stage of maintaining (we use the skill without instructions)- the user implements new tasks in different sequences of different movements and activities, what s problem very often and
4. Stage of generalization (we enlarge the usage of the acquired skill in more situations)- the disabled people have problem with reaching the phase of generalization, so there is need for providing different situations for practice of new skills.

People learn in different ways, but we need to choose the most appropriate individual way, to achieve the best possible results. A special training program does not exist, everyday life activities are applied as a basis for achieving the goal.

If step 6 does not perform effectively, the whole work with the previous five steps will be lost and the child will not learn the skills.

Observing our case and taking care of acquired phases, refer to maintaining balance during sitting, M.S was not able to seat on the edge of the bed or chair without usage of rest for legs or back, for minimum five minutes. According to that this ability can be practice by using the classical classroom chair without back support, so the user will learn to seat without back support with the legs fully supported on the floor. When she achieved this exercise, the sit of the chair should be placed on higher level, so the user will practice the in same task but with the legs partially supported on the floor. Refer to movements during sitting, M.S is not able to erect the body after leaning for 45 degrees, but she can erect after leaning for 20 degrees and gives us chance for more practicing with applying creativity in sitting. Refer to standing, M.S tolerates verticalisation, but she can not tolerate fully extension of knees and hips. In these cases there is often use of surgical and orthopedic interventions, which will enable fully extension of hips and knees, but we have on our mind that this is not always possible and that we do not have to use force and to cause pain during practicing and acquiring goals.

Why we use MOVE ?
- Provides a way to effectively unite therapy with learning;
- Provides a way to use time spent on routine care, to learn and practice the practical-functional skills;
- Provides a system of measurement and recording of the success;
- Provides a program that is from early childhood to adulthood.

Ability to move allows us to learn much more effectively!
"MOVE proves what is in the heart of every parent, his child to has the opportunity to do more, to be more and improve the quality of its current and future life." Cherie Blair

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