

INVESTIGATING THE RELATIONSHIPS BETWEEN LEARNING STYLES, STRATEGIES AND THE ACADEMIC PERFORMANCE OF SAUDI ENGLISH MAJORS

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Abstract *The purpose of the current study was to identify the learning style and strategies preferences of female EFL majors at Taibah University as well as to investigate the relationship of learning styles and learning strategies to academic performance in the Methodology One Course. Data was collected from a sample of (88) participants. The instruments used in this study were: (a) The Language Style Preferences Questionnaire; (b) The Strategy Inventory for Language Learning SILL (Oxford [7] Version 7.0); (3) An EFL Methodology One Course achievement test. Results showed that the visual learning style was the most preferred by the majority of participants. The strategies most frequently employed were cognitive strategies followed by metacognitive strategies. The results also revealed a significant relationship between the visual learning style and memory strategies. Another significant relationship was found between the visual learning style and affective strategies. However, the findings demonstrated the lack of a significant relationship between learning styles and academic performance. In contrast, a significant positive relationship was found between participants' use of learning strategies and their academic performance.*

Key words: *learning style preferences, language learning strategies, academic performance.*

I. INTRODUCTION

Variation and diversity are pervasive features of human beings. People are more different than they are alike. Formal education is an example of an environment where these differences are clear and apparent. Individual learners have different backgrounds, strengths, weaknesses, needs, levels of attitudes, motivations and approaches to studying. They adopt approaches to learning which they are most comfortable with and leave behind the ones with which they are less comfortable. They also differ in how successfully they respond to and profit from instruction practices. The more instructors take differences into consideration, the better

chance they have of improving the academic performance of all of their students. Among the factors that determine success or failure in teaching and learning processes is the consideration of differences in learning styles and strategies preferences [1].

Learning style preferences (LS) refer to 'an individual's natural, habitual and preferred way of absorbing, processing and retaining new information and skills' Reid [2] as cited in Dörnyei [3]. They are characterized as the way people acquire and understand new knowledge and skills. These are typical 'approaches or patterns- for example- visual, auditory and kinaesthetic that give direction to learning behaviour Cornett [4]. Meanwhile, the term language learning strategies (LLSs) is defined as 'steps ,behaviours and techniques used by students to enhance their learning and make it faster and more effective Maclytyre [5] Scarcella & Oxford [6].

Researchers drew a distinction between learning styles and strategies focusing on the ways they differ from each other. Reid [2] stated that learning styles are 'internally based characteristics, often unconsciously used by learners', whereas learning strategies are 'external skills often used consciously by learners'. Oxford [7] indicated that learning styles are 'stable and difficult to change. Learning strategies, on the contrary, are 'more liable to change over time'. Compared to LS, however, LLSs include 'goal, intention, and purpose'. They are controllable means for learners to achieve their learning goals [8].

To teach and learn more effectively, instructors and learners need to better understand and appreciate these individual differences and how they affect the learning process. Understanding individual learning style preferences has significant implications for learners: It helps them be aware of themselves, their abilities, how they learn, and why they differ from peers. It also assists them in planning their learning and developing strategies that cope with different learning situations in order to make learning more meaningful and effective. This awareness has positive psychological

effects for learners. They can gain self-esteem, motivation and feel more confident about themselves Ibrahim& Ramli [9] Sarasin [1]. Furthermore, it becomes one of the most important responsibilities of instructors today is to identify how their students learn and discover factors affecting the learning process in the classroom. Sarasin [1] stated that this knowledge is helpful for instructors in various ways: It supplies them with information about their students like strengths, weakness, why they prefer certain activities, how they behave in group work, participate in the classroom, solve problems...etc. It encourages them to use methods, arrange materials and engage the students in activities that meet their needs and accommodate various learning styles. It helps them reconsider learning problems resulting from the mismatch between students' learning styles and teaching methods.

II. STATEMENT OF THE PROBLEM

Language classrooms contain a wide variety of learners with different needs, abilities, styles and skills. Tailoring instruction to match the needs of each individual learner is impossible; it is equally difficult to imagine that a single approach fits all learners. Awareness of the various needs of learners and exposing them to variety of approaches to accommodate such differences lead to effective learning Bidabadi and Yamat [10]. If students' needs are neglected or not met properly, they will get bored, inattentive, demotivated and discouraged which will lead to poor perform in the course [11].

Given the situation, the researcher shifted the 'Methodology'1 Course activities, techniques and instructional material to meet the diverse styles and strategies employed by learners in an attempt to find out their relationships with academic performance.

A. Study Objectives

The purpose of the current study was to investigate the learning style and strategies preferences utilized by EFL majors in learning 'Methodology1 Course', exploring the influence of these factors on learners' academic performance.

Research Questions:

1. Which learning style do EFL majors at Taibah University prefer to use in learning Methodology 1 Course?
2. What are the most frequently used strategies by EFL majors at Taibah University in the Methodology 1 Course?
3. Is there a significant relationship between the learning style preferences and the learning strategies used by EFL majors in the Methodology 1 Course?

4. What are the relationships between students' learning styles, learning strategies and their academic performance in the Methodology 1 Course?

B. SIGNIFICANCE OF THE STUDY

Findings of the current study might

1. Raise learners' awareness regarding their learning styles and strategies preferences which develops better understanding of the learning environment.
2. Help instructors be conscious of some factors affecting academic performance.
3. Assist curriculum designers and material producers to integrate the appropriate activities, aids, drills.....etc that match the preferred styles and strategies utilized by EFL students.

III. LITERATURE REVIEW:

1-Learning Styles:

The concept of Learning styles (LS) has been defined by various scholars. Pritchard [12] stated that it is "an individual's preferred means of acquiring knowledge and skills". It is "a person's typical approach to learning activities and problem solving". Liu [13] defined it as "approaches to learning which refer to information processed in a preferred way in accordance to learner's habitual characteristics". Sarasin [1] described it as "a certain specified pattern of behaviour and /or performance according to which the individual approaches a learning experience". Dunn and Dunn [14], cited in Tabanlıoğlu [15] defined it as "a term which describes the variations among learners in using one or more senses to understand, organize and retain experiences" (p.9).

The above definitions asserted that learning styles have some characteristics: Each learner has a preferred way of learning. Understanding this idea includes realizing that it is misleading to limit a person's learning style to only one certain type or category. Šabatová [16] stated that human beings naturally possess different learning styles and are capable of learning in almost any style; however, they adopt the one which they feel most comfortable with. The terms 'approach', 'way' and 'preference' have been used to refer to environmental, affective and physical conditions under which a student is likely to learn Pritchard [12].

Thus, learning styles are concerned with how students prefer to learn not what they learn. Learning styles are value-neutral; that is, no one style is better than others Reid [2] as cited in Dörnyei [3]. The different styles may complement one another instead of competing with one another. The

important thing that is helpful to students is to allow them to become aware of their own learning style preferences, yet encouraging them to develop less preferred styles which may suit different learning activities.

Although there is a wide acceptance of the concept of LS in educational psychology, there is, however, disagreement on how to classify and measure it. Different theories used several models and instrument to identify the concept. Gregorc and Butler [17] classified learning styles into four models: Concrete, Abstract, Sequential, and Random. They believed that individuals possess some natural ability in each of the four models; however, most individuals possess more natural ability in one of the models. McCarthy [18] described learners as Analytic, Imaginative and Dynamic according to characteristics they use when processing information. Sim and Sim [19] proposed a theory that classified LS into Cognitive, Affective, Perceptual, and Behavioural. Sarasin [1] adopted a theory that addresses LS from a perspective that classifies learners according to their preferences into: Visual, Auditory, and Kinaesthetic. This perspective made use of the previous theories and synthesized the characteristics defined in those theories into an approach that could be translated into strategies in a classroom setting Walsh [20] Zaiol Abdi, Razaee, Abdullah & Singh [21] Pritchard [12] Sarasin [1]. The current study, hence, adopted the same perspective in measuring LS preferences. Researchers like Walsh [20], Pritchard [12] and Sarasin [1] have been identified the major characteristics of visual, auditory and kinaesthetic learners as follows.

1.1 Visual Learners

They learn best through seeing and prefer information to be presented visually in the form of pictures, posters, maps, diagrams, film...etc. Lectures do not work well for them. They get nothing from merely hearing information. They usually tend to sit in the front of the classroom, take notes, use lists to organize their thoughts and observe teacher's body language and facial expressions to fully understand . They like to be left alone when reading or studying because they are easily distracted by noise. They have neat appearance and so is their handwriting. They also love colours and show interest in the world around them.

1.2 Auditory learners

They prefer to collect and confirm information via listening. Some of these students learn best when the teacher explains orally, others when participating in speaking activities. The classroom activities they like to participate in are discussion, debates, role play and problem solving. They read and talk to self-aloud, discuss ideas verbally with others and recite information over and over to better realize the learning material. They benefit from formal lectures,

repetition, questions and sequential presentation. The majority of auditory learners are talkative, conceptual, perceptual, reflective and memory-oriented.

1.3 Kinaesthetic learners

They are the movers of the educational world. They learn best when actively engaged in doing or touching something. They need to walk around or stand up while working. They enjoy physical activities, field trips, manipulating objects and hands-on experiences. All Kinaesthetic learners need to interact with learning materials and resources. They like to think out issues, ideas and problems while they exercise. They would rather go for a run or walk if something is bothering them than sitting at home. The thought of sitting in a lecture listening to someone else talk is extremely demanding to them.

Exploring the relationship between learning styles and academic performance is a controversial issue that requires further investigation Cano-Garcia & Hughes [22], Romanelli, Bird, & Ryan, 2009[23]. Some researchers stated that LSs are among the factors that play a vital role in affecting academic performance Hall & Mosely [24]; Cassidy [25] ,Collinson [26]. Rayneri and Gerber [27] indicated that LSs play a role in the classroom performance of gifted middle school students. Drysdale , Ross and Schulz [28] carried out a study on the effect of LSs on students' academic performance. They found a significant relationship between the two variables in 11 of 19 courses. Ahmed [29] found that matching students' helped improving the performance of Saudi EFL learners in writing skills. Al-Khatani's [30] study revealed no clear correlation between the students' preferred styles and their choice of instructional mode. However, students' satisfaction and success, as well as their positive and negative learning experiences, did correlate with their learning style preferences. Abu Sharbain, Tan and Jahaish [31] carried out a study to investigate the relationship between the LS preferences and academic performance of third year English majors at Al-Aqsa University in Gaza. The results indicated that there was a significant correlation between performance and auditory style, but there was no significant correlation between performance and visual and kinaesthetic styles. Tight's [32] study revealed that college students learning English performed equally well on vocabulary tests regardless of perceptual LS preferences. Other researchers Sparks [33] ; Dörnyei [3]; Arslan [34] stated that LSs are not the variables explaining and predicting achievement.

2. Language Learning Strategies:

The literature on learning strategies emerged from a concern for identifying the characteristics of effective second language learners. Many researchers Naiman, Frohlich, Stern & Todesco [35], Rubin [36], as cited in O'Mally & Chamot

[37] investigated how learners go about learning something. What makes some learners more successful than others regardless of teaching methods or techniques? The results of these studies led researchers to describe successful language learners in terms of personal characteristics, styles, strategies, attitudes, motivations...etc. Being aware of the learning strategies that enhance learning efficiency, instructors started teaching these strategies to less successful learners Zare [38].

Great attention has been paid to learning strategies since 1970s. It was argued that LLSs are "the special thoughts or behaviours that individuals use to help them comprehend, learn, or retain new information" O'Malley & Chamot [37]. Oxford [7] provided another definition "operations employed by the learner to aid the acquisition, storage, retrieval, and use of information; specific actions taken by the learners to make learning easier, faster, more enjoyable, more self-directed, more effective, and more transferable to new situations.

Cohen [39] stated that LSs "are processes which are consciously selected by learners and which may result in actions taken to enhance the learning or use of a second or foreign language through the storage, retention, recall and application of information about that language". They are also defined as individual's way of organizing and using a particular set of skills in order to learn content or accomplish other tasks more effectively and efficiently in school as well as in non-academic settings [40].

Brown [41] concluded that LSs are the "specific methods of approaching a problem or task, the modes of operation for achieving a particular end and the planned designs for controlling and manipulating certain information" (p.119). From the varied definitions above, Griffiths [42] asserted the following six essential features:

1. LLSs are what students do both physically and mentally.
2. Consciousness is a basic element distinguishing strategies from those processes which are not strategic.
3. LLSs are optional means and learners have complete freedom to choose any strategy that suits a learning situation or task requirements.
4. Strategic behaviour implies goal-oriented, purposeful activity on the part of the learner.
5. They allow learners to regulate or control their own learning.
6. The main purpose of LLSs is the facilitation of learning. These six elements suggested a definition of LLSs as "activities consciously chosen by learners for the purpose of regulating their own learning" (p.87).

Besides the various ways of defining LLSs, there are also different ways of classifying identified LLSs LSs. Early researchers introduced lists of strategies based on the performance of good language learners Rubin [36], Stern [35]. Later, more recent research classified them either based on the level or type of information processed by learners when they use such strategies O'Malley & Chamot [37] or their direct indirect contribution to learning [7]. Chang [43] stated that Oxford's classification has been regarded the most comprehensive. It has been extensively used to collect data on large numbers of learners around the world and also has been employed in numerous correlation studies. The Oxford's Strategy Inventory for Language Learning (SILL) is comprised of:

2.1. Direct Strategies

2.1.1. Cognitive Strategies: procedures and activities that facilitate processing information and structuring it, e.g. practicing, note-taking, grouping, summarizing and analyzing.

2.1.2. Memory Strategies: techniques those help remembering and recalling information, e.g. grouping, using imagery, reviewing and employing action.

2.1.3. Compensation Strategies: those enable learners to use new information despite knowledge gaps, e.g. guessing, rephrasing, and using gestures and synonyms.

2.2. Indirect strategies

2.2.1. Meta-cognitive Strategies: they include managing, controlling and thinking about the learning process, e.g. paying attention, planning for the task, setting goals, self-monitoring and self-evaluation.

2.2.2. Affective Strategies: assist learners to control emotions, attitudes and motivations, e.g. anxiety reduction and self-encouragement.

2.2.3. Social Strategies: those facilitate learning through interactions with others, e.g. working with peers, cooperation and communication with and among people.

For decades, language learning strategies have received increasing attention. The majority of studies considered the effect of strategy use on variables such as proficiency, motivation, gender, self-regulation, learning styles, culture, and academic achievement.

Concerning the effect of strategy use on learning styles, the finding of some studies Ehrman & Oxford [44], Rossi-Le [45], Ko [46], revealed important relationships between learning styles and strategies. The learning style preference of an individual affected the strategies a learner might use. The

findings in the area of language strategies have demonstrated that the employment of learning strategies facilitate learning and lead to better performance. A strong positive correlation has been discovered between learning strategies and academic achievement Al-Qahtani & Al-Hebaishi [47], Rahimi, Riazi & Saif [48], Yang [49], Hong [50], Lee [51], Griffiths [42], Vidal [52], Kiely [53], Koura [54].

IV. METHODOLOGY

A. Participants:

The respondents of the current study were (88) undergraduate EFL majors, Faculty of Education, Taibah University. The participants were selected purposefully. The reason behind selecting undergraduate students was that they were about to finish their studies, so they were motivated to exert much effort to improve their academic performance. All were Saudi female with an average age of twenty. They registered for the *Methodology 1 Course* in the second semester of the academic year 2012.

Instruments

In this study, three research instruments were used for the purpose of collecting data: The Language Style Preferences Questionnaire, The Strategy Inventory for Language Learning SILL (Oxford [7] Version 7.0) and Achievement Test for Methodology 1 Course.

The first instrument was the self-assessment questionnaire developed by Swinburne University of Technology. It was used to identify the learners' style preferences. It consists of (30) items, each has three answer options (A, B, C) representing each of the three style preferences. If the respondent chooses mostly A's, this means that s/he has a visual learning style. If B's, she/he has an auditory learning style. And the option C stands for the Kinaesthetic learning style.

The second instrument was employed to investigate the learners' frequency of use of learning strategies. The version 7.0 of SILL consists of 50 items, and characterized into six subcategories: memory strategies (items 1 to 9), cognitive strategies (items 10 to 23) compensation strategies (items 24 to 29), and metacognitive strategies (items 30 to 38), affective strategies (items 39 to 44), social strategies (items 45 to 50). These SILL 50 items are evaluated on a five-point

Likert scale ranging from 1 (almost never true of me) to 5 (almost always true of me).

The third instrument was applied to measure learners' performance in *Methodology 1 Course*. The test consisted of 50 multiple choice questions with one hour to respond.

To compute the reliability of the two scales, a pilot study was carried out in the first semester of the academic year 2012 on a sample consisting of 40 students. Cronbach Alpha reliability coefficients were calculated. The reliability coefficient of Learning Styles questionnaire was found 0,89, and it was 0.92 for the SILL.

B. Data Analysis

The data Analysis was conducted by using SPSS for Windows 18.0. The descriptive statistics (Mean and Standard Deviation) were used to rank order the learning style and strategies preferences from the most preferred to the least preferred categories. To investigate the relationships between the variables learning styles, learning strategies and academic achievement, the researcher employed Pearson coefficient analysis.

V. RESULTS AND DISCUSSION

Research Question (1): Which learning style do EFL majors at Taibah University prefer to use in learning the Methodology 1 Course?

Synthesizing the results of the learning style questionnaire, 41 (46.6%) EFL majors were visual learners, 29 (33.0%) were auditory learners, while only 18 (20.5%) were kinaesthetic learners. Table (1) displays the mean scores and standard deviations of students' learning style preferences. According to Oxford [7] visual learning is preferred by a large proportion of learners. They prefer to see how to do things rather than just talk about them. The most appropriate instruction for visual learners includes visual formats, demonstrations and computer aided activities. The obtained result was not consistent with that of Al-Khatani [30] who reported that the most preferred learning styles of Saudi students were Kinaesthetic, auditory and then visual.

Table (1)
Descriptive Statics of Learning Style Preferences

Learning style	Frequency	Percent	Mean	Std. Deviation	Rank
Visual	41	46.6	11.1364	2.05768	1
Auditory	29	33.0	9.4432	2.72434	2
Kinaesthetic	18	20.5	9.4205	2.58964	3
Valid N (listwise)	88	100.0			

Research Question (2): What are the most frequently used strategies by EFL majors at Taibah University in the Methodology 1 Course?

In order to find out which learning strategies EFL majors prefer to use, descriptive statics of the two major categories (direct, indirect) were calculated. Table (2) shows the mean scores and standard deviations of these major categories. The results found that the participants used direct strategies more

than indirect strategies. This can be explained that the participants were involved in these strategies because they involved the subject matter directly [7]. They were so beneficial to learners because they helped them store and recover information which assisted their performance directly. EFL majors were very keen on progressing in their academic study.

Table (2)
Descriptive Statics of Learning Strategies

	Minimum	Maximum	Mean	Std. Deviation
Direct	62.00	125.00	92.7841	14.85830
Indirect	35.00	101.00	70.2386	12.24932
Valid N				

Concerning the most frequently employed strategies of the six subcategories, the results indicated in Table (3) show that the most preferred strategies of all with a mean score of 45.78 were cognitive strategies. Second were metacognitive strategies with an average of 31.06. Memory strategies ranked

third with a mean score of 28.26. The mean scores for social and affective strategies were very close to each other, 19.96 and 19.20 respectively, the fourth place in the ranking order was taken by the former and the fifth by the latter. Finally, compensation strategies were the least preferred strategies, with an average score of 18.73.

Table (3)
Descriptive Statics of Six Learning Strategies

Learning strategies	Sum	Mean	Std. Deviation	Rank
Memory	2487.00	28.2614	5.43614	3
Cognitive	4029.00	45.7841	8.66549	1
Compensation	1649.00	18.7386	3.53470	6
Metacognitive	2734.00	31.0682	7.01525	2
Affective	1690.00	19.2045	3.54660	5
Social	1757.00	19.9659	4.37456	4
Valid N (listwise)				

Cognitive strategies were, as described above, the most preferred type of strategies used by the participants. They include note-taking, summarizing, practicing, analyzing, grouping, structuring input...etc. O'Malley and Chamot [37] described them as the most popular among language learners. Oxford [7] added that they are the most essential in facilitating learning, understanding and producing language.

Metacognitive strategies, the second in the ranking order, involve planning, monitoring and evaluating one's learning. They helped the participants of this study think, guide and control their own learning. Memory strategies were the third preferred strategies used by Saudi EFL majors. Oxford [7] stated that these strategies like reviewing, repetition, association...etc are powerful learning tools. They enhance storing and remembering information. They are useful if used with the intention of increasing long-term memory.

A closer look at the three most used strategies, 'cognitive', 'metacognitive' and 'memory' strategies revealed that this obtained result was in agreement with those of Tabanlıoğlu

[15], Al-Refay and Koura [54], Shokrpour, Zareii, Zahedi and Rafatbakhsh [55], Jowkar [56] . However, it was not consistent with Al-Otaibi [57] who stated that memory and cognitive strategies were used most frequently by Saudi students studying in America.

Moreover, findings revealed that social, affective and compensation were the least favoured among EFL students. This was consistent with Al-Refay and Koura's [54] interpretations that Saudi students do not have enough exposure to the target language to acquire it unconsciously. Through formal learning within a classroom, conscious and direct attention to the learning process, they can bridge this gap. Methods of language teaching and learning concentrate on a lot of practicing, analyzing, note-taking...etc. However, students are also required to do much organization, planning and evaluating their academic progress in terms of periodical tests and daily language activities.

Research Question (3): Is there a significant relationship between the learning style preferences and the learning

strategies used by EFL majors in the Methodology 1 Course?

To investigate whether there was a significant relationship between learning strategies employed by female EFL majors and their learning style preferences, the Pearson correlation method was run. The results indicated that there was a significant positive relationship between the visual learning style and memory strategies with correlation coefficient ($r = .050$ significant at $(p < 0.05)$). This implies that visual learners preferred using a wide variety of memory strategies (e.g. creating mental linkage, applying images and sounds, reviewing and employing actions) that helped them store the input they read or hear and retrieved it when they needed to use it. Visual learners used memory strategies effectively to link the visual with the verbal, which is useful for the

following reasons: The mind’s capacity for storage of visual information exceeds its capacity for storage of verbal material. The most efficiently packaged chunks of information are transferred to long-term memory through visual images. Visual images might be the most effective mean to aid recall of verbal material [7].

Another significant positive correlation was also found between the visual learning style and affective strategies. Visual learners were capable of using techniques and behaviours like strengthening motivation, raising self-confidence, reducing anxiety, increasing feelings of satisfaction which helped them get better control over their emotions towards learning. Wooldridge [58], cited in Sarain [1] described visual as sensitive, affective and their emotions play an important role in their learning.

Table (4)

Correlation Coefficient between Learning Strategies and Learning Style Preferences							
Learning styles		Memory	Cognitive	compensation	meta	Affective	Social
Visual	Pearson Correlation	.177*	.080	-.014-	.020	.256**	.071
	Sig. (1-tailed)	.050	.230	.448	.426	.008	.256
	N	88	88	88	88	88	88
Auditory	Pearson Correlation	-.060-	.042	-.061-	.107	-.132-	-.011-
	Sig. (1-tailed)	.290	.349	.287	.160	.110	.459
	N	88	88	88	88	88	88
Kinaesthetic	Pearson Correlation	-.077-	-.108-	.075	-.129-	-.065-	-.044-
	Sig. (1-tailed)	.237	.159	.244	.116	.275	.341
	N	88	88	88	88	88	88

4. What are the relationships between students’ learning styles, learning strategies and their academic performance in the Methodology 1 Course?

To examine if there was a relationship between students’ learning styles and their academic performance in

Methodology 1 Course, The Pearson Correlation was computed. The findings illustrated in Table (5) show that there was no significant relationship between the two variables.

Table (5)

Correlation Coefficient between Learning Styles and Academic Performance						
Academic marks	Performance	visual	auditory	Kinaesthetic	marks	
	Correlation Coefficient	.074	.092	-.101-	1.000	
	Sig. (1-tailed)	.246	.198	.174	.	
	N	88	88	88	88	

One-way ANOVA was also conducted to test the existence of possible differences among learning style preferences and students’ academic performance. The results of the analysis are displayed in Table (6) where the data show no significant relationships among them. Based on the analysis of the results, learning styles preferences did not seem to affect or

predict academic success of the participants. This finding was not consistent with Ahmed [29] who conducted that taking all of learning styles into account in EFL classrooms helped Saudi learners develop their writing skills. On the other hand, this finding was consistent with those of Sparks [33], Dörnyei [3], Arslan [34].

Table (6)
One-Way ANOVA Analysis of Learning styles and Academic Performance

Learning styles		Sum of Squares	Df	Mean Square	F	Sig.
Visual	Between Groups	166.064	31	5.357	1.483	.099
	Within Groups	202.300	56	3.613		
	Total	368.364	87			
Auditory	Between Groups	236.578	31	7.632	1.045	.433
	Within Groups	409.138	56	7.306		
	Total	645.716	87			
Kinaesth-etic	Between Groups	200.972	31	6.483	.949	.553
	Within Groups	382.471	56	6.830		
	Total	583.443	87			
Type	Between Groups	22.584	31	.729	1.342	.167
	Within Groups	30.404	56	.543		
	Total	52.989	87			

In order to determine whether there was a statistically significant relationship between the students' use of learning strategies and their academic performance in the Methodology 1 Course, the Pearson correlation was applied. The results revealed that learning strategies significantly correlated with academic performance at $p < 0.01$ significance value their correlation coefficient being $r = .334$ (See Table 7). Learning strategies helped facilitate learning and absorbing the course. This result was consistent with those of Rahimi, Riazi and

Concerning the relationship between the six learning strategies subcategories and academic performance, the Pearson correlation was employed. The results displayed in Table (8) show that direct strategies (memory, cognitive, compensation) were statistically correlated with academic performance at $p < 0.01$ significance. They highly affected academic performance. Out of the indirect strategies,

Saif [48], Yang [49], Hong [50], Lee [51], Griffiths [42], Vidal [52], and Kiely [53].

Table (7)
Correlation Coefficient between Learning Strategies and Academic Performance

Learning Strategies		Marks	Total
marks	Pearson Correlation	1	.334**
	Sig. (2-tailed)		.001
	N	88	88

metacognitive strategies were the only indirect strategies that had significant positive correlation with academic performance at $p < 0.05$. Affective and social strategies had no significant correlations with academic performance, but they were good predictors of academic success. This result was in line with those of Sparks [33], Dörnyei [3] and Arslan [34].

Table (8)
Correlation Coefficient between the Six Strategies Subcategories and Academic Performance

Academic Performance		Memory	Cognitive	compensation	meta	Affective	Social
Marks	Pearson	.325**	.367**	.387**	.195*	.141	.028
	Correlation						
	Sig. (1-tailed)	.001	.000	.000	.034	.095	.398
	N	88	88	88	88	88	88

VI. DISCUSSION AND CONCLUSION

The current study was set out to investigate the types of learning style preferences as well as the learning strategies mostly employed by female EFL majors in the Methodology 1 Course. The study also examined the relationships among learning styles, learning strategies and academic performance. The results showed that the visual

learning style was the top choice for the majority of female English majors (46.6%).

With respect to the second question, it was found that the most favoured strategies were cognitive strategies followed by metacognitive strategies. Compensation strategies were the least favoured among EFL majors.

Concerning the relationship between learning styles and strategies, it was found that the visual learning style had

significantly correlations with memory and affective strategies. The correlation coefficient of the visual learning style and memory strategies was ($r = 0.50$, $P < 0.05$) and the correlation coefficient of the visual learning style and affective strategies was ($r = 0.08$, $P < 0.01$). No significant relationships were found between the auditory learning style and learning strategies or between the Kinaesthetic learning style and learning strategies.

Regarding the final research question, the findings revealed that learning style preferences had no significant relationship with academic performance. Having a particular learning style did not make an impact or provide an advantage on students' learning outcomes. However, learning strategies were significantly related to academic performance. Language instructors are recommended to take learning styles and strategies into account in order to help EFL majors learn more efficiently.

Recommendation

The results of the study recommend that effective teaching requires teachers' awareness of the importance of learning styles and strategies as variables can influence learning. Such awareness guides teachers in the selection of appropriate instructional methods, tools and materials to maximize students' learning. The study also recommends future research in the area of learning styles and strategies to explore more factors like age, gender, educational level, and motivation....etc. Other research methodologies and instruments can be used to measure students frequent use of language learning strategies and learning styles.

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