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Research Paper

Relationship between Creativity and Grammar Learning Strategy Use: A Case of Iranian Advanced EFL Learners

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Abstract

Notwithstanding all of the advances in language learning strategy research, there are still some areas that strategy scholars have overlooked. The dearth of research into grammar learning strategies (GLS) may be the most egregious instance of this neglect. In order for this type of research to gain momentum, the present article reports on research that sought to identify whether there was any relationship between advanced EFL learners' creativity and their grammar learning strategy use. It also sought to find if male and female advanced EFL learners were different in terms of grammar learning strategy use. To this end, 69 Iranian advanced EFL learners (30 males and 39 females) selected through convenience sampling participated in this study. Data were collected through Creativity and Grammar Learning Strategy Questionnaires. The Pearson product-moment correlation analysis and the independent samples *t*-test were used to analyze the data. The results revealed that there was a significant relationship between Iranian advanced EFL learners' creativity and their grammar learning strategy use. In addition, the findings demonstrated that female learners employed the grammar learning strategy more than male learners. Finally, pedagogical implications of the study for language teachers, learners, educational policymakers, and curriculum developers were presented.

Keywords: *Advanced EFL Learners, Creativity, Gender, Grammar Learning Strategies*

شناسایی رابطه بین خلاقیت زبان آموزان دوره پیشرفته زبان انگلیسی و استفاده آنها از استراتژیهای یادگیری دستور زبان با وجود همه پیشرفت‌ها در تحقیقات مربوط به استراتژی‌های یادگیری زبان، هنوز برخی از زمینه‌ها وجود دارد که محققان حیطه استراتژی آنها را نادیده گرفته اند. کمبود تحقیق در مورد استراتژیهای یادگیری دستور زبان احتمالاً مهمترین نمونه این غفلت است. به منظور پیشرفت این نوع تحقیقات، مقاله حاضر مطالعه ای را گزارش می کند که به دنبال شناسایی رابطه بین خلاقیت زبان آموزان دوره پیشرفته زبان انگلیسی و استفاده آنها از استراتژیهای یادگیری دستور زبان است. علاوه بر این، این تحقیق تلاشی است برای بررسی این مطلب که آیا تفاوتی بین زبان آموزان مرد و زن دوره پیشرفته زبان انگلیسی از نظر استفاده از استراتژی یادگیری دستور زبان وجود دارد. به این منظور، 69 زبان آموز ایرانی دوره پیشرفته زبان انگلیسی (30 مرد و 39 زن) به روش نمونه گیری در دسترس در این پژوهش شرکت کردند. داده ها از طریق پرسشنامه خلاقیت و پرسشنامه استراتژی یادگیری دستور زبان جمع آوری شدند. برای تجزیه و تحلیل داده ها از آزمون همبستگی پیرسون و آزمون تی مستقل استفاده شد. نتایج نشان داد که بین خلاقیت زبان آموزان ایرانی دوره پیشرفته زبان انگلیسی و استفاده آنها از استراتژیهای یادگیری دستور زبان رابطه معناداری وجود دارد. علاوه بر این، یافته ها نشان داد که زبان آموزان زن، بیشتر از زبان آموزان مرد از استراتژی‌های یادگیری دستور زبان استفاده می کنند. در نهایت، مفاهیم آموزشی این مطالعه برای معلمان زبان، سیاست گذاران آموزشی و توسعه دهندگان برنامه درسی ارائه شد.

واژگان کلیدی: زبان آموزان پیشرفته زبان انگلیسی، خلاقیت، جنسیت، استراتژی‌های یادگیری گرامر

Introduction

Over the previous few decades, research on language learning strategies (LLS) has made significant progress in terms of conceptualization of the construct, the primary foci of research studies, and the methodology employed (Cohen & Griffiths, 2015; Grenfell & Harris, 2017; Oxford & Amerstorfer, 2018; Pawlak, 2009, 2011). Oxford, Lee, and Park (2007) made one of the first attempts to characterize grammar learning strategies (GLS), based on Oxford's (1990) basic concept of LLS. Oxford et al. (2007) considered GLS as “actions and thoughts that learners consciously employ to make language learning and/or language use easier, more effective, more efficient, and more enjoyable” (p. 117). Recently, Oxford (2017) provided a more extensive and inclusive definition of GLS. She defined second or foreign language (L2) grammar learning strategies as “teachable, dynamic thoughts and behaviors that learners consciously select and employ in specific contexts to improve their self-regulated, autonomous L2 grammar development for effective task performance and long-term efficiency” (p. 244).

Despite the pivotal role of GLS in second language learning (Griffiths, 2003), as Anderson (2005) and Pawlak (2009) conceded, there is a dearth of empirical research on GLS. Grammar learning strategy was also dubbed the "Second Cinderella" of LLS research by Oxford et al. (2007, p. 117), who attributed the lack of attention to the dominance of the communicative method while the study of strategies was at its peak.

Research on learners' learning strategies is a relatively new endeavor in the field of language learning. However, Language learning strategy research has yielded a plethora of evidence on the type and nature of strategy usage by learners of different proficiency levels, personal characteristics, and cultural backgrounds. However, creativity, a difficult yet fascinating mental ability domain, has been a somehow neglected variable in the research on learners' grammar learning strategy use.

Since creativity affects practically every aspect of our lives, it is seen as a critical skill in a variety of fields. Creativity, according to Pir Khaefi (2001), is a crucial skill for any change or innovation. Nevertheless, in L2, creativity has almost been under-researched (Dörnyei, 2005; Birdsell, 2013; Pishghadam, Khodadadi, & Zabihi, 2011) and somewhat ignored (Albert, 2006).

Due to the encompassing role of GLS in language learning, the current study aimed to delve into the probable interface between advanced EFL learners' use of GLS and their creativity. The researchers sought to examine this hypothesis based on a growing body of research suggesting that learners' GLS are congruent with their skills and capacities (Skehan, 1989) and that they differ amongst learners (Ghannam, 2019).

Literature review

Grammar Learning Strategies (GLS)

Based on the classical definition of LLS provided by Oxford (1990), Oxford et al. (2007) defined GLS as acts and concepts that learners consciously utilize to make language acquisition and/or language usage simpler, more effective, and pleasurable. A similar definition was offered by Cohen and PinillaHerrera (2010) who described GLS as “deliberate thoughts and actions that students consciously [employ] for learning and getting better control over the use of grammar structures” (p. 64).

Various classifications have been proposed for GLS. One of the leading GLS classifications was proposed by Oxford (1990). In the present study, Oxford's (1990) classification was used. This classification includes six categorizations: memory, cognitive, and compensation strategies considered as direct strategies, and metacognitive, affective, and social strategies categorized as indirect strategies.

Direct strategies (i. e., memory, cognitive, and compensation strategies) are directly related to learning/producing the target language.

Memory strategies such as making mental associations and using actions assist in storing knowledge in long-term memory and recovering information as in the case of commination. Cognitive strategies such as analyzing and reasoning are employed to build and revise internal mental modes as well as to receive and



produce signals in the target language. Learners utilize compensatory methods, like guessing new words while listening and reading or utilizing circumlocution in speaking and writing, to compensate for their ineptitude in the target language and continue communicating.

Indirect strategies (i. e., metacognitive, affective, and social strategies) support or enable direct strategies to occur and/or improve the likelihood of their success (Oxford, 1990).

Meta-cognitive strategies assist learners in self-regulating their learning by helping them in planning, organizing, concentrating, and assessing their own learning process. Learners can use affective methods to regulate feelings such as confidence, motivation, and attitudes toward language acquisition. Social tactics such as questioning and cooperating with others enhance contact with others, which is especially important in a discourse context.

The significance of employing GLS in relation to language learning has been noted by previous studies (Azizmohammadi & Barjesteh, 2020; Philips, 1991; Zekrati, 2017). These studies confirmed the positive relationship between learners' use of GLS and their achievement. For instance, Azizmohammadi and Barjesteh (2020) found a positive and significant relationship between EFL learners' use of GLSs and their grammar performance. In the same vein, Mistar and Zuhairi (2020) reported that the use of GLSs correlates positively and significantly with grammar mastery. Yeh (2021) found that the use of GLSs is positively related to Asian learners' achievement.

Several studies also explored the personal characteristics thought to be influencing learners' use of learning strategies. This is exemplified in the research undertaken by Rezaei and Almasian (2007) who found a positive relationship between learners' creativity and both their use of LLS and language proficiency. Baghaei (2016) explored if there is any relationship between EFL learners' creativity and their use of GLS and concluded that EFL learners' creativity and their use of GLS are not related.

Zarrinabadi, Rezazadeh, and Chehrizi (2021) explored the relationship between language mindsets and grammar learning strategies among English as a second language and third language learners. They found that language mindsets significantly predicted grammar learning strategies and grammar scores.

The other evidence of the role of personal characteristics in learners' use of LLS can be seen in the study of Tang and Tian (2015). They investigated the relationship between Chinese EFL graduate students' beliefs about language learning and their LLS and found that gender, age, major of study, and language proficiency level influence students' use of learning strategies. Tang and Tian (2015) also reported that a significant relationship exists between learners' beliefs and their use of LLS. In the same vein, in a study that set out to assess the association between EFL learners' beliefs and their use of LLS, Abedini, Rahimi, and Zare-ee (2011) concluded that learners with more positive beliefs towards language learning employ more LLS and enjoy a higher level of proficiency. Furthermore, Oxford (1996a, 1996b) reported that students' learning strategies and their learning styles are related.

The effect of gender on strategy use has also been investigated in several studies (Azizmohammadi & Barjesteh, 2020; Ehrman & Oxford, 1988; Green & Oxford, 1995; Chandler, Lizotte & Rowe, 1998; Ghadesi, 1998). However, the results of the studies which have examined the role of gender in using learning strategies, more specifically GLS, are not conclusive.

In the majority of these studies, females have consistently been reported as employing GLS and LLS more frequently than males (Green & Oxford, 1995; Gurata, 2008; Oxford & Nyikos, 1989; Tam, 2013). For instance, in 2020, Azizmohammadi and Barjesteh compared male and female university students' use of GLS. They found females use more GLS compared with males.

Oxford and Nyikos (1989) also searched gender differences in strategy use of 1200 foreign university students in the United States. The results showed female dominance in terms of the use of learning strategies. The researchers concluded that compared with males, females employ more learning strategies due to their desire for excellent grades and need for social approval (as cited in Hong-Nam & Leavell, 2006).



In another study, Green and Oxford (1995) investigated university students' use of English LLS in the educational context of Puerto Rico. The results revealed a significant gender difference regarding the use of learning strategies including memory, cognitive, affective, and social strategies in favor of females.

In the same vein, investigating the GLS used by Turkish EFL learners, Gurata (2008) concluded that compared with males, female learners employed more metacognitive, social, and affective strategies.

Tam (2013) also conducted a study to determine the LLS of Hong Kong university students. The findings demonstrated that females outperformed males in terms of strategy usage. The researcher concluded that male learners are less inclined to engage in provocative communication and seek assistance from other English learners in order to enhance their English skills.

However, while some studies reported females' superiority in the use of learning strategies, other studies reported more strategies used by males. For example, Radwan (2011) searched the effects of second language proficiency and gender on university students' use of LLS. The findings revealed that males employed more social strategies than females which are diametrically opposed to the preceding research. According to Radwan (2011), society's culture offers males more responsibility in important political and social dimensions. As a result, in order to function in this setting, individuals must have outstanding social skills. The conservative character of culture, norms, and habits, on the other hand, inhibits females from developing conversational skills in the language with other people.

Other studies concluded that gender does not have a significant role in the use of LLS and GLS. For example, Rahimi, Riazi, and Saif (2008) also conducted a study on the investigation of the factors influencing the use of LLS by Iranian EFL learners. They discovered that gender had no influence on the usage of LLS. Zekrati (2017) also reported that gender did not play a significant role in Iranian high school EFL learners' grammar strategy use. Similarly, Alsied, Ibrahim, and Pathan (2018) who compared male and female Libyan EFL learners in terms of using GLS reported that there was no significant difference in using grammar learning strategies between males and females.

As it can be seen, the literature has emphasized the importance of grammar learning strategy use and its contributions to education which signifies the importance of doing more studies. On the other hand, as Pawlak (2018) pointed out, the inadequacy of empirical GLS studies has been addressed in major overviews of LLS. Oxford (2017) also indicated that "grammar learning strategies have garnered the least interest and concern of any area of L2 learning strategies" (p. 246).

Furthermore, among the various factors that are generally conceived to have a relationship with the use of grammar language learning strategies, creativity has not gained due attention. It is believed that if the effect of these two variables is explored, more insights can be gained regarding the learning process and more particularly the grammar learning strategies used by different second language learners. To address this gap in the literature, the current research aimed at examining the interface between EFL learners' use of GLS and their creativity. In addition, since the results of the previous studies regarding the role of gender in the use of GLSs were inconclusive, the present study aimed to scrutinize if there is any difference between Iranian advanced EFL learners' grammar learning strategy use in terms of gender.

Creativity

Creativity is regarded as a complex yet fascinating mental ability domain. As the influence of creativity has permeated into all facets of our lives, it is seen as a crucial ability in a variety of fields. Creativity has also penetrated nearly every aspect of education, including English language learning. Additionally, it is one of the fundamental components of Sternberg and O'Hara's (2000) theory of successful intelligence, described as the creation of original, beneficial, and valued goods or ideas.

Dickhut (2003) described creativity as the process of creating something original and valuable. Torrance (1988) postulated the following four components of creativity:

- (1) Fluency, defined as the ability to generate a high number of ideas.
- (2) Flexibility, characterized by a high level of innovation and diversity in the generation of ideas.



(3) Originality, defined as the capacity to generate new, distinctive and uncommon ideas.

(4) Elaboration, is considered as the process of developing concepts in order to generate a large number of details.

One of the primary goals of education is developing creativity. A lot of research has been done on the learners' creativity. For instance, Zhang and Postiglione (2001) found that learners' creativity is related to their self-esteem, thinking styles, and socioeconomic status. Different studies revealed that learners' achievement is significantly correlated with both their creativity (Nami, Marsooli, & Ashoori, 2014) and their teachers' creativity (Baghaei & Riasati, 2013). A study by Eishani, Ata Saa'd, Nami (2014) also showed that the relationship between learners' learning styles and their creativity was positive and significant. In addition, in a study conducted by Baghaei and Bagheri (2013), it was found that learners' creativity and their speaking skill were positively correlated.

In a more recent study, Novikova, Berisha, Novikov, and Shlyakhta (2020) compared personality traits and creativity as predictors of university linguistics students' success in foreign language acquisition. They found that creativity has a stronger impact on the level of students' foreign language proficiency compared to personality traits.

While there is a considerable amount of work on learners' creativity in the field of second or foreign language learning, it is an almost virgin territory in work on GLS. This research strand is thus groundbreaking in many respects and will give us a better understanding of the potential interface between learners' use of GLS and their creativity.

Research Questions

Q1. Is there any significant relationship between Iranian advanced EFL learners' creativity and their grammar learning strategy use?

Q2. Is there any difference between Iranian advanced EFL learners' grammar learning strategy use in terms of gender?

Methodology

Design

A correlational design was used to undertake this study because this study dealt with estimating the correlation coefficient between two variables (learners' creativity and their grammar learning strategy use). A correlational study can be considered as a type of quantitative method of research. In correlational studies, the researcher attempts to find out if there is any relationship between two or more quantitative variables from the same group of participants (Tan, 2014). In this research, the learners' creativity was focused on as it was thought to have a relationship with the learners' grammar learning strategy use. To answer the second research question, the study followed a descriptive design to determine whether there is any difference between Iranian advanced EFL learners' grammar learning strategy use in terms of gender.

Participants

The participants included 69 (30 males and 39 females) Iranian advanced EFL learners within the age range of 17 to 28 years old ($M= 21.33$, $SD= 7.09$) who had already passed primary and intermediate level courses, based on the placement tests administered by the institutes. The participants were selected from different language institutes of Fars province, Iran. They were selected through the convenience sampling method. That is, sample selection followed a type of non-probability sampling in which the researchers' certain practical criteria such as the participants' "geographical proximity", "availability at a certain time", "easy accessibility", and "willingness to volunteer" are followed (Dörnyei, 2009, p. 99). It's worth noting that before answering the questionnaires, participants were assured that their personal information, as well as their responses, would be kept private.



Instruments

Two questionnaires as the instruments of the study were used to explore the relationship between the advanced EFL learners' creativity and their use of GLS: creativity questionnaire (Abedi, 1993) and grammar learning strategy questionnaire (Bayou, 2015).

Creativity Questionnaire

This scale presented by Abedi (1993) includes 60 questions (with three choices) for evaluating creativity in accordance with the definition given by Torrance (1965). There are four scales in the creativity questionnaire: fluency (22 items), originality (11 items), flexibility (16 items), and elaboration (11 items). Each item has three options ranging from least to most creative responses with a range of scores between one (low creativity) to three (high creativity). The total score ranging from 60 to 180, is the sum of each sub-scale, which indicates the overall creativity. The Persian version of the creativity questionnaire was used in the study (See Appendix A). In the present study, the total reliability of the creativity questionnaire computed via Cronbach's alpha was .81.

Grammar Learning Strategy Questionnaire

Bayou (2015) modified Oxford's (1990) version 7.0 ESL/EFL Strategy Inventory for Language Learners (SILL) to explore the learners' GLS (see Appendix B). The questionnaire comprises 35 statements in the form of a 5-point Likert Scale, ranging from 1 (Never or almost never true of me) to 5 (always or almost always true of me) and measuring six categories as proposed by Oxford (1990):

- 1) Memory Strategies (7 statements)
- 2) Cognitive Strategies (8 statements)
- 3) Compensation Strategies (3 statements)
- 4) Metacognitive Strategies (8 statements)
- 5) Affective Strategies (5 statements)
- 6) Social Strategies (4 statements)

As the questionnaire included Likert items, the reliability of the questionnaire was computed via Chronbach's alpha. The reliability estimate obtained in the current study was .79.

Data Collection Procedure

As mentioned earlier, in order to collect data for the study, 69 advanced EFL learners from private language institutes in Fars province participated in the study. First, permission was taken from the authorities (language institute principals and teachers), the researcher shared the questionnaire invitation and a link (Google form) to the survey with WhatsApp groups of the English advanced classes and asked the learners to fill out the questionnaire. It is noteworthy to mention that both researchers and teachers ensured their students that their participation was entirely voluntary. By clicking the link to proceed to the survey questions, EFL learners indicated their willingness to participate in the study. It took them about 30 minutes to complete the questionnaires. All participants completed the research questionnaires anonymously. The data collection took place over a period of 3 months.

Data Analysis

In the process of data analysis, SPSS software (version 26) was used. As two continuous variables were involved, the Pearson product-moment correlation coefficient was used to determine the relationship between learners' creativity and their grammar learning strategy use. Afterward, to compare male and female learners' use of GLS, the independent samples *t*-tests were run.



Results

Prior to analyzing the data, preliminary analyses were done to confirm that no violation of the assumption of normality occurred. The normality of the data was assessed by running the Shapiro-Wilk test. To meet the normality assumption, the significance level reported for the variables by the Shapiro-Wilk test must be more than 0.05. The results of the Shapiro-Wilk test are set out in Table 1.

Table 1

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	<i>Statistic</i>	<i>df</i>	<i>Sig.</i>	<i>Statistic</i>	<i>df</i>	<i>Sig.</i>
Creativity	.104	69	.062	.977	69	.220
GLS	.117	69	.200	.948	69	.526
Memory strategy	.140	69	.122	.967	69	.318
Cognitive strategy	.100	69	.182	.970	69	.219
Compensation strategy	.307	69	.114	.407	69	.278
Metacognitive strategy	.166	69	.341	.951	69	.558
Affective strategy	.185	69	.389	.948	69	.576
Social strategy	.161	69	.246	.956	69	.617

As evident in Table 1, creativity, grammar learning strategy, and its five sub-categories were found to be normally distributed ($p > 0.05$). Therefore, the parametric tests, Pearson product-moment correlation, and independent samples *t*-test were selected for further analysis.

The descriptive statistics of the participants' creativity and GLS are shown in Table 2. It should be noted that since the questionnaire had 60 Likert items dedicated from 1 to 3 points based on the chosen option, the possible range of scores for the creativity questionnaire was from 60 to 180 points. Furthermore, the Grammar learning strategy questionnaire used to evaluate the learners' use of GLS included 35 five-point Likert scale items ranging from never 1 to 5 points. Therefore, the total GLS score calculated for each learner could range from 35 to 175.

Table 2

Descriptive Statistics of Measured Variables

	N	Minimum	Maximum	Mean	SD
Creativity	69	109.00	135.00	121.78	5.10
GLS	69	83.00	160.00	122.53	11.83
Memory strategy	69	16.00	33.00	25.14	3.24
Cognitive strategy	69	19.00	35.00	28.62	3.13
Compensation strategy	69	6.00	41.00	10.43	4.07
Metacognitive strategy	69	17.00	36.00	26.66	3.06
Affective strategy	69	13.00	23.00	17.14	1.75
Social strategy	69	11.00	18.00	14.52	1.50

As evident in Table 2, the descriptive statistics of creativity and GLS are ($M = 121.78$, $SD = 5.10$) and ($M = 125.08$, $SD = 13.92$), respectively. In addition to descriptive statistics, inferential statistics were also used to answer each research question. It must be pointed out that, for this study, the alpha level was set at a

.05 level of significance. In addition, to determine the strength of the relationship, the guideline presented by Cohen (1988) was applied:

Small relationship $r = .10$ to $.29$

Medium relationship $r = .30$ to $.49$

Large relationship $r = .50$ to 1.0 (p. 79-81)

To answer the first research question (i.e., is there any significant relationship between Iranian advanced EFL learners' creativity and their grammar learning strategy use?), a Pearson product-moment correlation analysis was run. Table 3 displays the results of the correlation.

Table 3

Correlation between Learners' Creativity and Their Grammar Learning Strategy Use

	Strategies						
	GLS	Memory	Cognitive	Compensation	Metacognitive	Affective	Social
Pearson Correlation	.511**	.436**	.305*	.365**	.454**	.411**	.491**
Sig. (2-tailed)	.000	.000	.011	.002	.000	.000	.000
N	69	69	69	69	69	69	69

Table 3 offers a positive and significant relationship between learners' creativity and their use of GLS ($r = 0.51$, $n=69$, $p < 0.05$), suggesting that the learners with higher levels of creativity, employ more GLS. Concerning the strength of the relationship, the results demonstrated that there is a large relationship between Iranian EFL learners' creativity and their use of GLS.

Moreover, Table 3 indicated positive and medium relationships between learners' creativity and sub-scales of GLS. According to the above results, among the five sub-scales of GLS, the highest and the lowest relationships belong to the correlation between learners' creativity and the social ($r = 0.49$, $p < 0.05$) and cognitive ($r = 0.30$, $p < 0.05$) strategies, respectively.

In the next step, to answer the second research question, the male and female learners' use of GLS was compared through the independent samples t -tests. Table 4 demonstrates the results of the independent samples t -tests.

Table 4

Independent Samples T-test Results for Male and Female Teachers' GLS Scores

	Gender	N	Mean	SD	t	df	Sig. (2-tailed)
GLS	Male	30	118.96	12.26	-2.26	67	.02
	Female	39	125.28	10.86			

As evident in Table 4, a significant difference was observed between the males ($M = 118.96$, $SD = 12.26$) and females ($M = 125.28$, $SD = 10.86$) concerning the use of GLS $t(67) = -2.26$, $p = .02$, (two tailed). The magnitude of the differences in the means (mean difference= -6.31 , 95%, CI: -11.88 to $-.74$) was large (eta squared= $.07$). According to the mean scores, females employed more GLS compared with males.

Discussion

The first question in this study sought to determine the relationship between advanced EFL learners' creativity and their grammar learning strategy use. The other purpose of this study was to explore if there was any significant difference between male and female advanced EFL learners in terms of grammar learning strategy use.



The results of the current study provided evidence that there is a positive association between Iranian advanced EFL learners' creativity and their use of GLS indicating that the learners with higher levels of creativity use more GLS.

Results also showed moderate yet significant correlations between learners' creativity and sub-scales of GLS. Furthermore, the highest and the lowest correlations belonged to the relationship between learners' creativity and the social and cognitive strategies, respectively.

When it comes to possible explanations, as Rezaei and Almasian (2007) conceded, it seems plausible to presume learners who enjoy more creativity are more successful in finding and inventing methods and strategies to improve their learning.

Additionally, the results of this study confirm the findings of Rezaei and Almasian (2007), who found that there was a positive relationship between creativity and both the extent of use of LLS and language proficiency. They concluded that the learners with a higher level of creativity employ more strategies and, as a result, are better learners of English.

While Baghaei (2016) assessed the relationship between EFL learners' creativity and their use of GLS, came to contradictory results. The difference between the proficiency levels of participants may explain the contrast between the results of the current study and the findings of the study conducted by Baghaei (2016). The participants of the current study were selected from advanced learners. While Baghaei (2016) selected participants from all proficiency levels.

The results of the present study also revealed a significant difference between male and female learners regarding their use of GLS. The findings reported females' higher use of GLS compared with males. The differences in strategy use by males and females can be justified based on diverse learning styles, motivations, and attitudes (Aslan, 2009). Additionally, this might be attributed to female learners' high level of awareness of their demands, as well as the possibility that female learners seek greater opportunities to engage in the analysis and practice of foreign/second language input (Salahshour, Sharifi, & Salahshour, 2013).

These results are consistent with those of Azizmohammadi and Barjesteh (2020) who found a significant difference between males' and females' use of grammar learning strategies. They also reported that females are superior to males regarding the grammar learning strategy use.

The results of the current study accord with Oxford's and Nyikos's (1989 cited in Hong-Nam & Leavell, 2006) opinion. They considered gender as a pivotal factor influencing the selection of LLS in language learning. They also pointed out that gender has a profound effect on strategy choice. Observing a significant difference between male and female learners with female dominance over males in LLS use is also supported by several studies (Alnujaidi, 2017; Baghaei, 2016; Gurata, 2008; Tam, 2013; Zare, 2010; Zeynali, 2012).

Conclusion

Taken together, the current study's findings highlighted the relationship between Iranian advanced EFL learners' creativity and their grammar learning strategy use. In addition, the findings substantiated the debilitating role of gender in learners' use of GLS. Overall, the findings of this study provide justification for additional research into the relationship between learners' GLS use and their personal characteristics.

The findings of this study have a number of important implications for teachers, educational policymakers, and curriculum developers. Teachers are recommended to consider the role of creativity and gender in the advanced learners' grammar learning strategy use. Therefore, they can provide opportunities for learners to use the grammar learning strategy in a more proper way.

Additionally, such insight would surely assist language teachers in recognizing individual variations among language learners, perhaps leading to the implementation of a learner-centered classroom.

As "creativity can be enhanced and nurtured" (Isaksen, Puccio, & Treffinger, 1993, p. 158), educational policymakers and curriculum developers can develop and support curriculums and teaching methods with



the aim of improving EFL learners' creativity. In other words, they can concentrate on creative pedagogy, which fosters language learners' creativity in the English classroom while also promoting their language performance through intense activities targeted at developing their creativity.

There were unavoidable limitations in conducting the present study. For instance, although the sample was fairly large, caution must be applied, as the findings might not be transferable to all advanced EFL learners, and this may restrict the generalizability of the results. Therefore, further research with more representative samples needs to be undertaken in order to expand on the findings presented in the present study.

Furthermore, the researchers only used questionnaires to collect the data; to be more inclusive, data collection instruments like observation or interview can be added, as well. Future researchers are recommended to adopt the mixed methods approach to explore the association of Iranian EFL learners' creativity and their use of GLS. In fact, their application of interviews and class observation can add weight to the results and conclusions of the study.

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