

Language learning strategy use of English FL learners in Greek schools: The role of school type and educational level

Gavriilidou, Zoe ✉

Democritus University of Thrace, Greece (zoegab@otenet.gr)

Petrogiannis, Konstantinos

Hellenic Open University, Greece (kpetrogiannis@eap.gr)



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Abstract

This article reports the results from the main study of a large-scale project focusing on language learning strategy use in Greece. Using the Strategy Inventory for Language Learning adapted in Greek, this study examined reported frequency of strategy use by 4932 students attending Greek mainstream or minority elementary and secondary schools. Results indicated that students attending minority schools demonstrated higher mean scores (representing frequencies of use) in all six types of language learning strategies. It was also found that the elementary school students demonstrated higher mean scores in all six language learning strategies factors. Results are discussed with regard to the reasons behind the relationship between the type of school, educational level and strategy use.

Keywords: language learning strategies; SILL; Greece; school students

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1. Introduction

A growing body of research has focused on the close relation between language learning strategy use and successful learning of a foreign or second language mediated by variables such as gender, age or motivation. In spite of the close attention paid, in previous research, to individual differences of the learners, issues related to different school types or teaching methods have not attracted analogous attention of researchers even though school type may affect implicit and explicit processes in language classroom. The present paper reports findings from a large scale quantitative study undertaken in Greece on language learning strategy use examining patterns of variation by school type and educational level.

2. Background ideas

2.1 Defining language learning strategies

Definitions regarding language learning strategies are basically found in literature on psychology, where learning is commonly referred to as the process of storing and retrieving information (Dornyei, 2005). In general, strategies have been described as techniques or devices learners use to gain knowledge (Rubin, 1975) or as actions toward achieving a given objective (Cohen, Weaver, & Li, 1996). Their conscious character was emphasized in the work of Chamot (2005) and Griffiths (2007). Thus language learning strategies have been defined as “conscious thoughts and actions that learners take in order to achieve a learning goal. Strategic learners have metacognitive knowledge about their own thinking and learning approaches, a good understanding of what a task entails, and the ability to orchestrate the strategies that best meet both the task demands and their own learning strengths” (Chamot, 2005, p. 14) or as “specific actions consciously employed by the learner for the purpose of learning language” (Griffiths, 2007, p. 91). O’Malley and Chamot (1990) define them as “the special thoughts or behaviours that individuals use to help them comprehend, learn or retain new information” (p. 1). Oxford (1990) describes them as “steps taken by learners to enhance their own learning” (p. 1) and claims that they refer to “specific actions, behaviors, steps or techniques that students use to improve their own progress in developing skills in a second or foreign language. These strategies can facilitate the internalization, storage, retrieval or use of the new language” (Oxford, 1999, p. 518). Finally, Weinstein, Husman, and Dierking (2000, p. 727), from the perspective of educational psychology, argued that “learning strategies include any thoughts, behaviors, beliefs or emotions that facilitate the acquisition, understanding or later transfer of new knowledge and skills”.

2.2 Research background

Much research has looked into language learning strategies, both in the field of second/foreign language (SLA/FLA) acquisition studies and educational psychology during the last four decades. The literature on learning strategies in the SLA or FLA emerged from an increased concern for highlighting the characteristics of effective learners and promoting learner-centered models of language teaching. The focus of this research body was on the processes used by learners for managing their learning and, more specifically, on identifying those strategies that make learners successful in language learning and those that lead to less successful learning. Many researchers have found that conscious use of appropriate learning strategies characterizes good language learners. It has also been found that many factors such as gender (Ehrman & Oxford, 1989; Green & Oxford, 1995; Kaylani, 1996; Lan & Oxford, 2003; Lee, 2003; Mochizuki, 1999; Nyikos, 1990; Oxford & Nyikos, 1989; Oxford et al., 1988; Oxford et al., 1993; Peacock & Ho, 2003; Politzer, 1983; Sheorey, 1999), age (Chamot et al.,

1987; Oxford & Crookall, 1989; Peacock & Ho, 2003), motivation (MacIntyre, 1994; MacIntyre & Noels, 1996; Schmidt et al., 1996; Oxford & Nyikos, 1989), language learning level (Chamot & El-Dinary, 1999; Mochizuki, 1999; Oxford & Nyikos, 1989), ethnicity (Mochizuki, 1999; Politzer & McGroarty, 1985; Reid, 1987), field of specialization (Ehrman & Oxford, 1989; Oxford & Nyikos, 1989; Politzer & McGroarty, 1985), and language teaching methods (Bejarano, 1987; Ehrman & Oxford, 1989; Gunderson & Johnson, 1980; Griffiths, 2008; Jacob & Mattson, 1987; Oxford & Nyikos, 1989; Politzer, 1983) are shown to be strongly related to language learners' choice of strategies.

More specifically, it has been evidenced that more successful language learners use more elaborated strategies (Kaylani, 1996; Lan & Oxford, 2003; Magogwe & Oliver, 2007) and less successful language learners may "sometimes use strategies even as frequently as more successful peers, but their strategies are used differently" (Chamot, 2003, p. 116). Successful language learners have the ability to select the appropriate strategy or a set of strategies for each task, while less successful learners do not have the so-called "metacognitive task knowledge" to opt for the appropriate strategies (Chamot & El-Dinary, 1999, 2003; Oxford et al., 2004).

A brief look at published research so far reveals that these studies involved mainly university students or adult learners of SL/FL. Few studies (e.g. Chen, 2009; Green & Oxford, 1995; Magogwe & Oliver, 2007) investigated high-school students learning English as SL/FL, while language learning strategy use of children under 13 years has been inadequately examined in the past. Comparing the preference of the types of strategies between adolescents and adults, it was found that junior secondary school students reported greater use of social, metacognitive, affective, memory, and cognitive strategies. High-school students on the other hand indicated a strong preference for compensation (Chen, 2009) and metacognitive (Magogwe & Oliver, 2007) strategies compared to adults who reported greater use of cognitive strategies (Green & Oxford, 1995). Nevertheless, no comparisons have been recorded for younger population such as between elementary-school aged children and adolescents.

2.3 Language learning strategy research in the Greek setting

In Greece, public education starts at age 5 with compulsory attendance of one year kindergarten (maximum two years). At age 6 children enter the primary education system (Dimotikon), which includes 6 grades up to the age of 12 years. Secondary education is divided in two levels. The former (Gymnasion) represents the junior high school and lasts 3 yrs. (12-15), giving a total of 10 years of compulsory education for all students in the Greek territory. The second level (Lyceion) represents the senior high school grades, lasts 3 more yrs. (15-18), and is divided in either mainstream or technical/vocational schools. There is also a parallel minority primary and secondary education system which children belonging to the Muslim minority of Thrace-Greece may attend. Minority Schools are situated in the northern part of Greece (Prefecture of Thrace).

With regard to the foreign or second language, a few empirical studies have been undertaken regarding the assessment of language learning strategies when learning a foreign or second language and the investigation of the effect of intervention programs in language learning strategy use. Kazamia (2003) focused on measuring the frequency of language learning strategy use in adult Greek learners of English. Psaltou-Joycey (2003) studied strategy use by Greek university students in BA of English language and literature and has shown that motivation, when linked to high aspirations regarding the proficiency level as well as the enjoyment at learning English, is higher among university students majoring in English. Gavriilidou (2004) reported on the strategies that Turkish L1 primary school children (aged 8-12) used when they learned Greek as L2. She found that metacognitive and cognitive strategies use were increased with age while socio-affective ones decreased. Papanis (2008) investigated the effect of an intervention program teaching language learning strategy use on Muslim bilingual minority children attending minority primary schools in the region of Thrace, northern Greece. He found that students that followed the intervention program reported higher frequency of metacognitive and cognitive strategy use. Psaltou-Joycey (2008) used the SILL (Oxford, 1990) in order to study cross-cultural

differences in the use of language learning strategies by students of Greek as a second language. Gavriilidou and Papanis (2009) investigated the effect of integrated strategy instruction by implementing a direct strategy instruction program on primary school children of the Muslim minority background in Thrace and found that students that participated in the intervention program improved to a statistically significant degree the language learning strategies required for the development of the four skills of listening, speaking, reading and writing when compared to the students that followed the typical curriculum. Psaltou-Joycey and Kantaridou (2009) involving bilingual and trilingual university students investigated types and levels of motivation with respect to proficiency level and the number of languages and found that motivation is correlated with plurilingual knowledge.

Gavriilidou and Papanis (2010) investigated university students' beliefs about their use of strategies. The results showed that university students use learning strategies to a high degree. No significant effects of gender, career orientation and knowledge of more than one language were revealed. On the contrary, there was a significant effect of language proficiency on the use of metacognitive strategies. Vrettou (2011) recorded the frequency of use in early adolescents who are learning English at school and investigated the effects of gender, proficiency and motivation. She found that females exceeded males in the use of cognitive, metacognitive, affective and social strategies. In addition, there was a correlation between motivation and frequency of language learning strategies reported by the participants. Sarafianou (2013) assessed the effectiveness of an intervention program on a group of upper secondary school students which was based on the application of explicit and integrated strategy instruction. The findings indicated that after strategy training the students of the experimental group showed significant improvement in strategy use as a whole as well as in all strategy categories, with the exception of compensation strategies.

Finally, Mitits (2014), in the latest relevant work, focused on Muslim minority group of adolescent learners in Thrace, north-eastern Greece, aged 12 to 15 learning English as foreign language and Greek as second language. She found significant differences between monolinguals and multilinguals on the frequency of overall strategy use, as well as on compensation and metacognitive strategy categories in favor of multilinguals who also outscored the monolinguals on individual items. The findings reveal a difference in the frequency and type of strategies preferred by monolingual and multilingual learners of English. Moreover, statistically significant effects of gender, age, language proficiency level in English and motivation to learn English were evidenced. In her study, girls outperformed boys with respect to the overall strategy use and on cognitive, compensation, metacognitive, affective and social categories; early adolescents used fewer memory and cognitive strategies as they grow up while they increased the use of compensation and affective strategies. It was also found that language proficiency level and motivation are positively correlated with the frequency of reported language learning strategies.

The previously mentioned research held in the Greek setting contributed to the current literature by shedding more light on language learning strategy use of high school and elementary school-aged learners of English as FL compared to research previously undertaken in other countries. It also provided findings concerning language learning strategy use of students attending different types of schools found in the Greek region, such as mainstream or minority schools, even though none of these studies involved a thorough examination of the effect of type of school on language learning strategy use.

Based on this research body three main shortcomings emerged: firstly, empirical evidence, particularly with regard to the relationship between FL learning and language learning strategy use, remains inconsistent or controversial due to the lack of a proper instrumentation that would accurately assess language learning strategy use and would provide reliable data for foreign or second language learning and teaching practices. The lack of such a valid and culturally adjusted instrument that could be used as a standard measure for any future empirical research is also a critical factor for the absence of data that could allow the comparisons between them. Secondly, even though the greatest amount of language learning strategy research in Greece focuses on school-aged populations (Gavriilidou, 2004; Gavriilidou & Papanis, 2009; Mitits, 2014; Papanis, 2008; Sarafianou, 2013;

Vrettou, 2011), the instruments used for data collection were different versions of the Strategy Inventory for Language Learning (SILL) (Oxford, 1990) which, is principally an adult-oriented instrument and was judged inappropriate for school-aged children in previous research (Ardasheva & Tretter, 2013). Thirdly, no previous comparisons were made between language learning strategy use of students attending different types of schools in Greece such as mainstream or minority schools.

Actually, according to the 1923 Treaty of Lausanne, the Greek state must provide segregated primary education for the Muslim minority living in Thrace (Greece) which is a region situated at the North-east part of Greece. The Muslim minority of Thrace consists of a) Turkish-speaking populations who became Greek citizens in May 1920, when western Thrace became part of Greece and Turkish became the only officially recognized language minority population, b) Pomaks, a Muslim Slavic-speaking community who live in the area around Xanthi, Western Thrace and c) Muslim Roma who also live in Thrace and speak Turkish, and Roma who speak Romany (the language of the Rom). The curriculum in the minority primary schools is divided in two: half of the subjects are taught in Greek (history, geography, environmental studies, Greek language) by teachers with L1 Greek and half in Turkish (religion, physics, chemistry, Turkish language) by L1 Turkish-speaking teachers. English is taught as a foreign language. In the region of Thrace, there are also minority secondary schools in which the curriculum includes subjects taught in Greek (Greek language, literature, history, geography, civil education) and in Turkish (Turkish language, religion, physics, mathematics).

In order to respond to this methodological issue and the lack of systematic and a country-level representative evidence, a national-large project was designed aimed at a) offering a shortened, translated in Greek, simplified and culturally adapted version of SILL with the aim of further administering it to school-aged students (upper elementary and junior secondary schools), b) profiling the language learning strategy use of the population attending Greek mainstream and minority elementary and secondary schools in Greece when learning English as a foreign language, and c) constructing and validating an instrument which would be based on the SILL for profiling teachers' language learning strategy use in classroom.

This project included an exploratory and a main study phase. During the former (April 2012 - March 2013), 1308 students from 16 schools representing 5 prefectures (Athens, Piraeus, Thessaloniki, Rodopi, Ioannina) and 4 regions (Attica, Central Macedonia, Eastern Macedonia-Thrace, Epirus) of Greece filled in a recently adapted version of the V7 SILL by Gavriilidou and Mitits (2014). The adapted version of the SILL in Greek that was used for this stage was tested for its content validity through exploratory and confirmatory factor analysis, where a six-factor model based on the six subscales suggested by Oxford was retained and tested (see Demirel, 2009). The analyses finalized a common factorial pattern consisting of 29 items whilst retaining Oxford's factorial structure (Petrogiannis & Gavriilidou, 2015). The main study of the project (April 2013 - June 2014) included measures of language learning strategy use of mainstream and minority, elementary and secondary school EFL learners using the 29-item instrument developed during the exploratory phase.

This article draws on data collected during the main study of that project and examined differences of language learning strategy use between students attending mainstream and minority, elementary and secondary schools in Greece. The purpose of this article is to investigate the effect of type of school (mainstream vs. minority) and educational level (upper-elementary vs. junior secondary) based on the overall strategy use index as well as the separate SILL categories indices by learners of English attending mainstream and minority, elementary and secondary schools in Greece.

3. Method

3.1 Participants

The sample consisted of 4932 students in total, including approximately equal number of boys (N= 2344, i.e. 47.5%) and girls (N=2588, i.e. 52.5%). The figure represents the 0.71% of the student population aged 9-14 yrs

in a national level according to the demographic statistics provided by the Hellenic Statistical Authority. The total sample size is larger enough the initial target of 0,25% that had been set prior to the main phase of the study aiming to collect data by a sample of 1800 students corresponding to 300 students in each grade (three senior elementary school grades and three junior high school grades). Mainstream schools were attended by 3348 (67.9%) students and more specifically, the students were recruited from the 12 regions of the country: 672 (22.3% of the mainstream schools sample size) students attended schools in Eastern Macedonia-Thrace, 474 (14.2%) in Central Macedonia, 32 (1.0%) in Western Macedonia, 103 (3.1%) in Epirus, 357 (10.7%) in Thessaly, 131 (3.9%) in Ionian Islands, 255 (7.6%) in Sterea Ellada, 245 (7.3%) in Peloponnese, 175 (5.2%) in Northern Aegean, 90 (2.7%) in South Aegean, 746 (22.3%) in Attiki and 68 (2.0%) in Crete. In addition, 1584 (32.1%) were students from minority schools in north-eastern Greece (Eastern Macedonia-Thrace). Finally, elementary schools were attended by 2714 (55.0%) students while 2218 (45.0%) attended secondary education schools.

3.2 Instrumentation and procedure

The main instrument used in the study was the 29-item translated and adapted Greek version of the SILL (Oxford, 1990) which was adjusted for school population during the exploratory phase of the project (Petrogiannis & Gavriilidou, 2015). This 5-point Likert-type scale instrument asks learners to report the frequency with which they use certain language learning strategies. The items are organized under two broader factors, i.e. direct and indirect learning strategies, depending on the extent to which each strategy item is involved in language learning. In addition, the items are further distributed under six factors:

i. “Direct strategies” include: (a) *memory strategies* (remembering and retrieving vocabulary), i.e. how learners remember and retain language (4 items), (b) *cognitive strategies* (comprehending and producing text), which indicate how learners think of their learning (6 items), and (c) *compensation strategies* (compensating for the lack of knowledge), reflecting how learners make up the limited language to achieve successful language use (4 items).

ii. “Indirect strategies” include: (d) *metacognitive strategies* (manipulating learning processes), i.e., how they manage their own learning (7 items), (e) *affective strategies* (regulating affective state), or how learners adjust their affective status in the learning process (3 items), (f) *social strategies* (learning with others) which refer to how learners learn language through social interaction) (6 items).

The instrument was verified for its psychometric properties. With regard to the internal consistency of the SILL’s two-construct (i.e. direct and indirect LL strategies) as well as the six-construct factor structure, the reliability coefficients were estimated by using the Cronbach’s α , both for the whole sample and the two sub-samples (elementary and secondary education students). The internal consistency coefficients suggested a satisfactory degree of internal consistency since the coefficients were ranging from .75 to .87 for the higher order factors (direct and indirect strategies) and from .45 to .83 for the six subscales.

Respondents received instructions to fill in the 29-item SILL and the background questionnaire in their classrooms following the necessary permissions by the central and local educational authorities.

The main statistical analysis used in the study was independent samples t-tests for the two main independent variables of interest (i.e. level of education and type of schools) as well as the 2x2 analysis of variance for unequal sample sizes allowing the researchers to evaluate the effect of two independent variables and the interaction between them (Pagano, 2007). In addition, descriptive statistics (means and standard deviations) were also used to complement the information. Results were considered statistically significant at the .001 level. A mean score over 3.5 on all the SILL items was considered to reflect “high use” of a given strategy, 2.5 to 3.4 indicates “medium use”, and below 2.4 indicates “low use” of a strategy according to Oxford’s (1990) suggestions.

4. Results

4.1 Descriptives

The mean frequency of overall strategy use, based on the 5-point Likert scale used in the SILL for the whole sample was found to reflect the “medium frequency range” ($m= 3.18$, $sd=.87$). The means for the 6 language learning strategy categories also fell within the same range with *metacognitive* strategies exhibiting the highest mean frequency ($m= 3.41$, $sd=.85$), followed by *affective* ($m= 3.25$, $sd= .97$), *compensation* ($m= 3.23$, $sd= .88$), *social* ($m= 3.10$, $sd= .92$) and *memory strategies* ($m= 3.08$, $sd= .81$). *Cognitive* strategies revealed a mean of 3.04 ($sd=.84$) and they were the least used strategies.

4.2 Type of school

The descriptive statistics concerning students' responses to the six types of strategies from the two sub-samples of minority and mainstream schools are presented in Table 1. The frequencies of use of all the strategy types were found to be in the medium frequency range except for metacognitive strategies which demonstrated high use in the minority sample ($m= 3.55$, $sd= .88$).

In addition, the minority sub-sample of students demonstrated higher mean frequency rates in all the types of strategies. Independent samples t-tests revealed significant differences between mean scores in all six types of language learning strategies between the non-minority and minority samples.

Table 1

Descriptive data and t-test comparisons by language learning strategies and status of school

Language Learning Strategies (LLS)	Status group/school		t	p
	Mainstream Mean (s.d.)	Minority Mean (s.d.)		
Memory	2.90 (.77)	3.26 (.85)	-12.5	.001
Cognitive	3.01 (.83)	3.08 (.86)	-2.4	.001
Compensation	3.14 (.85)	3.33 (.92)	-6.8	.001
Metacognitive	3.28 (.83)	3.55 (.88)	-9.9	.001
Affective	3.10 (.96)	3.40 (.99)	-10.0	.001
Social	2.95 (.89)	3.31 (.95)	-12.6	.001

4.3 Educational level

With regard to the level of education, the elementary school students demonstrated higher mean scores (representing frequencies of use) in all six LLS factors. The mean differences were statistically significant in all but one case, the compensation strategies (see Table 2).

Table 2

Descriptive data and t-test comparisons by language learning strategies and level of education

LLS	Level of education		t	p
	Elementary Mean (s.d.)	Secondary Mean (s.d.)		
Memory	3.24 (0.82)	2.84 (0.75)	17.8	.001
Cognitive	3.18 (0.84)	2.86 (0.82)	12.9	.001
Compensation	3.21 (0.92)	3.20 (0.83)	.3	n.s.
Metacognitive	3.57 (0.83)	3.12 (0.82)	18.4	.001
Affective	3.42 (0.97)	2.94 (0.94)	17.3	.001
Social	3.29 (0.91)	2.79 (0.88)	19.0	.001

4.4 Interaction effects by type of school and educational level on learning strategy use

In the final step of the current analyses, the six Language Learning Strategy scores were subjected to a two-way (2x2) analysis of variance by which the main and the interaction effects of the two independent variables of interest (status of school and level of education) on the Language Learning Strategy use were tested (see Tables 3a, 3b). All but two effects were statistically significant at the .001 significance level. More specifically, the analysis of variance yielded a main effect for the school type, controlling for educational level, in five of the Language Learning Strategy categories, with the exception of cognitive strategies. In all the analyses students attending minority schools indicated higher use of strategies than those in mainstream schools.

The main effect of level of education yielded statistically significant F ratios in all the six separate Language Learning Strategy categories' analyses indicating that the mean score for frequency use of strategies was significantly higher for elementary than for secondary school students.

Table 3a

Descriptive statistics of the LLS use according to level of education and status of schools

LLS	Variables		Level of education		Total Mean
	Status of school		Elementary Mean (sd)	Secondary Mean (sd)	
Memory	Mainstream		3.14 (.79)	2.79 (.73)	3.06
	Minority		3.43 (.85)	2.93 (.79)	
Cognitive	Mainstream		3.15 (.82)	2.89 (.84)	3.01
	Minority		3.25 (.87)	2.78 (.77)	
Compensation	Mainstream		3.11 (.86)	3.23 (.82)	3.23
	Minority		3.43 (.96)	3.16 (.89)	
Metacognitive	Mainstream		3.45 (.79)	3.13 (.83)	3.37
	Minority		3.78 (.86)	3.11 (.81)	
Affective	Mainstream		3.27 (.95)	2.94 (.95)	3.20
	Minority		3.67 (.95)	2.92 (.92)	
Social	Mainstream		3.19 (.86)	2.73 (.88)	3.07
	Minority		3.50 (.95)	2.93 (.91)	

Table 3b

2x2 ANOVA for the influence of school status and level of education on students' LLS use

LLS	Source of Variance*	Ss	df	ms	F	p	η^2
Memory	Lev.E.	144.60	1	144.60	237.44	.000	.053
	Sch.St.	36.83	1	36.83	60.48	.000	.015
	Lev.E x Sch.St.	4.32	1	4.32	7.09	.008	.002
	S/AB Error	2492.53	4093	0.61			
	Total	41066.50	4097				
Cognitive	Lev.E.	110.41	1	110.41	159.30	.000	.037
	Sch.St.	0.04	1	0.04	0.06	n.s.	.000
	Lev.E x Sch.St.	8.70	1	8.70	12.55	.000	.003
	S/AB Error	2836.72	4093	0.69			
	Total	40832.58	4097				

Table 3b ... continued

LLS	Source of Variance*	Ss	df	ms	F	p	η^2
Compensation	Lev.E.	4.99	1	4.99	6.54	.011	.002
	Sch.St.	13.65	1	13.65	17.87	.000	.004
	Lev.E x Sch.St.	29.50	1	29.50	38.626	.000	.009
	S/AB Error	3126.35	4093	0.76			
	Total	45886.25	4097				
Metacognitive	Lev.E.	199.26	1	199.26	293.50	.000	.065
	Sch.St.	18.94	1	18.94	27.901	.000	.007
	Lev.E x Sch.St.	24.09	1	24.09	35.490	.000	.008
	S/AB Error	2778.78	4093	0.68			
	Total	49617.69	4097				
Affective	Lev.E.	240.15	1	240.15	267.07	.000	.060
	Sch.St.	29.46	1	29.46	32.758	.000	.008
	Lev.E x Sch.St.	35.06	1	35.06	38.986	.000	.009
	S/AB Error	3680.47	4093	0.90			
	Total	46098.89	4097				
Social	Lev.E.	209.20	1	209.20	262.96	.000	.058
	Sch.St.	53.35	1	53.35	67.060	.000	.016
	Lev.E x Sch.St.	2.61	1	2.61	3.285	n.s.	.001
	S/AB Error	3256.22	4093	0.80			
	Total	42151.44	4097				

Note. * Lev.E.= Level of education; Sch.St.= School status

The interaction effect was significant in five out of the six separate ANOVAs that were conducted indicating that elementary education students of minority schools had higher mean scores (based on the scaled frequency use of LLS) than those of mainstream schools, and secondary education students in minority schools revealed lower mean scores in relation to those attending mainstream schools. The only non-statistically significant interaction was revealed for social strategies.

In all the analyses, Cohen's (1988, 1992) rules of thumb on the determination of effect size were used. The strength of these relationships, as indexed by η^2 , was ranged in low levels (small effect sizes). This means, for example, that 5,3% of the total variance of the mean scores of memory strategies is explained (or is attributed) to the main effect of the level of education ($\eta^2 = .053$). In the same manner, only 1,5% of the total variance of the mean scores of memory strategies is explained (or is attributed) to the main effect of the school status ($\eta^2 = .015$) and many others.

5. Discussion

The purpose of the article was to investigate what kinds of strategies learners of English attending mainstream and minority, elementary and secondary schools in Greece report they use. This discussion explores the reasons behind the relationship between the type of school, educational level and strategy use. It was found that the total sample made medium use of all types of strategies. It was also found that students attending minority schools reported using more strategies than children attending mainstream schools. The same was true for elementary students who reported using more strategies than students attending secondary schools.

As anticipated, the mean score, reflecting average frequency of Language Learning Strategy use, of the 4097 students who participated in the study was in the "medium use range", based on Oxford's (1990) approach. This finding suggests that school students in Greece do not use often the widest range of strategies. This may be due to the standard academic approaches applied to teaching practiced in Greek elementary and secondary schools.

Indeed, the relation between teaching methods and language learning strategy use has been highlighted in previous research (Oxford & Nyikos, 1989; Politzer, 1983). It is worth noting though that the medium use of strategies in our sample is a quite surprising finding given that in the Greek educational context the Revised Curriculum for the teaching of English as a foreign language in primary and lower secondary schools (Pedagogical Institute, 2003) follows a *holistic* approach to knowledge and places particular emphasis on the cultivation of the ‘learning how to learn’ skill within a multilingual and multicultural world. However, despite the efforts made by FL policy makers to promote these concepts and integrate strategy instruction in the FL curricula, there is a lack of a continuous, long-term, strategic plan on in-service teacher training which could sensitize and familiarize teachers with the benefits of language learning strategy instruction and how to implement it in classroom activities.

As a result, FL teachers are not fully aware of the positive impact of language learning strategies in FL learning and additionally they feel inadequately prepared to implement the curriculum or to design intervention programs promoting strategy use during FL teaching. Because teaching methods influence language learning strategy use, teachers in Greek schools should be provided by the appropriate state institutions with systematic training in strategy teaching that will support them in becoming aware of the importance of strategic teaching in solving problems of implementation of intervention programs that promote learning strategy use as they teach, and in modifying instruction to meet the needs of their contexts and students. Teaching materials such as *Foreign Language Learning Strategy Instruction: A teacher’s guide* (Psaltou-Joycey & Gavriilidou, 2015), which is intended for practicing EFL teachers, are useful tools for teachers whenever they seek information about acquiring knowledge, understanding, and skill regarding implementation of explicit and integrated language learning strategy instruction within their everyday teaching practices.

5.1 Effects of type of school

In this study, the type of school had a pervasive influence on the reported use of language learning strategies. The results showed that children attending minority schools not only demonstrated statistically significant higher mean scores in all six categories of strategies than children attending mainstream schools but also made high use of metacognitive strategies. With regard to the type of school, it was revealed that students attending minority schools in Thrace, northern Greece, compared with children attending mainstream schools, reported use of more metacognitive strategies (for controlling their learning process), more affective strategies (for controlling and manipulating their feelings related to learning), more compensation strategies (for overcoming deficiencies in the learning process or foreign language use), more social strategies (for interacting with their peers), more memory strategies (for memorizing new grammatical, semantic or syntactic information) and, finally, more cognitive strategies (for associating new information with existing information and for forming mental patterns).

The relation between the type of school and reported language learning strategy use is more complex than it appears to be at first sight. Children attending minority schools in Greece are bilingual and in some cases trilingual. In their everyday struggle to learn their second language for social adjustment-related reasons (i.e. communication in everyday situations, at school, in their social interactions with the Greek-speaking community etc.) minority students employ more strategies to help themselves find resources to process linguistic information more efficiently. In other words, in this demanding situation, they are likely to use a variety of strategies (social adaption -related, rule-related, or communicatively oriented strategies) so that they can choose those that they finally consider more helpful for their learning. In doing so, they actively involve themselves in learning the language, they become experienced language learners, they acquire and use language learning strategies that help them achieve language learning and they probably transfer the strategies they use in learning their second language in another foreign language learning situations. When viewed under this perspective it could be assumed that current findings are consistent with previous research evidence (Hong-Nam, 2006; Hong-Nam & Leavell, 2007; Mitits, 2014; Tuncer, 2009) which indicated statistically significant differences between monolingual and bilingual or multilingual learners, favouring the latter group. The current finding provides new evidence for a substantial relationship between strategy use and bi-/multilingualism.

This relationship between strategy use and bi-/multilingualism can also challenge a discussion why children attending minority schools reported high use of metacognitive strategies comparing with their peers attending mainstream schools. Metacognitive strategies are used by FL learners in order to exercise executive control of their learning through planning and evaluating their own progress in learning process. They are considered as strategies that contribute most to effective language learning and they are usually preferred by good language learners (Kaylani, 1996). Metacognition is "knowing about knowing" or "thinking about thinking" or else it is the active process of understanding the cognitive processes involved in learning and having control over those processes (Baker, 2000, 2006). Metacognition is highly related with bilingualism (Baker, 2000; Peal & Lambert, 1962; Wharton, 2000).

Baker (2000) maintains that students who are literate in both the first and second language have a greater flexibility and a metacognitive advantage over monolinguals because of the rich resources they bring to the understanding of the second language from their knowledge of the first. Given that the minority sample of this study consists of bilinguals, it could be assumed that they are provided with opportunities to reflect on language and its structure and meaning in such a manner allowing them to focus on the process of their learning. In other words, their preference to deploy metacognitive strategic procedures (such as monitoring, planning, evaluating, problem solving and implementing) may indicate their effort for self-management which can be defined as deliberate, goal-directed attempts to manage and control efforts to learn L2 (Oxford, 2011; Rubin, 2001, 2005). This might explain the high use of metacognitive strategies by students attending minority schools revealed in this study.

5.2 Effects of educational level

Educational level had also a profound influence in this research. Compared with students attending secondary schools in Greece, students of elementary schools demonstrated higher mean scores in all six types of language learning strategy. This result seems contradictory with previous research on the impact of age or educational level in language learning strategy use, which indicated that more, and more sophisticated strategies are employed by older or advanced students (Bialystok, 1981; Chamot et al., 1987; Politzer, 1983; Tyacke & Mendelsohn, 1986). However, there is previous research undertaken in Greece (Mitits, 2014; Psaltou-Joycey & Sougari, 2010) which provided evidence that the older the learners the fewer strategy use they report. One explanation for this incongruence in results could be attributed to the fact that the effect of age on language learning strategies interrelates with other factors such as the level of proficiency, culture, beliefs or attitudes in a rather complex manner (Psaltou-Joycey, 2010). As far as the Greek context is concerned Mitits (2014) maintains that students attending secondary schools in Greece achieve their EFL related goals by the age of 13 or 14 (the average time period they are examined for the B2 level certificate in English) and tend to lose interest in English as a school subject. This loss of interest results in reduced strategy use as well. Another possible explanation is that given the learning goals, the demanding curriculum of secondary Greek schools and teaching practices which privilege structure-oriented FL teaching or memorization instead of active learning, students in secondary education adopt learning methods useful in a traditional, structure-oriented FL teaching environment which is based on tests or assignments and rejects strategy use.

6. Conclusion

This study provides insights into variables that may affect language learning strategy use. We demonstrated that there are effects attributed to the type of school and the educational level on reported language learning strategy use based on the answers provided by elementary and secondary education students in Greece. To the degree that wider use and range of appropriate strategies correlate with more successful language learning, understanding of variables affecting such strategy use contributes to better insight into foreign/second language acquisition. Furthermore, sharing results as those presented in this study could be helpful in motivating students to use more and more varied strategies and could provide information of the various types of strategies they have at their disposal.

We also suggested the need to provide systematic training in strategy teaching to FL teachers that will support them in becoming aware of the importance of language learning strategies and able to implement intervention programs promoting strategy use. For doing so, teachers should be able to account for individual differences in strategy choices and recognize factors that affect strategy use. This ability will allow them to schedule their teaching taking into consideration the differentiated needs of their students. Thus, the results of this research can contribute to an effort to improve FL instruction, by modifying learner's and teacher's attitudes and class behaviours so that the former will become autonomous in learning and the latter will adopt more creative or communicative practices promoting strategic learning.

7. References

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