

# AN EMPIRICAL STUDY OF INTEGRATING EFL LEARNERS LEARNING STYLES INTO THE CLASSROOM INTERACTION

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## Abstract

This study attempted to explore ,based on the findings from a pedagogical experiment ,the impact on EFL learners motivation and language proficiency of integrating their learning styles into the classroom interaction . The experiment was implemented in two 7th grade EFL classes for 10 weeks . The teacher of one class consistently and exclusively applied activities belonging to the global style ,while the teacher of the other class did the same but with activities of the analytic style . The pre test consisted of Style Analysis Survey ( SAS ) ,a motivation scale ( measuring “ achievement goal orientation ” ,“ attribution ” ,and “ self efficacy ” ) ,and a language proficiency test . The post test was a statistically equivalent version of the pre test ,without the use of SAS though . Results showed that in general ,when activities matched his /her style ,the learner s motivation would probably be enhanced ,and he /she tended to achieve more in language proficiency .

## Key words

learning style ;classroom interaction ;activity ;motivation ;language proficiency

## 1 . Introduction

Teaching English as a Foreign Language ( TEFL ) has become a joint effort of policy makers , practicing teachers ,researchers ,etc . in China for at least three decades . Research has successively or interactively focused on English ,the language ;methodology ;curriculum and instruction ;aspects of teacher role ;aspects of learner role ;and so on and so forth . As in depth research vista unfolds ,researchers have discovered a strong point in exploring EFL learners individual differences and their impacts on foreign language learning ( Martinez 2001 ) . Among the sources of individual differences ,learning style has been considered to play a core role ( Reid 2002 ) . It is also believed that the understanding of learning style can be of benefit to many aspects of teaching :nearly every step from instructional design to assessment could find learning style a say ( Curry 1990 ) .

Many researchers argue that the learning style factor can and should be implemented in EFL classrooms so that the learner s learning process could be facilitated and the learning outcome enhanced ( He 2003 ; Kroonenberg 2002 ; Rossi -Le 2002 ; Violand Sanchez 2002 ) . Such implementation is substantially realized through classroom interaction ( Reid 2002 ) ,which ,similarly ,is substantially realized through classroom activities ( Richards & Rodgers 1986 ) . However ,there have been very few empirical attempts to implement the style factor through activities in classroom interaction ,and little information about the impact of such implementation is available . Moreover ,the researcher believes that only empirical attempts can shed truer light upon this impact since the implementation of the learning style factor is essentially an issue of teaching practice in the complex system of TEFL ( Larsen Freeman & Cameron 2008 ) . Therefore ,the current study attempted to seek evidence of the effectiveness of integrating EFL learners learning styles into the classroom interaction ,particularly from the perspectives

of EFL learners' motivation and language proficiency. These two strands are most frequently addressed and hypothetically assumed to be ultimate reflections of any effectiveness in second language acquisition / learning (Ellis 1994).

## 2. Literature review

There is a modest proportion of literature that extends efforts on the practical aspect of learning style research — the application of learning style in EFL classrooms. Theoretically, Felder and Silverman (1988) first proposed a parallelism between students' preferred style and the corresponding teaching style. There are also studies focusing on the implementation of learning styles in EFL classrooms. Bassano and Christison (2002) focused on the use of quick student-created drawings in the classroom as a means for promoting personalized content, strengthening personal self-esteem and cultural pride, lowering student resistance to collaborative group work, addressing all the learning styles, and integrating language skills practice. The results of Carrell and Monroe's (2002) research suggested that the positive relationships between writing factors and Myers-Briggs Type Indicator scales might be the effects of basic compatibilities between the processing styles of students high on these scales with the methods of writing instruction to which they had been exposed. The negative relationships might be the effects of basic incompatibilities between the processing styles of students high on these scales with the methods of writing instruction under which they had been required to work. Christison and Bassano (2002) argued that there were important benefits to using poetry in the ESL / EFL classroom, in particular, helping develop a love of words and sounds in language learners, building a positive climate in the classroom, assisting in vocabulary development, addressing different learning styles, and providing opportunities for learner-strategy instruction. Friedman and Alley (1984) and Hainer et al. (1990) also addressed the issues of integrating learning styles into classroom instruction.

In China, there has also been some literature on this practical issue. Wang and Zhang (2006) argued for creating a harmonious relationship between students' learning style and teachers' teaching style. They also raised the question of matching and mismatching the styles of the two parties, and proclaimed that much could be done in this scope. Xu and Wen (2006) proposed three principles for integrating learning style factors into classroom instruction: the micro principle, the diversity principle, and the backwash principle. Together with the principles, a matching schema was also tentatively proposed between students' learning styles and the classroom activities. Zhao and Xi (2006) conducted an empirical study involving 796 participants from 7 senior high schools in Shanxi. They discovered that students' preferences for teaching methods used by the teacher in EFL classroom were related to students' learning styles. An empirical step forward is made by Xu (2007) whose correlational study of EFL learners' learning styles and his or her preference for classroom activities found that probably when a learner was more global in learning style, he or she might be in favor of activities that included elements of task-based language teaching and communicative language teaching, and that when a learner was more analytic, he or she might prefer approaches or methods similar to grammar translation and inquiry-based learning.

In sum, previous studies have gained some insights into the effectiveness of implementing the learning style factor into EFL classrooms. The inadequacy, however, lies in the fact that they either considered learning style a rather minor factor in contributing to learners' learning outcome, or addressed this practical issue on a theoretical basis only, which lacked authentic pedagogical explorations with the learning style factor as the core of instructional design. Many researches, especially those conducted in ESL settings, put more emphasis on the socio-cultural impact of implementing the learning style factor, and concluded prevalently within the domains of cultural pride, cultural resistance, collaboration in classrooms, etc. In other words, they were far from explicitly and convincingly addressing the issue of implementation effectiveness in terms of learners' motivation enhancement and language proficiency development. On the other hand, researches in EFL settings, as is mentioned above, have only just started to detect the matching correlations between certain learning styles and learners' preferences for corresponding teaching methods or classroom activities. It is undeniable that preference and effectiveness are two very different concerns, although research into the former obviously offers guidelines for that into the latter. The current research, inspired and guided by these existing studies, attempted to explore how effective the integration of EFL learners' learning styles into the classroom interaction is in terms of motivation enhancement and language proficiency development. And it is hoped that this attempt can

help enrich our knowledge about the unveiled importance of the learning style factor to these two significant measures of language teaching and learning attainment .

### 3 . Methodology

#### 3 .1 Participants

Participants came from two 7th grade classes of the same junior high school in Beijing . There were 42 students (21 males and 21 females )in Experiment Class 1 (to be abbreviated as EC1 ) ,and 45 students (24 males and 21 females )in Experiment Class 2 (to be abbreviated as EC2 ) .

Students in the two classes were new recruits from nearby elementary schools ;therefore ,it was presumed that their backgrounds did not exert validity threatening difference in the study . A survey -purposed English test designed by the school for new recruits , which consisted of listening comprehension ,vocabulary and grammar ,reading comprehension ,and writing sections ,was carried out for the two classes simultaneously . Independent sample t test showed that their mean scores did not exhibit significant disparity (  $p > 0 .05$  ) . Therefore ,they could be treated as approximately identical in language proficiency .

Two female teachers taught them respectively . They had both worked in the school for 4 years since graduation from a normal university .

#### 3 .2 Instruments

Instruments consisted of Style Analysis Survey ( SAS ) ,a motivation scale ,and a language proficiency test . The motivation scale was a combination of three scales targeted at the measurement of achievement goal orientation ,attribution ,and self efficacy respectively . The proficiency test was of four sections : listening ,speaking ,reading ,and writing .

##### 3 .2 .1 SAS

This questionnaire survey ,entitled Style Analysis Survey :Assessing Your Own Learning and Working Styles ,was designed by Oxford (1993 )to assess one s general approach to learning and working .It does not predict one s behavior in every instance ,but it offers a clear indication of one s overall style preferences .

The survey is a combination of five sections . Each of them measures one s styles from one of the five dimensions :how one (1 )uses his or her physical senses to study or work ;(2 )deals with other people ;(3 )handles possibilities ;(4 )approaches tasks ;and (5 )deals with ideas . In other words ,the survey designer presumed that learning /working styles could be investigated from five perspectives . In each dimension ,two ends or extremes are assumed with the style considered a spectrum of variation . Each one s style ,at a particular moment ,is relatively static at a point on the style continuum . Since only the “global analytic ”<sup>1</sup> dimension was significantly correlated with preferences for different classroom activities ( Xu 2007 ) ,the present study applied this corresponding section alone .

The “global analytic ” section encompasses 20 items . Ten of the items seek evidence of one s tendency towards the global end of the style spectrum ,the other ten ,towards the analytic end . When the participant responds to the survey ,he or she circles the response ,for each item ,that represents his or her approach . The possible responses are numbers (from 0 to 3 )indicating “never ” ,“sometimes ” ,“very often ” ,and “always ” . This format was modified in the current study as a scale of five points (1 5 ) with the purpose of attaining higher accuracy (Jin 2001 ;Spreitzer 1995 ) . Response numbers 1 to 5 , respectively ,represented “never or almost never true of me ” ,“usually not true of me ” ,“somewhat true of me ” ,“usually true of me ” ,and “always or almost always true of me ” .

##### 3 .2 .2 Motivation scale

Three scales constituted the motivation scale :Achievement Goal Questionnaire ( Elliot & McGregor 2001 ) ,Personal Efficacy Scale ( Paulhus 1983 ) ,and General Self Efficacy Scale ( Schwarzer 1994 ) . They tested the participant s achievement goal orientation ,attribution ,and self efficacy . They are very important reflections of one s motivation ( Feng et al . 2000 ) . All of the three scales ,originally of

different numbers of points, were transformed into five-point scales. Besides, the order of the items was randomly shuffled when the three scales were combined as one, and the post-test version was a re-shuffled one with the items being the same. The participant indicated the extent to which each of the statements applied to him or her. Response numbers 1 to 5 are the same in meaning as those in SAS.

Achievement goal orientation is an internal force or direction by which an individual makes efforts for goals he or she thinks of meaning and value (Pi 1997). The scale for this aspect of motivation is made up of 12 items. They were treated as consisting of two measurement scopes in this study, i.e. the tendencies of "mastery/performance" and "approach/avoidance". Three in the six "mastery/performance" items are positive statements for the mastery tendency, and the other three are positive statements connected with the performance tendency. The same applies to the "approach/avoidance" scope. In the calculation of the scores, the "mastery" and "approach" tendencies are taken as positive (+), while the "performance" and "avoidance" tendencies are taken as negative (-). Finally, the participant has one score for each of the two scopes based on addition, the arithmetic operation, between the "mastery" and "performance" scores, and between the "approach" and "avoidance" scores. In short, the participant has two scores to represent his or her achievement goal orientation.

Attribution generally refers to the explanations people generate for why they do well or poorly in achievement situations (Weiner 1990). The corresponding scale draws on 10 items. Five of them are positive statements, and the other five are negative ones. The researcher needs to reverse the point values for the five negative items, and then add all values up to gain a total score. The higher one's score is, the more he or she tends to believe that he or she is generally responsible for what happens to him or her in personal achievement situations.

Self-efficacy, another aspect of motivation, refers to the degree of conviction an individual possesses that he or she can do something (Bandura 1977, 1997). The General Self-Efficacy Scale also consists of 10 items. The higher score a participant gets, the more self-efficacy he or she is supposed to possess.

### 3.2.3 Language proficiency test

The language proficiency test was specially designed for related researches to measure the proficiency development rate of 7th grade EFL learners. Its initial purpose was to see the impact on learning achievement of learners' sufficient or insufficient adaptation to the junior high school environment. Therefore, it was believed that this test was also suitable for the present study.

There are four sections in the test: listening, speaking, reading, and writing. The test consists of two identical versions: Version A and Version B. Eighty-five 7th grade students were invited to take the test for collection of its reliability evidence. Results showed that the reliability measures (alpha) for the four sections were 0.966, 0.929, 0.864, and 0.921 respectively (personal communication with the test designers). Therefore, the two versions of the proficiency test are accepted as identical. Besides, rubrics for rating the writing section are clearly illustrated.

### 3.3 Treatment

Treatment was used in both classes. EC1 received "global teaching", while EC2 received "analytic teaching". The framework of these two "teachings" was based on the findings of Xu's (2007) study.

The principles for the global teaching were: (1) task-based activities were highly valued in leading learners through the learning process; (2) communication skills and the functional aspect of language teaching were highlighted; and (3) presenting the learners first with a general/whole picture was important before getting down to details. The principles for the analytic teaching were: (1) grammar-translation was necessary for the purpose of drill and consolidation; (2) autonomy of exploring questions by themselves was expected of the learners; and (3) comprehending major details was the gateway to generalize and arrive at a holistic understanding.

A few examples on the basis of China's National English Curriculum Standards (The Ministry of Education, P.R.C., 2001) are as follows. Note that the treatment only explicitly involved the domains of "language skill", "language knowledge", "learning strategy", and "cultural awareness", but without

“affect and attitude” for fear that it might affect the motivation change the current study intended to investigate.

Language skill consisted of listening, speaking, reading, and writing. In the listening instruction, the teacher of global teaching, for example, might ask the student to understand the general idea first before moving onto understanding details; the teacher of analytic teaching might do exactly the opposite. In the speaking instruction, there might be plenty of communicative activities organized for global teaching, but students receiving analytic teaching might work more frequently on pattern drills after a presentation of the structure of the pattern that had a function in real life communication. In the reading instruction, comprehension tasks with clear goals might be frequently used for students receiving global teaching, while under analytic teaching students might be assisted by the teacher in understanding the typical structure, for example, what was usually in the opening paragraph, etc. In the writing instruction, activities for real communication were supposed to be held for global teaching, writing a letter to a real pen pal for instance; however, analytic teaching might focus more on the basic structures of English writing, and emphasized step by step practice, each step dealing with one particular structure.

The domain of language knowledge encompassed pronunciation, vocabulary, grammar, function, and topic. For students receiving global teaching, pronunciation practice might be realized in reading-aloud activities for small dialogs that were of close meaning to real life, but the teacher teaching analytically might have the students presented with a systematic body of pronunciation rules first before drills were implemented. Vocabulary might be frequently presented in contexts in global teaching, while analytic teaching might call for decontextualization when the root and affix of a word could be analyzed. Global grammar teaching might also be expected to include contexts of real communication and to apply inductive methods of grammar presentation; nevertheless, students receiving analytic teaching might be trained to be rule conscious as the teacher helped them understand most grammatical forms first and then practice by way of translation in general. Function and topic might also be mixed with materials and mastered by means of tasks in global teaching, but in analytic teaching they were made explicit so that students could know well enough what they practiced for.

Learning strategy training and cultural awareness enhancement might be realized the same way as function and topic in the “language knowledge” domain. Besides, students receiving analytic teaching might be asked to get acquainted with the traditions of English speaking countries by autonomous explorations in the library, on the internet, and so on; in global teaching, the teacher might organize activities that were rich in cultural knowledge of the English speaking countries.

### 3.4 Design

The present study was a quasi-experiment. Two independent variables were included: the learning style variable was of three levels (global, analytic, and balanced), and the activity type variable was of two levels (global and analytic). Therefore, this was a 3 × 2 between group design. Dependent variables were student's motivation (with its three dimensions) and his or her language proficiency (with its four dimensions).

### 3.5 Procedures

The experiment was implemented between September and December, 2006, i.e. the fall semester of the school year 2006-2007. Before the experiment started, the proficiency test was carried out. The four sections were separately timed. For example, when the answer sheet for the listening section was collected, the test booklet for the reading section was handed out. The time limit for both reading and writing was 25 minutes each. The speaking test was carried out with each of the two classes simultaneously tested by one of the two examiners who were sufficiently trained to perform in accordance with the rating rubrics. Within two days from the pre-test of the proficiency test, SAS and the motivation scale were implemented in the two classes. The time limits for them were 5 minutes and 10 minutes respectively.

Afterwards, the experiment initiated and lasted approximately 10 weeks. One teacher taught EC1 and the other taught EC2. The researcher went frequently to the school to discuss the teaching plans for

the two classes . The two teachers were generally very cooperative ,and the researcher was allowed to audit three lessons for each class every week to ensure that proper treatment was implemented . When there were problems about the treatment , modifications were made with no considerable delay due largely to the intense presence of the researcher .

When the duration of the experiment closed ,the post tests of the proficiency test and the motivation scale were carried out . Time limits were the same as those in the pre test .

#### 4 . Results and discussion

##### 4 .1 Participants learning styles

Participants styles were determined in the first place . When all their results (87 participants in all) of SAS were analyzed ,27 %(23 participants) of them scoring highest were identified as global learners , and the lowest 27 %(23 participants) were identified as analytic learners . The rest (41 participants) were identified as balanced learners . A summary of participants learning styles is shown in Table 1 .

Table 1 . Summary of Participants Learning Styles

		Number of Participants	M	SD
Global	EC1	12	7.17	2.855
	EC2	11	6.45	2.911
	Overall	23	6.83	2.839
Analytic	EC1	10	-8.80	2.044
	EC2	13	-7.69	2.175
	Overall	23	-8.17	2.146
Balanced	EC1	20	-1.00	2.406
	EC2	21	-0.38	2.439
	Overall	41	-0.68	2.413

It was also necessary to double check if the three groups ,both on the overall basis and on the basis of either class ,were significantly different in styles . The analysis of variance showed significant effects of group divisions for all participants (  $F =212.469$  ,  $p <0.000$  ) and within EC1 (  $F =114.995$  ,  $p <0.000$  ) and EC2 (  $F =96.766$  ,  $p <0.000$  ). Scheffe tests were then adopted for the three effects to make multiple comparisons (see Table 2 ).

Table 2 . Post -Hoc Test for Effects of Group Division

	I	J	I J	Sig .
All	Global	Analytic	15.000	0.000
	Global	Balanced	7.509	0.000
	Analytic	Balanced	-7.491	0.000
EC1	Global	Analytic	15.967	0.000
	Global	Balanced	8.167	0.000
	Analytic	Balanced	-7.800	0.000
EC2	Global	Analytic	14.147	0.000
	Global	Balanced	6.836	0.000
	Analytic	Balanced	-7.311	0.000

Therefore ,the three groups were significantly different in styles ,that is ,group division based on learning styles was very effective .

##### 4 .2 Motivation

The internal three scales in the motivation scale were separated when calculation of the results was done ,and they will be compared separately in the results report as well .

4.2.1 Achievement goal orientation

Tables 3 and 4 show a summary of the results of the achievement goal orientation scale .

Table 3 . Summary of Achievement Goal Orientation ( Mastery /Performance )

		Pre -Test		Post -Test	
		M	SD	M	SD
EC1	Global	-3 .0	10 .33	-7 .8	10 .27
	Analytic	-2 .6	9 .61	-1 .7	9 .21
	Balanced	-1 .0	9 .58	-1 .4	9 .90
EC2	Global	-3 .1	9 .86	-2 .3	10 .34
	Analytic	-1 .9	14 .34	2 .2	14 .12
	Balanced	0 .4	10 .54	5 .0	10 .84

Table 4 . Summary of Achievement Goal Orientation ( Approach /Avoidance )

		Pre -Test		Post -Test	
		M	SD	M	SD
EC1	Global	0 .2	10 .10	5 .0	10 .58
	Analytic	6 .6	9 .14	2 .1	9 .84
	Balanced	5 .4	8 .95	4 .9	9 .09
EC2	Global	7 .5	9 .27	7 .1	10 .04
	Analytic	-1 .7	11 .12	4 .2	10 .89
	Balanced	0 .9	9 .58	0 .4	10 .09

Afterwards ,paired sample t tests were made within the three style groups in both the EC1 and EC2 , so that it could be statistically tested whether the mean differences between the pre test and the post test are significant or not . Tables 5 and 6 show the results :

Table 5 . Paired Sample t -Tests ( Mastery /Performance )

		I J	t	Sig .
EC1	Global	4 .833	9 .868	0 .000
	Analytic	-0 .900	-1 .646	0 .134
	Balanced	0 .400	0 .857	0 .402
EC2	Global	-0 .818	-1 .363	0 .203
	Analytic	-4 .154	-7 .513	0 .000
	Balanced	-4 .619	-9 .516	0 .000

Table 6 . Paired Sample t -Tests ( Approach /Avoidance )

		I J	t	Sig .
EC1	Global	-4 .833	-10 .195	0 .000
	Analytic	4 .500	6 .708	0 .000
	Balanced	0 .550	1 .150	0 .264
EC2	Global	0 .364	0 .559	0 .588
	Analytic	-5 .923	-11 .564	0 .000
	Balanced	0 .476	1 .070	0 .298

The results above eloquently illustrated the change in participants achievement goal orientation : changes were not consistent due to differences in learning styles of the participants and treatments . In EC1 ,global learners tended to grow more performance prone and approach prone ;analytic learners did not exhibit significant change in the mastery /performance scope ,but they seemed to tend to avoid classroom tasks ;and balanced learners revealed changes in neither scope . On the other hand , EC2 showed a somewhat different route of change :global learners were found relatively static in both of the

two scopes ;analytic learners gained tendency towards both “ mastery ” and “ approach ” ;and balanced learners also witnessed in themselves a rise in the mastery tendency ,but the change in the “ approach / avoidance ”scope was not significantly obvious .

Table 7 shows the results of analysis of variance on achievement goal orientation .

Table 7 . Analysis of Variance on Achievement Goal Orientation

	Mastery /Performance		Approach /Avoidance	
	F	Sig .	F	Sig .
Style	4 .049	0 .021	1 .313	0 .275
Treatment	47 .253	0 .000	2 .555	0 .114
Style ×Treatment	0 .081	0 .923	1 .329	0 .270

The “ mastery /performance ”scope was significantly affected by participants styles and treatments , but the main effects of the two independent variables in terms of “ approach /avoidance ” were not significant ;besides ,in neither scope ,the interactive effect between style and treatment was significant .

#### 4 .2 .2 Attribution

Table 8 shows a summary of attribution .

Table 8 . Summary of Attribution

		Pre -Test		Post -Test	
		M	SD	M	SD
EC1	Global	28 .25	7 .485	31 .75	8 .092
	Analytic	28 .30	8 .220	23 .90	8 .062
	Balanced	32 .10	9 .458	32 .20	9 .209
EC2	Global	34 .55	10 .152	30 .82	10 .467
	Analytic	28 .00	7 .326	31 .92	7 .740
	Balanced	27 .19	8 .675	27 .19	9 .212

From the raw data ,it could be seen that in EC1 ,global students tendency towards the belief that they themselves were responsible for the achievements was growing ,but such tendency in analytic students was declining ,and that in EC2 ,however ,the situation precisely reversed when the same tendency in global students weakened but ascended in analytic students . No observant tendency change was exhibited in balanced students ,whether they were in EC1 or EC2 .

Analysis of variance was made to test the effects of the participants style and treatment ,with the pre test score as a co -variable .

Table 9 . Analysis of Variance on Attribution

	F	Sig .
Style	0 .173	0 .842
Treatment	0 .605	0 .439
Style ×Treatment	93 .847	0 .000

Neither of the independent variables was of significant main effect for the post test score ,but the interactive effect between style and treatment was fairly significant . That is to say ,when different treatments were implemented with participants of different learning styles ,the results on their attribution change could be completely different . When a learner was taught the way parallel with his or her learning style ,he or she would tend to believe that he or she rather than external forces was generally responsible for the learning achievements ;if the learner was taught the way contrary to his or her learning style ,he or she would prefer to attribute his or her achievements or failures to external factors .

#### 4 .2 .3 Self efficacy

Table 10 shows a summary of self -efficacy .

Table 10 . Summary of Self -Efficacy

		Pre -Test		Post -Test	
		M	SD	M	SD
EC1	Global	31 .50	8 .878	34 .75	9 .077
	Analytic	29 .90	3 .247	28 .80	3 .676
	Balanced	33 .05	6 .684	34 .00	7 .298
EC2	Global	30 .64	8 .406	28 .09	8 .905
	Analytic	28 .85	6 .189	29 .85	5 .320
	Balanced	32 .19	7 .359	31 .95	7 .639

Very much like the case of attribution ,in EC1 ,global students self efficacy was growing ,but in analytic students it was declining . In EC2 ,however ,the situation reversed ;self efficacy in global students dropped ,but in analytic students ,it rose . Such change was not very observant in balanced students in either class .

Analysis of variance was likewise made with the pre test score as a co -variable .

Table 11 . Analysis of Variance on Self -Efficacy

	F	Sig .
Style	0 .345	0 .709
Treatment	12 .614	0 .001
Style ×Treatment	21 .278	0 .000

Treatment was of significant main effect for the post test score ,but style was not . The interactive effect between style and treatment was significant . The implication could be that when style and treatment were both global or both analytic ,participants self efficacy would be enhanced ,and that when they were mismatched ,it would be weakened .

#### 4 .3 Language proficiency

Table 12 shows a sum mary of language proficiency .

Table 12 . Summary of Proficiency Test

		Pre -Test		Post -Test	
		M	SD	M	SD
EC1	Listening	21 .79	5 .457	25 .74	5 .566
	Speaking	10 .36	2 .229	13 .05	2 .575
	Reading	10 .14	2 .918	14 .31	2 .975
	Writing	8 .21	2 .926	11 .67	2 .944
EC2	Listening	21 .78	5 .312	24 .38	5 .297
	Speaking	10 .82	2 .396	12 .84	2 .576
	Reading	10 .24	2 .732	14 .36	2 .830
	Writing	7 .71	2 .920	12 .13	3 .368

Analysis of variance was made to test the effects of the participants style and treatment ,with the pre test score as a co -variable .

Table 13 . Analysis of Variance on Style and Treatment

		F	Sig .
Listening	Style	4 .298	0 .017
	Treatment	15 .505	0 .000
	Style ×Treatment	7 .556	0 .001

		F	Sig .
Speaking	Style	2 ,640	0 ,078
	Treatment	12 ,303	0 ,001
	Style xTreatment	1 ,780	0 ,175
Reading	Style	0 ,428	0 ,653
	Treatment	0 ,026	0 ,871
	Style xTreatment	1 ,343	0 ,267
Writing	Style	0 ,230	0 ,795
	Treatment	13 ,645	0 ,000
	Style xTreatment	0 ,807	0 ,450

Treatment was effective in participants proficiency development in terms of listening ,speaking ,and writing . For the reading section ,this main effect of treatment was not significant . Secondly ,style was significantly influential only on the listening skill development . This ,fairly probably ,is partially due to the mixing of the two classes , whose students had been receiving different instruction treatments . Therefore ,to further explore the impact of style on proficiency change ,analysis of variance needs to be made again which separates EC1 and EC2 . At this time ,“post test score minus pre test score ” was used as the dependent variable for all modalities . Note that reading proficiency change was removed from the second round of analysis of variance .

Table 14 . Effects of Style in Different Classes

		F	Sig .
Listening	EC1	9 ,044	0 ,001
	EC2	1 ,123	0 ,335
Speaking	EC1	3 ,643	0 ,035
	EC2	0 ,190	0 ,828
Writing	EC1	0 ,539	0 ,593
	EC2	0 ,561	0 ,575

We can see that the effects of the style were significant for the modalities of listening and speaking in EC1 only . Scheffe test was then adopted (see Table 15 ) .

Table 15 . Post -Hoc Test for Listening and Speaking in EC1

		I	J	I J	Sig .
Listening	Global		Analytic	1 ,147	0 ,058
	Global		Balanced	-0 ,783	0 ,287
	Analytic		Balanced	-2 ,200	0 ,001
Speaking	Global		Analytic	0 ,650	0 ,192
	Global		Balanced	-0 ,200	0 ,800
	Analytic		Balanced	-0 ,850	0 ,037

Therefore ,analytic learners grew significantly slower than balanced learners in terms of listening and speaking proficiency in EC1 .

It can be concluded hitherto that (1) the impact of differences between global and analytic teachings was significant on listening ,speaking ,and writing ,but global and analytic teachings seemed to have similar impact on reading ;that (2) when global teaching was implemented ,learners of different styles tended to grow at the same rate in writing ,but in listening and speaking ,analytic learners grew less fast ; and that (3) when analytic teaching was implemented ,learners of different styles tended to grow at the same rate in all the four modalities . Therefore ,it seems by now that analytic teaching was of more balancing elements for the development of learners of different styles .

The next question ,consequently ,was raised :when learners of the same style were compared under the two teachings ,how would their proficiency in the three modalities ( with reading removed ) change ?

For that sake ,the third round of analysis of variance was generated within each style . All the pre test scores were treated as a co-variable ,whose F values were all significant ( p <0 .001 ). Table 16 shows more detail .

Table 16 . Variance of Analysis within Styles

			Pre -Test ( I )	Post -Test ( J )	I =J	F	Sig .
Global	Listening	EC1	21 .42	25 .33	3 .92	9 .350	0 .006
		EC2	24 .00	26 .18	2 .18		
	Speaking	EC1	9 .25	12 .00	2 .75	1 .717	0 .205
		EC2	12 .09	14 .00	1 .91		
	Writing	EC1	8 .58	12 .33	3 .75	2 .022	0 .170
		EC2	8 .55	12 .91	4 .36		
Analytic	Listening	EC1	21 .50	24 .00	2 .50	0 .688	0 .416
		EC2	21 .69	24 .62	2 .92		
	Speaking	EC1	10 .40	12 .50	2 .10	1 .039	0 .320
		EC2	11 .15	13 .15	2 .00		
	Writing	EC1	8 .70	11 .90	3 .20	7 .484	0 .013
		EC2	8 .46	13 .15	4 .69		
Balanced	Listening	EC1	22 .15	26 .85	4 .70	25 .125	0 .000
		EC2	20 .67	23 .29	2 .62		
	Speaking	EC1	11 .00	13 .95	2 .95	9 .462	0 .004
		EC2	9 .95	12 .05	2 .10		
	Writing	EC1	7 .75	11 .15	3 .40	5 .297	0 .027
		EC2	6 .81	11 .10	4 .29		

So ,for global learners ,global teaching was more suitable for listening instruction ;for analytic learners ,analytic teaching was of more help for their writing proficiency development ;and for balanced learners ,global teaching was better for listening and speaking while analytic teaching found itself advantageous in helping them to write better .

Finally ,a set of tentative conclusions was made based on the above analyses related to language proficiency .(1 ) In listening and speaking instructions ,the matching between the activity type and the learners learning style may be beneficial for all learners ,that is ,global teaching is more suitable for global learners (including balanced learners to some extent ) ,and analytic teaching helps analytic learners more .(2 ) In reading instruction ,it does not matter much in terms of proficiency development which approach ,global or analytic ,the teacher takes .(3 ) In writing instruction ,it is obvious that analytic teaching is of more help for all learners .

## 5 . Conclusion

EFL classroom instruction is more effective in terms of motivation enhancement and language proficiency development of the students ,when it matches students learning styles . More specifically , learning style and classroom interaction together ,rather than each of them alone ,contribute to motivation enhancement and language proficiency development . This is good proof that language teaching and learning takes place in a complex system and attending to any single “variable ” might be a misleading or sterile approach ( Larsen Freeman & Cameron 2008 ) . What really matters is the interaction between “variables ” ,and in the current case ,the effective interaction between learning style and classroom interaction . Besides ,when research is at deepening micro levels ,into the more discrete aspects of listening ,speaking ,reading and writing or of achievement goal orientation ,attribution ,and self-efficacy ,variation emerges on which matching pattern promotes which aspect . Therefore ,“balance of the development in different learners ” and “higher classroom instruction efficiency for learners of a particular style ” seem to pose a conflicting question for practicing teachers in their choice of instruction design . Even when style factors were taken into consideration in the instruction design ,as is the endeavor

of the current research, no ideal scheme has been achieved yet for ideal effects for all learners.

In the current study, there are also a few limitations to note. One threat to validity comes from the repeating of the same items in the motivation scale, although the items were reshuffled when the post-test version was generated. Another limitation is that the implementation of treatment, namely the two teachings, was realized by more than one teacher — the two classes had their respective teachers. Therefore, individual differences between the two teachers might also be of some impact on the results. However, implementing the two treatments by the same person without special and sophisticated training might be more problematic.

Further researchers are first recommended to design more sensitive study scheme to retest the results of this study; they are also suggested to design studies from the qualitative perspective for the triangulation of validity of the current results. Secondly, the theoretical framework is still lacking in systematicity and more theoretical work is needed. Thirdly, with a view to teaching practice, more activity forms are expected to be explored for their matching relevance to learners' style preferences; in other words, a more complete activity inventory is anticipated for the integration to be of more diverse guidance to practicing teachers.

#### Note

1. If a learner is global, he or she enjoys getting the main idea, guessing meanings, and communicating even if he or she does not know all the words or concepts; if a learner is analytic, he or she focuses more on details, logical analysis, and contrasts (Oxford 1993).

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( ...continued from p .119 )

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