THE SELF-DETERMINED LEARNING MODEL OF INSTRUCTION: IMPLEMENTATION TO ELEMENTARY SCHOOL STUDENTS WITH LEARNING DISABILITIES

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Abstract:

Self-determination is a framework for making decisions about one's life. In children, self-determination is linked to interests, choices, decisions, and problem-solving, usually with the help of an adult. The Self-Determined Learning Model of Instruction (SDLMI) teaches students the above issues related to their daily lives (Palmer & Wehmeyer, 2002). The purpose of this study was to determine whether students after the implementation of SDLMI would be able to set goals and make decisions about the subject being taught. The research involved 5 girls with learning disabilities, second and fourth grade, divided into two groups, depending on the class of study. The program was implemented for 5 months and was followed by the structure proposed by the authors (Palmer & Wehmeyer, 2002). Initially, the students' interests were investigated, the answers were recorded and there was a discussion about what the goal is and what the obstacles are. After the worksheets were translated and adapted, they were given to the students. After the students set their goals, each of them worked on their individual goals (in language or mathematics). For the final evaluation of the program, the students completed the worksheets. The results showed that the students, after completing the program, were able to better understand the meaning of the goal and set goals that corresponded to the level of learning they possessed and the difficulties they faced at that time.

Keywords: SDLMI, elementary school, case study, learning disabilities

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1. Introduction

Self-determination was defined by Wehmeyer (1996) as "*acting as the primary causal agent in one's life and making choices and decisions regarding one's quality of life free from undue external influence or interference*" (p. 24). The essential characteristics of a self-determined behavior are four: (i) autonomy, (ii) self-regulation, (iii) psychological empowerment and (d) self-realization (Wehmeyer, Kelchner, & Richards, 1996). People who are self-determined make their decision based on the purpose or function of their actions. Using this framework, Wehmeyer and colleagues have described the development of component elements of self-determined behavior in order to design instructional activities for students (Wehmeyer, 1997; Wehmeyer, Sands, Doll, & Palmer, 1997).

Self-determination for young children relates to their interests, choices, and preferences which can be approached by adults' support. Making choices, decision-making, setting goals, solving problems, self-observation, self-evaluation, self-awareness and self-advocacy skills are developmental components that support self-determination at young ages (Palmer & Wehmeyer, 2002).

2. Literature Review

The SDLMI is a program that allows teachers to teach their students to self-direct their own learning. That is the first step to becoming a self-determined adult. The Model consists of three phases, in each phase there are four questions students have to answer in a specific order. In the first phase, students must set a goal, in the second they have to decide on their action plan and in the third, they have to evaluate their progress (Table 1) (Shrogen, Wehmeyer, Burke & Palmer, 2017).

Table 1: The SDLMI (Palmer & Wehmeyer, 2002)

Phase 1: What is my goal?	What do I want to learn?
	What do I know about it now?
	What must change for me to learn what I don't know?
	What can I do to make that happen?
Phase 2: What is my plan?	What can I do to learn what I don't know?
	What could keep me from taking action?
	What can I do to remove these barriers?
	When will I take action?
Phase 3: What have I learned?	What actions have I taken?
	What barriers have been removed?
	What has changed about what I don't know?
	Do I know what I want to know?

In each phase, teachers support their students and they try to link students' decision with teacher objectives. Each phase provides teachers with a list of educational support measures to enable them to give instructional help to students may need it.

The Educational Support measures are several. In Phase 1 teachers should help students to (Palmer & Wehmeyer, 2002):

- gather information about the chances they have and the obstacles they face,
- choose which need they are about to work, and
- decide their action plan.

  In Phase 2 teachers should assist their students to reach:

- self-regulation,
- self-guidance,
- self-advocacy,
- self-evaluation, and
- communication skills.

  Also, to:

- make choices,
- monitor their progress, and
- decision making.

  In Phase 3 teachers should help with:

- self-evaluation,
- decision making, and
- reward.

"The SDLMI for Early Elementary Age is designed to help students develop abilities leading to later self-determination" (Palmer & Wehmeyer, 2002, p. 9). It is generally suggested that teachers have some preliminary conversations with students, about the meaning of the word "goal", "problem" and "barrier". Additionally, students must explore and talk about their interests and the things they want to learn (Palmer & Wehmeyer, 2002). It is suggested that students complete a worksheet about their interests at school and at home.

SDLMI learning model has been used, mostly, for students in secondary education. Thus, promoting self -determination in primary schools has an active role in students; a sense of personal investment and commitment to their own personal goals. Self-determination skills can be used in various fields of learning, academic, classroom participation, employment, career, social interaction (Rifani & Azizah, 2019; Cho, Wehmeyer & Kingston, 2010, 2013). Self-determination skills, also help students understand their strengths and weaknesses, setting goals and assessing their progress (Cho, Wehmeyer & Kingston, 2010, 2013). Self-determination can and should be taught from childhood and lasts for a lifetime. The SDLMI learning model can improve every aspect of self-determination, because this model focuses on the abilities someone could develop (Rifani & Azizah, 2019).

It is critical to consider that in Greece there is hardly any chance for a student to express his/her self-determination level in school. Self-determination is a field with little to no development in the Greek educational system. Few teachers use some of the self-determination skills, such as self-assessment, in their teaching. Even fewer try to teach

some of these skills. There is no research data to show any activity of teaching self-determination.

3. The Present Study

The goal of the present study was to identify whether the implementation of the SDLMI could improve students' skills in goal-setting and decision-making. The present study sought to answer the following questions:

1) Can students, who have never been taught self-determination skills, respond to the program?
2) Are the results of the response to the program different according to the age of the children?
3) Or according to their academic performance? d) Can the implementation of SDLMI improve students' skills in goal-setting and decision-making?

4. Material and Method

4.1 Participants
Five students with learning disabilities (LD) took part in the program. They were all girls and they all had a formal diagnosis and assessment of LD. Three of them were 8 years old (in the second grade of elementary school) and two of them were 10 years old (in the fourth grade). They all attended an elementary school in a small village nearby Thessaloniki, in Greece and they all attended the integration class for four hours a week.

Table 2: Participants

	n	Age	Gender	Grade	Diagnosis	Times/week in integration class
Group 1	3	8 y	Female	2nd	LD	4h
Group 2	2	10 y	Female	4th	LD	4h

All students have been diagnosed as students with learning disabilities. Their main difficulties are in reading, writing essays and math. The special education teacher evaluated all of them, at the beginning of the school year and according to her essays two of them, one of second grade and one of fourth grade, were facing much more difficulties, both in reading/writing and math, than the others.

The participants were separated into two groups, according to their school grade, group 1 consisted of the second-grade girls (3 girls) and group 2 of the fourth-grade girls (2 girls). The main reason that there were two groups of participants is that students belonged to different age groups (as mentioned before) and their program to integration class has been formed in a specific way and this couldn't change, so they could make one group (Table 2).

4.2 Procedure

In the beginning, students were asked if they wanted to participate in the program. After their acceptance, parents were asked to give their permission to their children to participate in the program. After their acceptance, the school principal was asked to give his permission too.

All worksheets (Palmer & Wehmeyer, 2002) were translated into Greek, after Mr Wehmeyer's permission.

The program lasted from January to June 2019.

In the preliminary phase, we discussed about the terms "goal", "problem" and "barrier". Next, each student drew a goal (how they imagine a goal) and a barrier. We also discussed about their interests in school and home. They fulfilled a worksheet about interests. In the field "What I want to learn?" the students were encouraged to choose any skill, even if it wasn't an actual school goal.

In each phase, there are some goals that students have to work with.

In the First Phase, the goals are developing as above. The students need:

- to identify their strengths and weaknesses,
- to communicate their interests and preferences, and
- to learn how to prioritize their needs.

In the Second Phase, the students have to:

- self-evaluate the present,
- pick the most appropriate strategy to work with, and
- identify the obstacles.

In the Third Phase, the students need to be able to:

- evaluate their progress,
- identify the obstacles that have been overtaken,
- re-evaluate their goals, and
- decide whether they succeed or not.

Each student selected one school goal, she wanted to work with and she completed the worksheet for each phase. In between, the students worked under teacher's observation, guidance and support.

5. Results and Discussion

5.1 Preliminary Phase

At the preliminary phase, students talked about their interests at school and at home and we made an overall table of their interests in school and home, which was hung in the classroom (Table 3).

Table 3: Students' goals

Student	Non-school goals	School goals
1 (2nd Grade)	To become a hairstylist	To write properly/ to do math
2 (2nd Grade)	To study music	To read fast/ to do math
3 (2nd Grade)	To study English	To write properly/ to do math
1 (4th Grade)	To study music	To write correctly and fast/ to count
2 (4th Grade)	To become a kindergarten teacher	Orthography/ to learn to do division

5.2 Phase 1

In Phase 1 the students firstly fill in the worksheet, according to the school goal they chose to practice. Their answers have been recorded and are presented in Table 4.

They were advised to choose a school goal, which they had difficulties with, according to their opinion.

Table 4: Phase 1 – Results

Students	Q1: What do I want to learn?	Q2: What do I know about it now?	Q3: What must change for me to learn what I don't know?	Q4: What can I do to make that happen?
1 (2nd Grade)	To write correctly	To write the letters	To write fast	Write words
2 (2nd Grade)	To add, subtract and multiple	The numbers and to count	To become better in math	To exercise
3 (2nd Grade)	To learn how to count	The numbers	Exercise	Study my homework
1 (4th Grade)	Orthography	To write all letters	I don't know grammatical rules	Study the rules and exercise
2 (4th Grade)	To write correctly	To read and write	I don't know grammatical rules	Study the rules and exercise

Students were practicing their goals under the teacher's observation and advice. The teacher was giving each student individualized worksheets to work with, according to the students' choice. Phase one lasted for two months, until March 2019.

5.3 Phase 2

Phase 2 began on the 15th of March 2019. Students had to think about their goals in Phase 1 and about the themes they worked on. After they completed Phase's 2 worksheet, they have been given extra worksheets on their goal by the teacher. Their goal setting is presented in Table 5.

Table 5: Phase 2 – Results

Students	Q1: What can I do to learn what I don't know?	Q2: What could keep me from taking action?	Q3: What can I do to remove these barriers?	Q4: When will I take action?
1 (2nd Grade)	To read words	I felt tired during reading & I don't like it	Read o book about princesses	When I have the book
2 (2nd Grade)	To distinguish + and -	I can't count backward	Practice and exercise	Tomorrow
3 (2nd Grade)	To check the number line	I don't have a number line	To ask one from my teacher	Today
1 (4th Grade)	Study the rules and exercise	I don't know where the rules are written and I don't have exercises	Ask for teacher's help and search the internet	Right now and every day
2 (4th Grade)	Study the rules and exercise	I don't know where the rules are written and I don't have exercises	Ask for teacher's help and search the internet	Right now and every day

Phase 2 lasted until the end of April 2019.

5.4 Phase 3

Phase 3 began on May 6, 2019. Table 6 shows students' results in Phase 3.

Table 6: Phase 3 – Results

Students	Q1: What actions have I taken?	Q2: What barriers have been removed?	Q3: What has changed about what I don't know?	Q4: Do I know what I want to know?	I Feel
1 (2nd Grade)	I did the exercises my teacher said	I did small exercises I didn't feel tired	I learned to write correctly	Yes	Happy
2 (2nd Grade)	I practiced in additions and subtractions	I can easily count forward and backward	I know how to count forward and backward	Yes	Happy
3 (2nd Grade)	I practiced a lot with the number line	I have a number line	I have learned the sequence of numbers	Yes	Proud
1 (4th Grade)	I have exercised in grammar	I have studied the rules	I have learned the rules	Yes	Happy
2 (4th Grade)	I have exercised in grammar	I have studied the rules	I have learned the rules	Yes	Happy

Phase 3 lasted until the end of May.

We, also, made a self-monitoring and self-evaluation table which was hung across their desks and they had to write down a tick (∨) or take a stamp, if they had succeeded

in exercises the specific day and a minus (-) if they had not. It was their choice to decide whether they had succeeded or not. This table was used in all three phases.

5.5 Assessment

In June, students were asked to fill in Phase's 1 and Phase's 2 worksheets, setting a new goal as an assessment. Through this phase, the students' level of understanding of goal setting was tested. The results are presented in Table 7 and Table 8.

Table 1: Phase 1 - Program's Assessment

Students	Q1: What do I want to learn?	Q2: What do I know about it now?	Q3: What must change for me to learn what I don't know?	Q4: What can I do to make that happen?
1 (2nd Grade)	To do additions and subtractions	To count forward and backward	To practice	To ask my teacher
2 (2nd Grade)	To study time	I know that there are clocks	To ask my teacher	To exercise on time
3 (2nd Grade)	To read better	I know the letters	I will practice	To read small books
1 (4th Grade)	To read better	I know how to read	I should read more times	To read slow and loud
2 (4th Grade)	Orthography	I know to write some verbs and some nouns correctly	I need to study grammatical rules	To study grammar

Table 2: Phase 2 - Program's Assessment

Students	Q1: What can I do to learn what I don't know?	Q2: What could keep me from taking action?	Q3: What can I do to remove these barriers?	Q4: When will I take action?
1 (2nd Grade)	To practice at math	I don't know where to get exercises	Ask my teacher to give me exercises	When I ask my teacher
2 (2nd Grade)	To study time on clocks	I don't know how to read o clock	To have a clock, so I will learn	When I talk to my teacher
3 (2nd Grade)	To practice	It is difficult	To start by reading single words	When I get words
1 (4th Grade)	To read slow and loud	I feel tired and I get bored	To read books, to read in the computer	During summer
2 (4th Grade)	To study grammar	Grammar confuses me	To exercise in easy themes	When my teacher says so

5.6 Discussion

The findings indicated that all students improved their performances of the target behavior, and choose a goal after receiving instructions on how to work with SDLMI (Agran, Blanchard & Wehmeyer, 2000).

All students chose school goals, which they actually had difficulties in and they had increased learning needs. All 5 students successfully completed all the phases, by answering all questions correctly. Their self-evaluation was objective, and they could be able to identify when they had done a good job and when not.

There was an evaluation phase of the program, by handing out students' worksheets of phases 1 and 2, giving them the opportunity to choose a new goal. All 5 students were able to complete those worksheets all by themselves. They actually chose the next school goal; they had indicated at the beginning of the program.

They were very happy each time they completed a worksheet and the self-evaluation table. They mentioned that it was weird that they had to choose the goal to work towards. They really enjoyed the fact that they could control and decide whether their work was successful or not. Students' self-esteem has significantly increased, especially if we consider that their self-confidence is very low, due to the learning difficulties they present. Rarely do they express themselves in the classroom or raise their hand to answer a teacher's question. After completing the program, they reported that they felt more confident and more ready to participate in the lesson. Each of the skills that are being included in the program, are skills that lead to successful adults. Students' quality of life can be increased throughout their school life. A good quality of school life leads to a good adult's quality of life. Also, when students themselves choose the goals to work with, those goals are more likely to succeed (Palmer & Wehmeyer, 2002).

During the first phase the second student of the 4th grade (she is one of the two students with the most severe difficulties, mentioned before), was answering similarly to the first student. The second student faces more difficulties than the first, in grammar and math. During the third phase and during the assessment phase she was giving different answers, due to her better understanding of what was happening and how she should react.

The results prove that SDLMI can improve students' performance, even if they hadn't been taught any self-determination skills before. It is certain that if students had been taught goal-setting and decision-making skills, the results of SDLMI's implementation would have been better.

Age doesn't seem to affect the results of SDLMI's implementation. Nevertheless, academic performance seems to play a role, mainly in understanding the stages of the program. The weakest students tended to copy the rest or waited for a hint from the teacher.

6. Limitations

There are several limitations to this paper. First and foremost, the statistical sample was substantially limited. Moreover, there was increased guidance by the teacher, especially during the first stages of the program. The guidance for some students was very strong and frequent, especially in the early stages of the program. In two students, one in the

second and one in the fourth grade (the ones with severe difficulties), guidance was frequent throughout the program.

The teacher who implemented the SDLMI is a teacher with 14 years of experience in teaching students with disabilities but had never worked and organize her teaching with the SDLMI. A more experienced teacher on the use of SDLMI, probably could have been more effective.

Finally, the assessment phase was very close to the end of the program. This is a serious limitation, as the process was repeated in a short period of time after the program was completed and the students knew exactly what needed to be done. A follow-up study is necessary to confirm the program's success with these students. Furthermore, the assessment phase should be conducted at a later stage. Maybe an assessment phase in September would have revealed a more objective picture.

Conflict of Interest Statement
The authors declare no conflicts of interest.

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