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L2 Motivational Self System and Learning Approaches of High School Students

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Abstract

This study identifies the level of L2 motivational self-system (L2MSS) consisting of Ideal L2 Self, Ought-to L2 Self, and L2 Learning Experience, and the application of deep and surface learning strategies on high school students regarding gender and grades. The study is designed in both correlation and descriptive comparative models. The research sample is composed of 202 high school students. Two questionnaires are used in the collection of data: The L2 Motivational Self System Questionnaire and The Student Process Questionnaire. SPSS 22 is used to analyze data and the findings show that the level of L2MSS is moderate and the most frequently reported sub-category of L2MSS is L2 Learning Experience. Regarding gender, the levels of each L2MSS category of the female participants are greater than those of the males. In terms of proficiency, students with higher grades tended to have an Ideal L2 Self motive than unsuccessful students. The findings also reveal that learning strategies are moderately used and surface learning strategies are the most widely used ones, and the level of learning approaches varies substantially in favor of females. Besides, the students with low grades tended to use surface learning strategies more than successful learners. Finally, the students with high levels of Ideal L2 self tend to use deep learning strategies.

Keywords: L2 Motivational Self-System, Ideal L2 Self, Ought-to L2 Self, L2 Learning Experience, Deep Learning Strategies, Surface Learning Strategies

1. Introduction

Global language teaching and learning approaches have been changing as a result of evolving needs of students and individual differences (Dağbaşı, 2018). The significance of individual differences among learners has been revealed in second language studies since the 1960s (Dörnyei, 2009). Motivation proves to be one of the main differences among others including language ability, learning strategies, and styles (Dörnyei, 2005). Motivation has thus become a significant factor in second language learning. Studies on the role of motivation in second language acquisition have now moved towards the socio-dynamic period, driven by Dörnyei's work, known as the L2 Motivational Self System (L2MSS) (Dörnyei, 2009). L2MSS also includes three main components as Ideal L2 Self (ILS), Ought to L2 Self (OLS), and L2 Learning Experience (LLE) (Dörnyei, 2009). L2MSS is a

variable affecting the utilization of language learning strategies (LLS). In other words, motivation is the variable with the strongest relationship with learning strategies (Oxford & Schramm, 2007). More LLS are used by the learners who are more motivated to learn (Grenfell & Macaro, 2007), and the factors as motivation and strategy use are interrelated (Oxford & Schramm, 2007). This means that high motivation can lead to high use of LLS or vice versa. (Rivera-Mills & Plonsky, 2007). Therefore, LLS leads to self-sufficient learning with motivation (Hong Nam & Leawell, 2006), and greater L2 success. As explained by Rubin (1987), it is crucial for students to be in a position to control their learning, so that, once alone, they can learn outside the school.

LLS are the most critical elements determining how students study English (Oxford, 2016). They can be divided into two groups, namely surface and deep learning strategies (Tragant et al. 2013). While the surface learning strategies promote memorization and recurrence, deep learning strategies require the application of metacognitive strategies and linguistic skills in practical situations. Deep learning strategies cultivation is important in the language learning process since it has a far greater impact on the EFL skills of students than surface strategies (Gerami & Baighlou 2011). On the other hand, it is difficult to have students use deep learning strategies in their classes until they learn how internal and contextual influences affect the choice of deep approaches to learning. In the existing literature, predictive roles of individual factors as motivation and self-efficacy on the use of surface and deep LLS have been widely explored (Zhan 2018; Wang & Bai 2017; Chang & Liu 2013; Senko et al. 2011; Li & Wang 2010). However, the relationship between the L2MSS of high school students and the use of surface and deep LLS has not been explored, yet.

2. Review of Literature

2.1. L2 Motivational Self System (L2MSS)

L2 motivation has been reconceptualized by Dörnyei (2009). This paradigm builds on Higgins's (1987) self-discrepancy where students study a foreign language or enhance their language skills to eliminate individual discrepancies whenever they see the difference as a language student and as an ideal student in their current state (Subekti, 2018). Markus and Nurius'(1986). The principle of the "Possible Self" is also emphasized in Dörnyei's L2MSS, where students can see the self in the future: What they are talking about, what they want to be, and how they worry about the future are just some reflections introduced by Dörnyei (Subekti, 2018). Besides, L2MSS comprises three components: Ideal L2 Self, Ought to L2 Self, and Language Learning Experience (Dörnyei, 2009). The ILS focuses on the future self-image regarding L2. The concept could therefore be linked to internal wishes. The inspiration, therefore, comes from an inconsistency between the present L2 image as well as the students' potential L2 images, that is the ILS. The studies of the ILS have further contributed to the emergence of new theoretical concepts like the "Rooted L2 Self," based on the compelling relationship between the student, culture, and background, and the "ideal multilingual self," which includes the wish to become a multilingual self (Henry, 2013; MacIntyre, et al., 2017). The next category, the OLS is characterized by external elements including families, friends, and community. The students, in other words, have an L2 self, so as not to let other people down and to attempt to live up to the standards of others. The three components of L2MSS should be consistent with each other (Dörnyei, 2009). However, some research studies have not reported statistically relevant findings. Moreover, taking this context into account, several researchers assumed that the OLS could make more sense in different environments, where societal values are more stressed (Lamb, 2012). Besides, the converse effect could occur in the context of the 'Anti-ought-to' L2 Self if L2 is taken into account within a society. Thompson and Vasquez (2015) stated in a case study that the negative attitudes of others to the L2 learning process could shape a motive. These negative external effects have also been studied by other researchers (Dörnyei, et al., 2015; Lanvers, 2016). Finally, the LLE component refers to one's current life, language classes, students, course books, subjects, the teaching atmosphere, or anything that can affect the current L2 learning process (Dörnyei & Al-Hoorie, 2017). The experiments also show that motivated learning behavior and LLE are more closely related than to the ILS and OLS (Csizér & Kormos, 2009; Papi 2010). To sum up, in various countries such as Japan, China, and Iran, the use of L2MSS has been investigated and validated (Lamb, 2012).

Due to Dörnyei's (2009) greater explanatory capacity to explain the motivation of learners, several recent studies examine the motivation of learners using the L2MSS as a theoretical paradigm in different learning contexts (MacWhinnie & Mitchell, 2017; Khany & Amiri, 2016; Moskovsky, et al., 2016; Yaghoubinejad et al., 2016; You et al., 2015; You & Dörnyei, 2014; Henry, 2013). Taguchi et al. (2009) studied and observed that L2MSS was a part of a learning effort. The motive of learners using L2MSS and its relation to anxiety and the intended learning effort was explored in a further analysis conducted by Papi (2010). This research showed that all L2MSS variables contributed greatly to the learning intentions of learners. Also, Moskovsky et al. (2016) performed a study exploring the relationship between L2MSS and foreign-language performance that showed that the components of L2MSS were not reliably correlated with performance through reading or writing assessments by the learners. Lamb's (2012) research also examined junior high school learners of English, finding that L2's optimistic views are the best predictors of both intended learning and L2 skills in both contexts. Numerous studies on L2MSS analyze the interactions between students' L2MSS and other factors (Papi, 2010), as self-reporting abilities (MacWhinnie & Mitchell, 2017), fear and auto efficacy (Ueki & Takeuchi, 2012), but interestingly few studies are analyzing the relationship between L2MSS and LLS.

2.2. Surface and Deep Learning Strategies

Language Learning Strategies (LLS) are practices used by students to learn or monitor language learning (Griffiths 2015). LLS is not a single concept, though. Over the years the LLS classification was varied and unclear. Oxford (1990) grouped LLS into six categories including “memory, cognitive, compensation, metacognitive, affective, and social strategies.” More recently in a validation report, Tragant et al. (2013) also classified LLS into skill-based deep processing strategies. They noticed that deep-processing strategies dependent on competence belonged to a profound collection of strategies that required higher-level expertise, including metacognitive strategy and the use of language skills in contexts; whereas language study strategies may be considered a surface cluster of strategies that promoted visual and auditory memorization. Successful L2 learners used deep LLS, whereas unsuccessful peers used surface LLS, as observed by Gerami and Baighlou (2011).

Haggis (2003) defined and illustrated surface and deep learning strategies. Deep learners make a connection between the ideas and previous knowledge. It is also recognized as a constructivist learning activity, the notion of content and competencies to be understood in the context of the previous learner experience (Alt, 2014). Students use their expertise and skills to interpret learning content more clearly, in contrast to surface learning that is limited to rote learning and retaining (Price, 2014). The deep approach is regarded as an effective way of managing the acquisition of information that rises exponentially in cycles of transformation (Alt, 2017). Deep learners often think critically of the recently acquired content, link knowledge with other sources, and want to clarify what the material means. These skills can be related to self-regulated learning that relates to the student's capacity to use internal controls for learning, which includes establishing its objectives, transmitting new meanings from established information, and sensitizing current knowledge frameworks (De Clercq et al., 2014). Students that have a deep understanding, coordination, or strategic choice of several approaches are referred to as self-regulating deep learners (Hattie, 2009). These students are described as possible teachers since they have a lot of techniques to use when their current approach was not functioning (Hattie, 2009). In a more technical sense, Pintrich et al. (2000) defined self-regulation as an involved, positive mechanism that allows students to set targets for their learning and try to track, change and regulate their comprehension, motivation, and behavior. Consequently, students are directed and restricted by their objectives and contextual characteristics in the environment. The students know what, where and why, and how to apply effective methods of learning. Deep learning strategies include preparation and organization, monitoring of strategies, design mapping, metacognitive strategies, self-regulation, and raise extensive questions (Pegg & Tall, 2010). There is a range of deep learning strategies that improve the learner's skills for deeper thinking and for learning to be more strategic. These include self-verbalization, consciousness, self-monitoring, justification, self-interpretation of the problems, peer support, cooperative learning, assessment and reflection, problem-solving, and critical thinking strategies (Pegg & Tall, 2010).

Surface LS contains the vocabulary of the subject matter, lesson content, and much more details such as recording, summarization, underlining and highlighting, note-taking, mnemonics, outline and transformation, organization of notes, developing working memory, imagery, and so forth. Once a student has started creating a surface understanding that it's important to encode the knowledge in such a way that it can be retrieved later. The coding comprises different layers of learning strategies: the former establishes storage power and the latter develops strategies for retrieval. Encoding strategies are meant to improve both, but with a focus on improving recovery capacity (Bjork et al., 2007). While some people do not enjoy this step, it consists of practice, becoming curious, and experimenting again and are prepared to accept complexity and confusion during this period of investment (von Stumm, et al., 2011). This requires adequate metacognition and a calibrated sense of progression in the intended outcome of learning. Testing, coaching, practice interleaved, rehearsal, maximization of commitment, support, time on the job, analysis of data, learning how to get input, and intentional preparation are some of the surface strategies (von Stumm, et al., 2011).

Several experiments on L2MSS and LLS were performed separately. Research studies have shown that the motivations of language education are linked favourably with the strategic actions and performance of the students. For example, Chang and Liu (2013) indicated that highly engaged students use the LLS substantially more periodically than their less motivated peers with a medium level of learning motive. There have also been many studies on the links between various LLS and language learning motives. The literature shows that such correlations are more complicated than merely assuming that deep LLS is encouraged by intrinsic motives and extrinsic motives promote the surface LLS. Deep LLS is possible both for extrinsic and intrinsic reasons (Zhan 2018). This study enlightened the researcher to explore the level of L2 motivational self-system consisting of ILS, OLS, and LLE and the usage of deep and surface learning strategies by high school students regarding gender and language grades. The above review of the literature suggests that motives for language learning affect the preference of LLS use and that the relationship between motives for language learning and the LLS may be more complicated. However, scientists underexplored the relationship between the motives of language learning and LLS. This research aims primarily to explore a potential connection between the L2MSS and the use of surface and deep learning strategies regarding gender and language grades. For this main objective, the research questions are:

1. What level of each component of L2MSS do high school students demonstrate? Does the level of L2MSS differ significantly in terms of gender, and foreign language grades?
2. Which approaches to learning are used by high school students? Do these strategies differ significantly in terms of gender, and foreign language grades?
3. Is there a correlational relationship between high school students' L2MSS and LS?

3. Method

This research study is a descriptive one based on the quantitative research method. The correlational and descriptive models are employed in this study. L2MSS and language learning strategies are dependent variables, while gender and foreign language grades are independent variables. The research attempted to characterize a current condition and to decide the magnitude of the relationship between variables.

3.1. Participants

202 high school students in Turkey enrolled in the research in the academic year 2020-2021. They were between the ages of 14 and 18. They were chosen using a simple random sampling technique. Table 1 describes the distribution of demographic characteristics of the students enrolled in the study.

Table 1: Demographic characteristics of high school students

Variables	Groups	N	%
Gender	Male	98	48.5
	Female	104	51.5
Foreign	5	51	25.2
Language	4	53	26.2
Grades	3	43	21.2
	1-2	55	27.2
Total		202	100

As shown in Table 1, 48.5% of the high school students in the sample are males, while 51.5% of them are females. 27.2% of them are not successful, while 25.2 of them are very successful.

3.2. Instruments

The L2MSS Questionnaire (Taguchi et al.,2009) and The Student Process Questionnaire (Biggs et al., 2001) were the two questionnaires used in the data collection process. To collect personal data, questions about the students' gender and language grades, were added at the top of these surveys.

The L2MSS Questionnaire (L2MSS)

The L2 Motivational Self System Scale of Taguchi et al., (2009) was applied for the identification of the L2MSS. There are 27 items, where nine are connected with ILS, nine are associated with OLS, and nine with LLE. The scale is a 5-point Likert scale ranging from "strongly disagree to strongly agree." The Cronbach alpha coefficient for the whole scale is .89. The reliability coefficients for the sub-categories can be listed as follows: "ILS, .88, OLS, .93, LLE, .87". Based upon Cronbach Alpha Coefficient scores, the scale was determined to be reliable.

The Student Process Questionnaire (R-SPQ-2F)

The Student Process Questionnaire developed by Biggs et al., (2001) was used to identify the high school students' approaches to learning. The surface learning strategy sub-category tests the tendency of students to satisfy the learning needs with minimal effort, while the deep approach to studying requires an underlying learning interest of the students. There are 20 items on the scale which is a 5-point Likert scale ranging from "almost never true to almost always true." The Cronbach alpha coefficient for the whole scale is .92. The reliability coefficients for the sub-categories can be listed as follows: The surface learning strategy is .91, and the deep learning strategy is .93. Based on the Cronbach alpha coefficient scores, the scale was determined to be reliable.

3.3. Data collection

In the fall semester, data of the research study were collected through two surveys from high school students. The aim of the data collection was clarified in the application of the scales. It was carefully ensured that participants were volunteered to participate in the study. The participating students had consent for the engagement in the research. The data collection and handling were declared to correspond strictly with the usual norms of research ethics.

3.4. Data analysis

The data of the research were analyzed by using the SPSS 22 software. Firstly, whether the normal distribution was achieved in the study was examined by the Kolmogorov-Smirnov test. As a result of the analysis, it was concluded that the data provided a normal distribution ($p > .05$).

4. Results

4.1. The Level of L2MSS

To determine the level of L2MSS of the high school students, findings regarding the scores obtained from the basic categories of " ILS, OLS, and LLE" and the whole of the scale are presented in Table 2.

Table 2: The level of L2MSS of high school students

L2MSS	\bar{X}	SD	Value
ILS	1.65	.572	Very Low
OLS	3.35	.614	Moderate
LLE	4.76	.461	Very High
TOTAL	3.25	.549	Moderate

Note: 1.0-1.80 = very low; 1.81-2.60 = low, 2.61-3.40 = moderate, 3.41-4.20 = high, 4.21-5.00 = very high

As can be seen in Table 2, the total mean of all 3 components of the L2MSS is moderate ($\bar{x}=3.25$, $SD=.549$). The arithmetic means of the total scores obtained from the sub-categories of the scale are calculated as; 1.65 for the ILS; 3.35 for OLS, and 4.76 for LLE. The mean scores and standard deviations have shown a moderate level of L2MSS of high school students. While the level of the ILS is very low ($\bar{x}=1.65$, $SD=.572$), the level of the LLE is very high ($\bar{x}=4.76$, $SD=.461$).

4.1.1. Gender differences

The mean values of the respondents' answers to the questionnaire were measured and compared using an independent sample t-test to assess the levels of each aspect of L2MSS regarding gender. Table 3 shows the results.

Table 3: T-Test results regarding gender differences in the use of L2MSS

L2MSS	Gender	f	\bar{x}	Sd	t	p
ILS	Male	98	1.30	very low	.610	0.987
	Female	104	2.00	Low		
OLS	Male	98	2.50	Low	.602	.008*
	Female	104	4.20	High		
LLE	Male	98	4.55	Very high	.466	4.312
	Female	104	4.96	Very high		

* $p < 0.05$

The level of all three components of L2MSS for both genders can be seen in Table 3. A more rigorous analysis of each component shows that in both groups, the level of LLE is the highest. The LLE of females is still higher

than that of males ($\bar{x}=4.55$, $\bar{x}=4.96$, respectively). Furthermore, in terms of encouraging students to learn English, the levels of ILS and OLS of females are greater than that of male students ($\bar{x} = 2.00$, $\bar{x} = 4.20$). However, for females, OLS ranks as the second-highest motivation ($\bar{x}= 4.20$) and ILS is the least effective motivation among the 3 components ($\bar{x}=2.00$). Similarly, for males, OLS ranks as the second-highest motive for learning ($\bar{x}= 2.50$) and ILS is the least effective one among the other components ($\bar{x}=1.30$). This shows that males have a significantly lower ILS, OLS, and LLE than females. Significant differences in both ought-to L2 Self and LLE between the two groups of students are found ($p < 0.05$).

4.1.2. Foreign Language Grades

T-test results regarding foreign language grades of the students and level of all three components of the L2MSS are provided in Table 4.

Table 4: The levels of the components of L2MSS regarding foreign language grades

L2MSS	Grades	\bar{x}	Sd	t	p
ILS	5	2.85	.576	.241	.001*
	4	1.60	.565		
	3	0.39	.562		
	1-2	0.26	.342		
OLS	5	2.01	.467	.156	.001*
	4	3.08	.543		
	3	4.12	.657		
	1-2	4.19	.342		
LLE	5	2.45	.213	.812	.131
	4	4.72	.435		
	3	4.95	.578		
	1-2	4.92	.753		

* $p < 0.05$

* Grades 1-2=very low level of knowledge; Mark 3=average level of knowledge; Mark 4=fewer major shortcomings; Mark 5=best performers

One of the aims of this research is to assess students' L2MSS levels regarding their foreign language scores. The students were classified based on the foreign language grades to accomplish this goal. As can be seen in Table 4, students with higher grades tend to have ILS motives than unsuccessful students. A closer look at each component reveals that the level of ILS is high for successful students, while OLS and LLE levels are lower than the others. However, the OLS and LLE levels of the underperforming students are high in promoting the learning of English ($\bar{x} =4.19$, $\bar{x}= 4.92$, respectively). Nevertheless, for low achievers, the ILS is the least effective motive ($\bar{x}=0.26$). This indicates the slightly lower OLS and LLE of high performers than of low performers. There are significant differences between student groups in both ILS and OLS ($p < 0.05$).

4.2. The Use of Learning Strategies

To determine the high school students' approaches to learning, findings regarding the scores obtained from the basic categories as "surface learning strategies" and "deep learning strategies" are presented in Table 5.

Table 5: The high school students' approaches to learning

	\bar{X}	SD	Value
Surface Learning Strategies	4.85	.516	Very High
Deep Learning Strategies	1.32	.312	Very low
TOTAL	3.08	.246	Moderate

When Table 5 is analyzed, the arithmetic mean of the total scores obtained from the scale is calculated as 3.08. The arithmetic mean of the scores obtained from the sub-categories of the scale is calculated as; 4.85 for the surface learning strategies, and 1.32 for deep learning strategies. The mean scores and standard deviations have shown moderate use of learning strategies, with the highest use of surface learning strategies ($\bar{X}=4.85$).

4.2.1. Gender Differences

To see whether there are any gender differences regarding learning strategy use, a t-test has been conducted. The results are presented in Table 6.

Table 6: T-Test results regarding gender differences in learning strategy use

	Gender	f	\bar{x}	Sd	T	p
Surface Learning Strategies	Male	98	4.78	.432	.367	
			very high			.368
Deep Learning Strategies	Female	104	4.81	.543		
			Very high			
	Male	98	0.76	.213		.896
			Very Low		.212	
	Female	104	1.12	.112		
			Very Low			

* $p < 0.05$

Based on the data in this table, it can be claimed that the use of learning strategies differs between genders. When considering surface learning strategies, both males and females tend to use them to a great extent. Deep learning strategies, however, are used more by females than males ($\bar{x} = 1.12$, $Sd = .112$). No other significant difference has been found between the groups of the students.

4.2.2. Foreign Language Grades

T-test results regarding foreign language grades of the high school students and their use of learning strategies are provided in Table 7.

Table 7: T-Test results regarding foreign language mark differences in strategy use

	Grades	\bar{x}	Sd	t	p
Surface Learning Strategies	5	1.23	.215		
	4	3.65	.675	.813	.113
	3	4.76	.112		
Deep Learning Strategies	1-2	4.89	.321		
	5	3.08	.322		
	4	2.68	.154	.5387	.021
	3	1.13	.443		
	1-2	1.01	.213		

* $p < .001$

One of the objectives of this research study was to analyze the high school students' use of learning strategies based on their grades. As can be seen in Table 7, when the surface learning strategies are considered, it is visible that the students with low grades prefer using them more than the successful language learners. The level of surface learning strategies is high for unsuccessful students while successful ones tend to use deep learning strategies more frequently. Additionally, there is no statistically significant difference found between the high school students' approaches to learning in terms of their foreign language grades, $p < .001$.

4.3. Correlation of L2MSS and Learning Strategies

The relationship between high school student's level of approaches to learning and L2MSS was analyzed using Pearson's r-correlation analysis. The correlation analysis was performed to assess how the relationship differed. The analysis of the Pearson r correlation showed that the participants' level of L2MSS and their use of learning strategies were reasonably positive, $r(202) = +.79$, $p < .001$ two-tailed(??). Table 8 also presents the results of correlation analysis of the sub-dimensions of L2MSS and LS.

Table 8: Correlation between subdimensions of L2MSS and LS.

r	ILS	OLS	LLE	Surface Learning	Deep Learning
ILS	1	.123	-.321	-.893	.588*
OLS		1	.154	.631*	-.252
LLE			1	.622*	-.356
Surface Learning				1	-.394
Deep Learning					1

* $p < 0,05$

When the potential relationships between the sub-dimensions of high school students' level of approaches to learning and L2MSS are analyzed, significant positive correlations are observed between ILS and deep learning strategies ($r = .588$, $p < 0,05$, at a high level). Besides, OLS and LLE are correlated with surface learning strategies at a significant level ($r = .631$, $p < 0,05$ at a high level, $r = .622$, $p < 0,05$ at a high level).

5. Discussion

This descriptive research study was conducted to identify the level of L2MSS and the usage of deep and surface learning strategies by high school students regarding gender and language grades. Therefore, the first step was to determine the level of L2MSS of the participants. When the national and international literature was analyzed, some studies that were conducted on the level of L2MSS were found (Bilhan, 2019; Öz & Bursalı, 2018; Laohawiriyanon, 2019). The level of L2MSS was found to be moderate within the framework of this study. The most frequently reported sub-category of L2MSS was "LLE" relating in particular to the current life, language courses, language instructors, course books, subjects, the classroom environment, etc. (Dörnyei & Al-Hoorie, 2017). The results are in line with the studies that determined that the motivated learning actions and LLE had the closest bond (Csizér & Kormos, 2009; Papi, 2010). Further, for high school students, OLS was the second most ranked subcategory of L2MSS. External influences such as the family, peers, and community characterize that category. This means that the learners construct OLS so as not to let people in their immediate surroundings down and to satisfy their education-related demands. When considering the Turkish context, this result is consistent with other studies which found out that the OLS had a greater influence in circumstances in which the values of society are prioritized (Lamb, 2012; Taguchi, Magid, & Papi, 2009; Dörnyei et al., 2016; Lanvers, 2016). While high school pupils had extensive LLE and OLS, they had a few ILS attributes that reflect on their potential self-image concerning L2. The findings of previous studies conducted did not match the results of this study because they found out that the students had ILS rather than the other categories (Bilhan, 2019; Henry & Thorsen, 2017; MacIntyre, Baker, & Sparling, 2017).

The level of L2MSS of secondary school students was also analyzed concerning gender and the level of LLE was found to be the highest in both genders. For all sub-categories, the levels of each L2MSS category of the female participants were greater than those of the males. Besides, for girls, OLS was the second-highest motivation, and ILS was the least effective motivation. Also, for boys, OLS was the second-highest motive for learning and ILS was the least rated one of all. Given the answers to the issues concerning genders, the participants' L2MSS construction resembles the participants in Csizer's analysis (2012).

Additionally, one of the goals was to identify the L2MSS level regarding foreign language grades. Taking the findings of this study into account, it was evident that students with higher grades tended to have an ILS motive than unsuccessful students. A closer look at each component revealed that the level of ILS was high for successful students, while OLS and LLE levels were lower. However, the levels of OLS and LLE of the low achievers were high. This revealed that high performers could master OLS and LLE slightly less than those of low performers. The study also explored various levels between successful and unsuccessful students of each aspect of L2MSS and found out that ILS influenced successful students more. In other words, those that were better than their counterparts were inspired by ILS. A significant correlation was also observed between the ILS and the language skills of high performers. This finding is in line with some studies that found out that students with lower grades were more influenced by OLS and the LLE than their peers (Islam, 2013; Papi, 2010). Conversely, successful students had higher ILS levels than low achievers did. This highlights the important role of ILS for being proficient in a foreign language. Concerning previous studies, the ILS has proven to be a strong indicator of the commitment that students make to learn the language (Deci & Ryan, 2002). These findings seem to be consistent with other studies (Laohawiriyanon, 2019).

In this study, the approaches to learning used by high school students towards foreign languages were also examined in terms of gender and exam scores. The findings revealed that learning strategies were moderately used and surface learning strategies were the most widely used strategies. As the surface of learning approaches was based on a lack of self-regulated learning, secondary school students can be inferred as struggling to control their learning effectively. These findings seem to be inconsistent with other studies (Karabenick & Berger, 2013; Karabenick & Dembo, 2011; White & Bembenutty, 2013).

It was also examined the level of language learning approaches of high school pupils concerning gender and observed that the level of learning approaches varied substantially in favor of females. When considering surface learning strategies, both males and females tended to use them to a great extent. Deep learning strategies which empower students to connect subjects and ideas to prior knowledge and generate new arguments, appreciate reasoning based on new information, and identify a pattern within a given material were used more by women than men. This finding does not correspond to the majority of studies carried out so far, as the students were expected to use deep learning strategies (Alt, 2017; Alt & Boniel-Nissim, 2018).

Another objective of this research study was to analyze the high school students' use of learning strategies regarding their grades. The results revealed that the students with low grades tended to use surface learning techniques more than successful language students. For unsuccessful students, surface learning strategies were highly preferred whereas successful students preferred using deep learning strategies. The findings are in line with Lai's (2009) research that also found that more proficient language learners preferred using metacognitive and cognitive strategies more often, and memory strategies were used less frequently than the less competent individuals.

Finally, the associations between secondary school students' levels of approaches to learning and L2MSS were examined, and significant positive correlations between the ILS and deep learning strategies were identified. This means that students with high levels of ILS tended to use deep learning strategies. Similarly, OLS and LLEs were correlated with surface learning strategies at a significant level. This finding showed that the high school students who had high levels of OLS and LLEs tended to use surface learning strategies more.

6. Conclusion

To begin with, the present study aimed to examine L2MSS concerning LLS in a Turkish high school context. In this study, the students have a moderate level of L2MSS and the most frequently reported sub-category used by both genders is LLE, while the second one is OLS. This is proof of the fact that the students are learning the language to pass the class, or to make the other people happy. They do not learn it for their future goals. Additionally, students with higher grades tend to have an ILS motive than unsuccessful students. Actually, the increased level of ILS is so important in learning a foreign language. With this in mind, teachers are required to

inspire students, especially low achievers, to have a potential L2 vision and navigate their future by pleasing learning opportunities and motivating interventions in their immediate learning environment.

Another significant finding is that learning strategies are moderately used and surface learning strategies are the most widely used approaches to learning. Additionally, students with low grades tend to use surface learning strategies while successful ones prefer using deep learning strategies. In reality, the proficiency of students is directly linked to the failure to self-regulate their learning. Self-regulation is to direct the learning process by strategies such as the search for knowledge, self-evaluation, and goal-setting. Since surface learning is a core component of reduced self-regulation, it appears useful to teach how to use deep learning strategies. Students should have the opportunity to participate effectively in the self-regulated learning process. Students acquiring self-regulation and practicing skills could include promoting abilities that can help them regulate their learning process.

Finally, it has been found out that the students with high levels of ILS tended to use deep learning strategies. That is proof of the fact that the students who can regulate their learning process have the motive for the future and become successful learners. If the teachers expect their students to be successful, they are required to teach them how to use deep learning strategies effectively.

More research studies should be conducted in a qualitative framework to better explain L2MSS and learning strategies. This study was also concentrated exclusively on students' use of LLS and L2MSS. Additional analysis may also provide observations that show how LLS and L2MSS are used by students in the learning of a foreign language. In future research experiments in different EFL contexts may be added to check the results obtained in this analysis.

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