



## ENHANCING GREEK STUDENTS' WRITING PROCESS THROUGH THE IMPLEMENTATION OF SELF-REGULATED PROGRAMS

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### Abstract:

Writing process is considered a demanding and complex process and one of the most important factors for children's' academic success. Cultivation of this skill must be systematic and methodical. The students' ability to produce meaningful and understandable texts both by themselves and by their classmates easily is considered to be of major pedagogical significance. In writing, students are encouraged to participate in activities, which involve exchanging and negotiating with peers and educators, which is related to Vygotsky's socio-cultural theory (1978). The teacher's contribution is significant as s/he is the one who mediates between students and text, selecting each time the appropriate technique / strategy to lead the students into self-regulation of the process. This paper presents a survey that was carried out in schools in the prefecture of Chania (Crete) in Greece and aimed at investigating the impact of Self-Regulated Strategy Development on students of mixed ability in written speech production. The purpose of this study was to determine the impact of this strategy on the empowerment of students' written discourse. Intervention applied to the experimental group has highlighted significant pedagogical benefits on students' ability to synthesize well-structured and cohesive narrative text.

**Keywords:** writing, Self-Regulated Strategy Development, improvement

### 1. Introduction

Communicative competence refers to the use of language as a means of oral and written communication, learning, building one's thinking and personal and behavioral regulation. It is therefore highly relevant to the field of education and very applicable to the social field, which means it can be approached through different contexts (Frijters, Barron, & Brunello, 2000; Hood, Conlon, & Andrews, 2009). Thus, the goal of educators is to train competent communicators to operate naturally in different everyday

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communicative contexts that involve both the use of oral language, reading and writing.

Writing process is an important skill, the conquest of which contributes to the cultivation of literacy. Finding and organizing ideas coherently is an important skill, since writing is one of the main pillars of language teaching in the context of the formal education program of the Primary School. The authors of this study sought to investigate the impact of a specific strategy that helps all students to cultivate narrative text through specific steps (Harris, Graham, Mason, & Friedlander, 2008). The Self-Regulated Strategy Development (SRSD) is an instructional proposal with significant pedagogical benefits, as the research data highlighted. It is a flexible approach which contributes to the improvement of writing texts by students of all ages.

This strategy is based on the constructivism theories which distinguished pedagogists and psychologists such as Dewey, Bruner, and Luria adopt and on Vygotsky's socio-cultural theory (1978), according to which knowledge is best constructed when students work together, encourage each other to form, construct and reflect on new knowledge. In this case, social interactions and participation of group members play a key role in the development of new knowledge, as speech production is considered a social-cognitive process (Hayes, 1996; Spadidakis, 2010). The teacher's contribution is also significant as s/he is the one who helps students achieving self regulation through the appropriate technique / strategy.

The fact is that writing is a complex, dynamic and creative work that requires the motivation of multiple actions on behalf of the learner: to plan, to develop relative ideas and concepts and to write them down with logical sequence. Also student's writing must be governed by consistency and coherence. In other words, writing a text requires from students, apart from knowledge of the structure of the type of text, also cognitive and metacognitive skills (such as reflection, monitor, feedback, evaluation, etc.) (Winne, & Hadwin, 2010).

Writing is a demanding task. Studies have shown that most of the students have difficulties in writing process (Bereiter & Scardamalia, 1987) and this result is confirmed by many primary school teachers (Matsagouras, 2001:66). Moreover, research focuses on the investigation of varied learning environments in order to forward new techniques of literacy which enhance all students (Kress & Knapp, 1992; Cope & Kalantzis, 1993; Halliday & Martin, 1993; Martin, 2000a; Macken-Horarik, 2004; Rose, 2010; Bednareck & Martin, 2010 in Keki, 2011:29). All these researchers figure out that more practicing time and helpful guidance procedures should be given to all students who experiencing difficulties in producing well-structured and coherent text (Printezi & Polichoni, 2016; Graham, Harris, & MacArthur, 2004). In particular, they have difficulties to organize their thoughts about a theme or a topic and usually have limited vocabulary and ideas. Furthermore, many of them do not activate their metacognitive skills, resulting in a low-poor quality text (Matsagouras, 2001). The same but much more extended difficulties in writing face up students with special needs and this certain strategy has been proved as the most appropriate for this category of students (Polychroni, 2011; Panteliadou 2011; Graham, Harris, & McKeown, 2013).

All these difficulties affect emotionally and cognitively many students. For this reason, the teaching of writing should be done in a way that meets all students' needs (cognitive, emotional and social). Student support should be systematic at every stage of writing. Instead of some single, fragmentary instructional techniques, an integrated approach with a clear theoretical basis and a flexible methodological design seems more effective. Self-Regulated Strategy Development is considered the most appropriate strategy as it meets all the above criteria (Graham & Harris, 2005; Graham, Harris, & MacArthur, 2004).

Additionally, various studies suggest that this approach has been used for students with learning difficulties in order to improve their writing (Graham, Harris, & McKeown, 2013). This strategy has not been applied at typically developing students (Graham & Harris, 1989; Harris, Graham, & Mason, 2006; Reid & Lienemann, 2006, as reported in Sandmel, Brindle, Harris, Lane, Graham, Nackel, & Little, 2009). Therefore, this paper's intention is to present the results of applying this strategy in whole class setting corresponding to students of mixed capacity in written speech production. This intervention program is also considering being beneficial for typically developed students because it has been noticed that most of them they can't produce coherent and meaningful narrative texts and as a result very often feel uncomfortable or unable with writing process. Consequently, the goal of the present study was the implementation of an intervention program based on SRSD in order to enhance all students to write coherent and cohesive narrative texts. Creating a dynamic, interactive learning environment, as this strategy suggests, we hope all students to feel effective and capable with writing process. In other words, we aimed at enhancing Greek students in writing narrative texts trying to give an answer in what field researchers point out "why students don't write although they think?" (Matsagouras, 2001:66). What are the causes of this phenomenon and what can be done to help them feel easy, confident and sufficient to do so?

### **1.1 Purpose**

The purpose of this study was the implementation of an intervention program that was based on the Self-Regulated Strategy Developed in order to train second grade typically developing Greek students in composing and writing coherent and cohesive narrative text.

## **2. Methodology**

The intervention program was implemented in four primary school classes in Chania, Crete, Greece. Our sample consisted of 80 second grade children (42 girls and 38 boys) aged 6.9 to 7.3 ( $M= 7.1$ ). Following statistical procedures we divided our sample in two groups: the experimental ( $N= 40$ ) and the control group ( $N= 40$ ). In the experimental group the first researcher enhanced student's writing skills by giving them instructions about planning and writing well-structured and complete written narrative texts by using the Self-Regulated Strategy Development (Harris & Graham, 1996) as a model of

instruction. These instructions aimed to increase genre specific knowledge, writing efficacy, strategic behavior, self-regulation skills and motivation among students of varying ability levels. In the control group the second researcher simply read and discussed a series of well-structured narrative books that corresponded to the second grade student's abilities and demands without following any specific program to enhance the student's narrative skills.

## 2.1 Study's design

Before the intervention program and for internal validity reasons we assessed the sample children with a series of tests. We assessed second grade students nonverbal ability by the *Raven's Colored Progressive Matrices test* recent standardized in Greek language (Sideridis, Antoniou, Mouzaki, & Simos, 2015). We also evaluated student's ability to write narrative texts (students write two narrative text before and two after the intervention program and we take the mean of the two evaluations trying to capture children's actual skills and abilities). Student's ability to write narrative text at the pre and post test phase was assessed with the *Index of Narrative Complexity story coding form* by Petersen, Gillam, & Gillam (2008).

The intervention program lasted two months in total. The first researcher met each class two times per week in the first month and once time per week the second month (12 sessions). In the first month of the intervention program we had more meetings with the students until they understood critical aspects of each stage but on the way as the students became more skilled with the methods and techniques introduced in this strategy we met them once per week. Once the study ended, a randomly selected sample of student's narrative text (33%) were rescored by all compositions by the second researcher and interrater reliability during training was point eighty two (.82.).

## 2.2 Major points of assessment

We used the *Index of Narrative Complexity story coding form* in order to assess student's ability to write narrative texts. This test includes all story structural elements that concern the narrative structure: (title, setting, theme, plan, reactions, actions, complications, consequences, end, sequence) and a series of qualitative data that related to the character development (plans, reactions, thoughts), the use of character's dialogues and the narrator's evaluations (Petersen, Gillam, & Gillam, 2008).

We added the assessment of the coherence of a written text. A scale of five levels evaluated the type of connectors that children used to connect clauses to each other in their narrative text (Nicolopoulou, 2011). Specifically, at level 1 children used "and" only to connect clauses in their narrative text, at level 2 they used "and" and "but" (logical connectors), at level 3 children used "then" or "and then", at level 4 "when" or "and when" (temporal connectors), at level 5 children used temporal connectors together with "because" and "so" (temporal-casual connectors). This evaluation system is cumulative e.g. at level 5 children must use all other connectors from previous level with the new ones (temporal-casual).

We also evaluated the students' text morphological procedures (agreement between verb and subject, plural and singular number, article and noun), (Ekonomou, Bezevenkis, Milonas, & Varlokosta, 2007a). The presence of each morphological element was evaluated with 1 point. Additionally, we evaluated the written text's psychological structure which referred to the "how" and "why" of the story character's actions and reactions (Curenton & Lucas, 2007). We evaluated children's ability to reach this consciousness level with 2 point (clear connection with what has happened in the story and why it has happened).

Because of the self – regulated features of this strategy we also examined: a) student's motivation to get involved in writing process, b) student's behavior during writing and c) usage of strategy techniques for instance planning, using mnemonic charts and revising the text. The presences of these features were measured with a three-point scale. In this scale, the 0 point corresponds to the absence of the specific feature (e.g. the student didn't use planning procedure or mnemonic chart), the 1 point to the simple presence whereas the 2 and 3 points correspond to the full presence of each feature (e.g. the student used very detailed mnemonic chart).

### **2.3 Intervention program**

During the intervention program and at the first stage which was named "Develop Background Knowledge", the students acquired knowledge and skills needed to apply **POW** (Pick my ideas, Organize my notes, Write and say more) and the genre-specific strategy for story writing. First, **POW** and its corresponding steps were introduced, and the researcher and the students discussed what it stood for and why each step was important. Second, the characteristics of a good story were discussed, including the ideas that stories are fun to read and write, make sense, have several parts, and include exciting, colorful, and descriptive words (referred to as a million -dollar words). Third, the researcher introduced the mnemonic **WWW** (Where, When, Who, Which, What, How, End) as a trick for remembering the seven story parts emphasized in this study. After discussing examples for each part, the students listened as a story was read. When a student identified a story part, the researcher wrote it in the appropriate place on a graphic organizer containing the story parts reminder. Each story part was labeled with a key-word to help the students identify it. The three first key-words referred to the story setting, the fourth one to the problem or the theme of the story, the fifth one to the story episodes, the sixth one to the resolution of the story problem and the last one to the end of the story.

At the second stage which was named "Discuss it", students continued to memorize what POW and the story parts reminder stood for and why they were important. The students again practiced finding story parts as the researcher read a story out loud, and notes for each part of the story were made on the graphic organizer. As the students had become more skilled writers, the researcher asked them to analyze one of their pretest stories and determine how many of the seven story elements were included in their papers.

At the third stage which was named "Model it", the researcher showed the students how to apply POW and the story part reminder and also introduced the use of self-instructions (i.e., self-talk). The researcher modeled, while talking out loud, how he can plan and write a story using previous techniques introduced at the first stage. The researcher pretended the naive writer who met many cognitive dead ends and using some self-statements (e.g. "what comes next?" or "does the story make sense?") involved students to help her by generating more ideas, to ensure if she utilized all instructional techniques etc. Once the story was completed, the importance of what we say to ourselves was discussed and the types of self-instructions, which the researcher used as a model, were identified.

At the fourth stage which was named "Memorize It", further practice was provided at this point and all students memorized the strategy mnemonics POW and WWW and their meanings.

At the fifth next stage which was named "Support It", students had the experience of writing a narrative text in a collaborative way. In particular, the students found an interesting topic, used for planning the graphic organizer and then wrote their ideas using all instructional techniques introduced in this strategy (POW, the story part reminder and their self-instructions). At this stage, the researcher provided support only when it was needed. From these general planning procedures each student wrote his/her own story which was enriched by his/her background knowledge and experience. Then they read their stories to each other establishing the usage or omissions of strategy techniques. A brief discussion followed by the students considering the ways that this strategy can be utilized for better writing performances.

At the sixth stage which was named Independent Performance, students used the strategy with little or no support. Researcher gave the students an interesting topic, then they composed their stories while initially wrote their notes in the form of keywords in a graphic organizer beside their paper. Researcher encouraged them to concentrate, to generate ideas, to use the keywords from their notes, to enrich and to review their writings.

The SRSD instructional model is a multilevel program. It is impossible to apply all these stages of instruction together in one meeting. Time should be given for instruction, depending on the student's needs and rate of progress. Gradually, when students were more skilled, we focused mainly to the usage of the graphic organizers and mnemonics charts before the writing process and the usage of their metacognitive skills during and after

## 2.4 Research Questions

This study attempted to answer four research questions:

- Did the experimental group students outperformed to the control group ones from pre to post phase in writing well-structured narrative text?
- Did the experimental group students outperformed to the control group ones from pre to post phase in writing more cohesive text?

- Had the SRSD program significantly affected and to what extent on students with learning disabilities problems?
- Did the experimental group children show from pre to post phase more appropriate behavior during the writing process than the control group children?

### 3. Results of the study

The researchers using the above methodological instruments collected the required data, and analyzed it in order to investigate the effectiveness of this instructional strategy by answering to the research questions.

#### 3.1 Results

The data collected were analyzed using descriptive statistics (mean, standard deviation, frequency count and percentage) to measure pre-test and post-test students' performance in writing narrative text. As we can see in *Table 1*, significant improvement in the performance of the pre to post phase of the study was made by the children in the experimental group compared with those in the control group in writing narrative text. More analytically and in relation to previous measurements, *Table 2* shows that significant improvement in the performance from the pre to post phase of the study in the production of cohered and cohesive narrative text was shown by the children in the experimental group compared to those in the control group.

**Table 1:** Pre-test and post-test student's mean scores of the experimental and control group on an enriched scale of the Peterson, Gillam & Gillam Story Coding Form (2008)

	Experimental		Control		t-test	P
	M	SD	M	SD		
Pre-test	12.80	5.26	13.16	4.88	5.84	.000
Post-test	18.90	4.14	14.64	3.59		

**Table 2:** Pretest and posttest student's mean scores of the experimental and control group on quantitative and qualitative aspects of the narrative text

Qualitative aspects	Pre test					Post test				
	Experimental		Control		t-test	Experimental		Control		t-test
	M	SD	M	SD		M	SD	M	SD	
Story structure	7.63	2.77	8.08	2.47	0.76 p=.97	10.65	2.21	7.74	1.60	6.67 p=.000
Cohesion	2.65	1.65	2.95	1.35	-0.87 p=.38	3.78	1.29	3.10	1.37	2.24 p=.0022
Psychological structure	.23	.62	.31	.56	-0.56 p=.47	1.15	.80	.38	.59	5.35 p=.000
Sequence	.88	.51	.95	.51	.63 p=.51	1.38	.49	.95	.22	4.95 p=.000

In *Table 3* we can also see the elements related to narrative texts' coherence, cohesion and psychological structure in which experimental group students made significant improvements from pre to post phase. Students' improvements ranged from 60-90 percent. That means that at the post-test phase more than 60 percent of the children referred these elements in their written texts.

**Table 3:** Structural, morph-syntactical and psychological elements where experimental group children made significant improvements (post- test phase)

Experimental group		
Narrative text elements	Percentage	
	Pre test	Post test
Setting	5%	90%
Actions	10%	87.5%
End	2.5%	68.5%
Sequence	7.5%	72.5%
Cohesion	10%	68%
Morphology	36%	82%
Psychological structure	2.5%	55%

We also assessed the effectiveness of this program (*Table 4*) on student's behavior and internal motivation development during the writing process. We realized significant changes on student's ability to organize and plan their writings as well as on student's behavior and internal motivation. That means that many of the second grade students who couldn't focus on the task and impeded other peer's efforts gradually they found the procedures interesting and concentrated seriously on their writings. On that path, the researcher's intermediation in the form of personal assistance, reinforce and abet, had a positive influence on student's productions.

**Table 4:** Experimental group children's improvements (percentage, mean scores) from the pre to post test phase in using of strategy techniques, in showing appropriate behavior and internal motivation development during the writing process

Experimental group								
	Percentage		Pre test		Post test		<i>t</i>	<i>p</i>
	Pre test	Post test	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>		
Strategy techniques	0%	63%	.00	.00	1.49	.75	-13.34	.000
Appropriate behavior	2%	57.5%	.59	.59	1.49	.55	-8.75	.000
Internal motivation	8%	72%	.46	.55	1.46	.55	-10.28	.000

Additionally, we evaluated the results of the learning disabilities students in relation to the coherence and cohesion of their narrative texts as well as the implementation of these specific techniques (planning, revising, behavior, internal motivation) during the writing process.



**Table 5:** Comparative results from the pre to post test phase of the experimental group students with learning disabilities problems in all quantitative and qualitative indicators of this study

	Pre test		Post test		t	p
	M	SD	M	SD		
Narrative structure	9.00	6.13	15.29	3.45	-3.93	.008
Cohesion	2.00	1.82	2.43	1.39	-.70	.510
Morphology	1.00	1.29	2.29	.75	-3.05	.022
Psychological structure	.17	.40	.33	.51	-.54	.611
Strategy techniques	.00	.00	1.14	.90	-3.36	.015
Appropriate behavior	.29	.48	.86	.37	-2.82	.030
Internal motivation	.00	.00	1.00	.57	-4.58	.004

As we can see in *Table 5*, the students with learning disabilities who followed main steam classroom curriculum (due to inclusive educational system) showed significant improvement in relation to the structure of their narrative text and to the presence of concrete morphological elements (agreement between verb and subject, plural and singular number, article and noun). To our great surprise, many of them used the strategy techniques that were introduced in this program and were very concentrated during the writing process owing to the supportive and reflective learning environment. Besides these promising results, students with learning disabilities faced many difficulties to use appropriate connectors and to make reference about characters' thoughts, feelings and believe in their narrative texts.

### 3.2 Discussion

The purpose of this study was to investigate the effect of an intervention program based on the principles of the Self-Regulated Strategy Developed in composing and writing cohered and cohesive narrative text from second grade typically development Greek students.

Our data analysis reveals significant improvement in the performance from the pre to post phase of the study on students' production of well-organized narrative text. This intervention program had significant effects also on qualitative aspects of our sample students' writings. On this perspective, the majority of the students after the implementation of the intervention program produced cohesive narrative text with appropriate morph-syntactical and psychological structure. Moreover, the effectiveness of this program on student's behavior and internal motivation development during the writing process was remarkable. It is worth to be noted that even students with learning disabilities experienced academic progress. They managed to follow main steam classroom curriculum (due to inclusive educational system) showing significant improvement in relation to the structure of their narrative text and to the presence of concrete morphological elements (agreement between verb and subject, plural and singular number, article and noun).

More analytically, highlighting some of our findings, it is worth mentioning the fact that this training program helped the majority of the students to manipulate effective planning and drafting procedures. This training program in whole class setting

helped children to understand the basic elements of a well-structured narrative text. In addition, the experimental group children comprehended the necessity of the presence of supplementary elements (cohesive device, use of alternative cognitive verbs, inclusion of the writer's internal states...) in order to synthesize a complete and understandable narrative text. It also helped them to organize their ideas based on a concrete design and to enhance their ability to plan very carefully before writing (any type of text respecting on its specific genre structure). They manage also their behavior during the writing process as many of them develop internal motivation and understand the whole process. All these achievements were due to the fact that the students felt very comfortable with their selves as all the procedures were implemented in a collaborative way (students selected interesting topics, share their experiences, their problems, their obstacles etc).

These findings are consistent with De La Paz and Graham (1997) study in which the implementation of the Self-Regulated Strategy Development particular techniques has been proven very effective on students' attitudes to text production, especially for weak learners with learning difficulties ones. Relevant studies have highlighted the effectiveness of this strategy in improving the structure, the quality and the length of the produced texts (Graham, Reid, & Tracy 2009; Limpo & Alves, 2013). Our findings also are in agreement with a meta-analysis of 43 surveys (Gillespie & Graham, 2014) which highlighted the importance of strategies for improving student performance in text production (Glaser & Brunstein, 2007; Graham, Harris, & Mason, 2005; Torrance et al., 2007; Wong, Hoskyn, Jai, Ellis, & Watson, 2008).

In general, writing is a highly demanding task dependent on several modulating factors of cognitive and emotional nature. As our study has shown, writing requires the implementation of a set of specific mental processes related to planning, editing and revising the text. It also requires a big cognitive effort and it is unlikely for students to complete it successfully exclusively through the use of their natural abilities (Alamargot & Chanquoy, 2001; Galbraith & Torrance, 1999; Kellogg, 2008; MacArthur, Graham, & Fitzgerald, 2006; Wong, 1999; Wray, 1998). Consequently, explicit instruction that promotes and facilitates this challenging task is required. Studies have shown that children acquire the ability to perform better texts in school when these tasks are carried out in context with real communicative purposes or when self-regulated instructional programs are carried out (Garcia, Fidalgo, & Robledo, 2010; Wray, 1994). Our study results confirm all the above mentioned studies, despite the fact that it was aimed at typically developing students without any severe learning difficulties.

Besides these promising results, we should also refer to the supportive and reflective learning environment. Self-Regulated Strategy Development (SRSD) combines high level mental processes (planning, controlling drafting, revising) in order to increase student motivation and the development of positive thoughts and perceptions about their academic success (Harris, 1982). Based on our observations, due to these self-regulated characteristics, many of our students developed their self-perception about their effectiveness on text completeness and this is a very valuable result. In addition, it is generally acknowledged that self-regulated programs ensure

academic success, positive behavior and of course operate as an excellent instructional mean (Albertson & Billingsley, 1997; Flower & Hayes, 1980; Harris, Graham, & Schmidt, 1997).

#### 4. Conclusions

Self-Regulated Strategy is a very effective model of instructions but presupposes teacher's ability to: a) deeply understand all differed aspects of this strategy, b) manage each step so as to meet students' needs. In order to be more effective, a teacher has to constantly change between roles in the classroom (for instance sometimes s/he is needed to be an effective instructor, a mediator, motivational, reflective, supportive...). Intervention and analysis of the data also showed that students were benefited by the implementation of the program based on this strategy as they seemed to have a) understood better the basic elements of a well-structured narrative text, b) perceived and realized the need for complementary data (coherent creation, use of alternative cognitive indicators, etc.) c) learnt to organise their ideas more methodically based on a specific design and to plan much more carefully before they start writing d) monitored and self-assessed their learning course by developing internal incentives and e) finally, to have used metacognitive skills (design, reflection, control, evaluation, review).

Self-regulated strategy is a flexible and effective model of instruction on the condition of well training and proper teacher's education and guidance. It is important for the teacher to be aware of the different stages of the strategy and to be able to guide students to meet their needs. Most importantly, a teacher should have the flexibility to exploit the right methodological and pedagogical tools and techniques in order to enhance all students to be developed on a cognitive, emotional and social level.

##### 4.1 Recommendation

It would be a good idea if this intervention program was applied to all grades students and particularly in higher grades where the needs of writing process are more demanding and the differences in students' performances levels are more difficult for the teachers to deal with. It would also be beneficial if this intervention was applied to more difficult kinds of text such as pragmatological texts.

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