A MIXED METHODS STUDY OF THE IMPACT OF LEARNING STYLES ON LEARNERS' UPTAKE OF CORRECTIVE FEEDBACK

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Abstract:

The present unprecedented study was undertaken to explore the effect of different learning styles of EFL learners on their uptake of various corrective feedback types provided by their teachers and probe their achievements longitudinally. This study was comprised of 383 adult male students from a popular English language institute. The instruments used in this study were a 30-item perceptual learning style questionnaire developed by Reid (1995) to tap into the students' learning styles together with semi-structured interviews which were conducted to have more rational and sophisticated insights into the phenomenon. The results showed that auditory learning styles prefer to receive corrective feedback explicitly, while repetition proves to be fruitful for interpersonal styles. Furthermore, intrapersonal learning styles have an inclination to recasts, whereas kinesthetic ones have a preference for clarification requests. Logical/mathematical learning styles show a proclivity toward elicitations. Moreover, verbal learning styles have a high rate of uptake when their errors are repaired via metalinguistic feedback. Finally, visual learning styles learn the corrective feedback best when their mistakes are corrected on board. Given the revealing findings, the paper concludes by offering some pedagogical implications to EFL/ESL teachers and also suggestions for future research on under-researched areas.

Keywords: corrective feedback, learning style, uptake, grammatical errors, EFL/ESL teachers

1. Introduction

Corrective feedback (henceforth CF) is an age-old educational praxis which can plausibly be associated with virtually anything we intend to acquire (Evans, Hartshorn, McCollum, & Wolfersberger, 2010; Hattie & Timperley, 2007). As Russell and Spada (2006) define it, in the process of language learning, the term corrective feedback concerns any corrective

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comment supplied to a learner, coming from every resource containing proof of learner error in terms of language structure.

Ever since the advent of "*corrective feedback: to give or not to give*" enigma, teachers have always wondered how CF ought to be delivered so that EFL learners could accomplish maximum pedagogical outcomes. Thus, this has intrigued SLA researchers in the field of Applied Linguistics to delve into the processes through which feedback could ease or hinder language development and the efficiency or inefficiency of CF. Over time, a barrage of research studies has been conducted focusing on various variables which may increase the efficiency of CF in the foreign language classroom. Many descriptive studies have been carried out to explore the incidence of feedback and learners' uptake (students' grasping of the provided feedback for an error), and learners' conceptualisation of feedback (Lyster, 1998; Egi, 2010). Moreover, experimental research studies have probed the impact of diverse kinds of feedback (Li, 2010; Lyster and Saito, 2010). It is noteworthy that both research types have broken new ground in second language teaching.

The previous research findings have revealed that CF can certainly be beneficial for some students if it concentrates on specific linguistic forms, structures, in specific contexts, and in particular ways. Yet, the research studies have inclined to concentrate on group findings, and not sufficient attention has been paid to the reasons as to why some individuals neglect to take advantage of the practice. Conceivably, this tends to be the problem which is of more significance. If EFL teachers pay heed to the prerequisites needing to be fulfilled before CF could prove influential, they seem to be able to develop strategies and techniques that will benefit the majority of individuals in the classroom. Therefore, the question which strikes the mind now is, what are those conditions requiring to be explored? One of these conditions could be teachers' awareness of the learning styles each individual brings to the class with them. Up to the present day, to the best of the researcher's knowledge, there is no research study in the literature investigating how learning styles of the language learners could contribute to the better uptake of the CF types which are provided for them in the classroom.

With all this in mind, the present study is designed to examine whether EFL learners' perceptual learning styles affect their uptake of various CF types and how ESL teachers could facilitate the students' learning by tapping into the ways their students grasp the language more easily and efficiently.

2. Literature Review

2.1 Oral and Written CF

Up to the present day, there has been an abundance of research studies on OCF and WCF exploring their effectiveness from various dimensions with different variables of interest. The majority of the research designs many scholars in the field have adopted so far are descriptive studies, experimental and quasi-experimental designs all of which have proven the practicality of CF and the necessity of its presence in the process of language

learning in a foreign language classroom. As illustrated in figure1, Ellis (2010) has suggested a framework of variables that have been employed in the studies on CF which includes contextual factors, feedback providers, feedback types, individual difference factors (covering both learner and teacher variables), learning outcomes, and the methodological procedures.
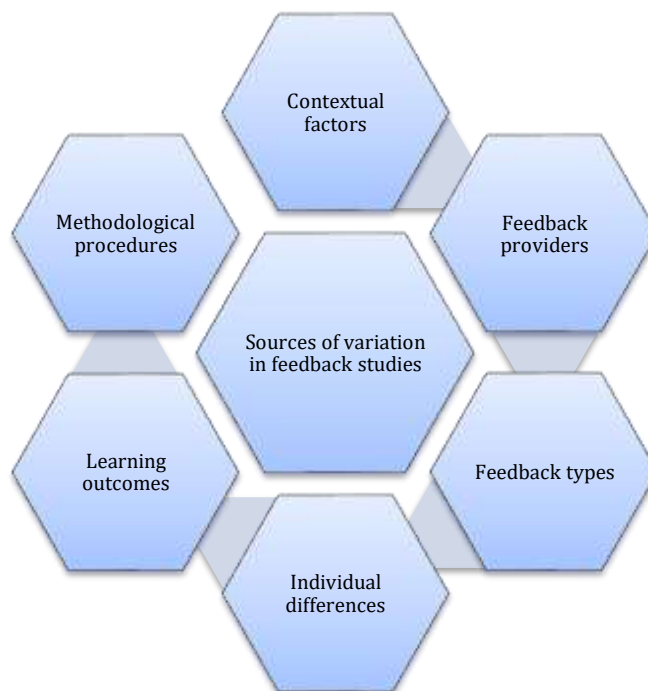

Figure 1: Sources of variation in feedback studies as suggested by Ellis (2010)

According to Lyster and Ranta (1997), there exist six kinds of CF: recasts, explicit correction, metalinguistic feedback, clarification request, elicitation, and repetition. Each of these feedback types will be elaborated in the methodology section. Some scholars refer to recasts and explicit correction as input-providing given the fact that they include the correct structures; output-prompting are the other corrective methods which support learner repairs. There is another instance of such opposition for these feedback moves called implicit/explicit polarity hinging upon whether learners' awareness is visibly directed towards linguistic structures. Recast types belong to the implicit extreme and metalinguistic feedback and explicit feedback at the explicit extreme.

2.2 Learners' Uptake

As defined by Lyster and Ranta (1997), uptake denotes a learner's reactive move that instantly ensues the teacher's feedback. Uptake has been considered as a yardstick of the efficacy of feedback, for, it could act as evidence for the student's perceiving and assimilation of the provided feedback (Egi, 2010; Lyster and Ranta, 1997). According to Swain (1995) uptake also comprises a kind of 'pushed output' through which students likely engages in metalinguistic reflection, hypothesis testing, and active rehearsal of

recently or previously acquired linguistic items. Despite the debate that uptake could ease the outgrowth of learning a second language, the literature lacks sufficient empirical studies in order to substantiate its practicality as a contributory factor in learning a foreign language. There are only two studies which investigate the connections between uptake and students' test scores are Loewen (2005).

2.3 Personality Oriented Factors

As Ellis (2010) puts it, individual factors constitute various elements such as age, language aptitude, memory, learning style, motivation or beliefs, and contextual factors, which are believed to interpose the way students are involved with feedback and eventually grasp it. The issue of individual factors has not been the foci of attention of the researchers and scholars specializing in the realm CF studies, however, a vast variety of learner differences have been substantiated as to how learners reply teacher comments (Ferris, 2006; Ferris and Hedgecock, 1998). Moreover, numerous elements have proven to play a part in this variety, for instance, students 'feelings towards the validity of teacher feedback (Goldstein & Conrad, 1990), content knowledge (Conrad & Goldstein, 1999), receptivity or resistance to revision (Enginarlar, 1993), motivation (Goldstein, 2006), beliefs (Storch & Wigglesworth, 2010) or, simply, the correspondence or lack thereof between the teacher's response and the students 'expectations (Hyland, 2003). Even though the investigation of individual learner factors was not directly pursued in any of those research projects, there exist several pertinent studies concerning how students react to the CF provided (Martínez Esteban & Roca de Larios (2010), El Ebyary & Windeatt (2010).

2.4 Learning Style

Today, the incontrovertible facts that no individual acquires a lesson precisely the same as their peers do and the learners demonstrate a preference to learn things differently are universally acknowledged. As Matthews and Hamby (1995) maintain, as educationalists, all of us have encountered the fact that students learn in different ways. The scientific truth that all teachers teach variegated classes similarly, yet, the learners' achievements tend to be different, is a compelling and concrete evidence for this proposition. One notion that could clarify the diversity in individuals 'accomplishments who are learning a second language, and which has been studied for its crucial part in educational success, on the whole, is the concept of learning style. As defined by Reid (1995), Learning style concerns a student's innate, constant and preferred way of taking in, processing and preserving the incoming data and new capabilities. The following figure is a tabulation of the seven globally established learning styles:
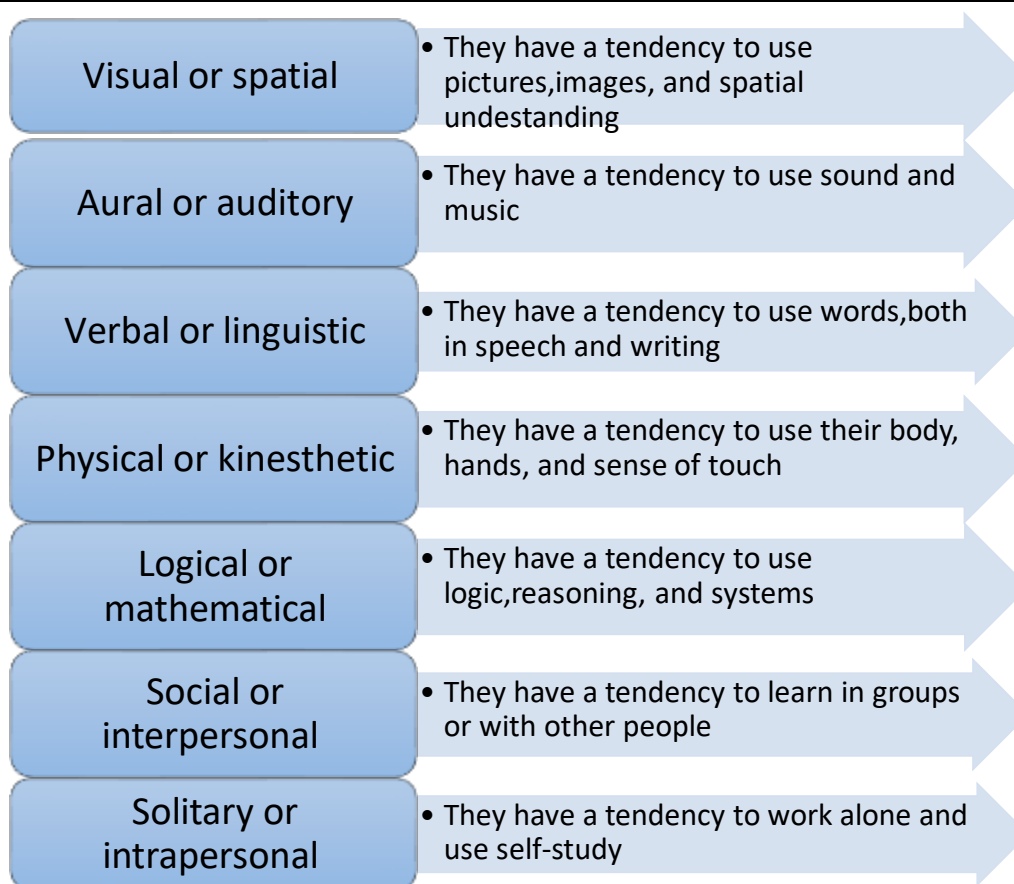
Visual or spatial	• They have a tendency to use pictures, images, and spatial undestanding
Aural or auditory	• They have a tendency to use sound and music
Verbal or linguistic	• They have a tendency to use words, both in speech and writing
Physical or kinesthetic	• They have a tendency to use their body, hands, and sense of touch
Logical or mathematical	• They have a tendency to use logic, reasoning, and systems
Social or interpersonal	• They have a tendency to learn in groups or with other people
Solitary or intrapersonal	• They have a tendency to work alone and use self-study

Figure 2: Seven universally-acknowledged learning styles

2.5 Studies Linking Learning Styles to Students' Achievements

The factor which has awakened researchers' curiosity in learning styles is that research findings regard the correlation between learning styles and teaching styles as being a component which results in the positive educational outcomes in postsecondary students (Dunn et al., 1995; Ellis, 1989; Griggs & Dunn 1996; Hall & Moseley, 2005). As stated by Cassidy (2004), the enthusiasm that has been observed in the effect of learning styles on academic achievement illuminates that research studies have moved one step further examining the old-school variables like intelligence and motivation trying to reveal elements influencing educational achievements. As Entwistle (qtd. in Drysdale et al.: 272) has demonstrated, success and failure in academic performance in tertiary education are affected by the consonance between the way materials are offered and the way learners organize and deal with them. Moreover, Nelson et al. (1993) observed a relationship between learning styles and improved GPA scores. Dunn et al. (1995) discovered that informing the learners of their learning styles and assisting them to acquire study skills congruent with their preferred learning styles had a positive impact on academic achievements. In the same vein, O'Brien (1991), conducted a study on subjects from various fields namely, business, education, and arts and sciences, perceived that variety in learning styles was related to academic success. According to the findings of a meta-analysis of 42 experimental studies, Dunn et al. (1995) assert that learners taught by a

method consonant with their learning styles outperform those whose learning styles are incompatible with the teaching method. Along the same line, Griggs and Dunn (1996) contend that individuals learning from a method congruent with their desirable learning styles perceive more academic accomplishments and are more optimistic towards learning.

Considering all the above-mentioned facts, to fill the void in the literature, the present study attempted to address the following research questions:

RQ1: Do learning styles have any significant effects on the amount of uptake by EFL learners?

RQ2: Do feedback types moderate the effects of learning styles on the amount of uptake?

3. Methodology

3.1 Participants
This research study was undertaken in an English language institute in Tehran capital of Iran specializing in teaching teenagers from basic to advanced levels over a course of four and a half years. Each level contains three stages. The subjects of the study were 383 male students aged from 12 to 20. They attend a course which includes 20 sessions with 21st session being the final exam day. The books are developed domestically by the institute's research and development department and the instructors are strictly forbidden to use L1 in the classroom. On average, there are 25 students in classes. The classes take one hour and forty-five minutes. The participants of the study were at elementary, pre-intermediate, intermediate learners, and high-intermediate levels.

3.2 Quantitative Data
All in all, this research was conducted in six different classes in four consecutive terms. Prior to embarking upon the research study in each semester, the Persian version of Perceptual Learning-Style Preference Questionnaire (PLSP) was administered to the students. This 30-item questionnaire developed by Joy Reid **(**1995**)** has been designed to help the learners identify the way(s) they learn best the way(s) they prefer to learn. Based on the results of the questionnaire, the learners were classified into 6 categories of learning styles. That is to say, for instance, one class was regarded as a visually-oriented group according to the predominant learning styles which were revealed based on the questionnaire results in that class. The focus of the study was just on errors concerning grammar and syntactic structures. The subjects were given a test of grammar at the beginning of the term to compare with the scores of their grammar tests at the end of the course after providing them with the feedback suitable for their learning styles.

3.3 Qualitative Data
To obtain a more comprehensive account of the learning styles, two students from each class were opted randomly to sit for open (semi-structured) interviews and they were

encouraged to explicate their views in detail. Pathak and Intratat (2012) reported research findings through using a blended analysis of data attained via employing these two instruments (questionnaires and interviews). Semi-structured interviews are utilized when the research seeks to take advantage of a quite open framework. Also, by using them, more useful data can be achieved from focused mutual interactions with the subjects. Given the fact that semi-structured interviews have to do with latitude and production of more useful data, the three techniques listed below were employed throughout the interviews. (Arksey and Knight, 1999, p.5).

1) *Rapport-building:* Some amount of time was allocated to establish a rapport with the interviewees. This technique was important to gain perspectives and counter-perspectives.

2) *Thought-provoking interjections:* Since the arrangement of the interview was not journalistic, the interviewer was free to utilize intriguing interjections from the start of the interview to the end. These interjections proved helpful in obtaining comprehensive answers.

3) *Critical event analysis:* Seeing that abstract answers might not be fruitful in some examples, the interviewees were inspired to recount critical events. This analysis led to a better expatiation and illustration of the issues being discussed. It also aided the interviewees to give tangible replies for abstract and complicated subjects.

The following four questions were posed to the learners attending the course:

1) What is your idea about being corrected?
2) How do you learn the lessons best?
3) How would you like to be corrected?
4) What is your opinion about the way your teacher corrected your errors in the class?

3.4 Lyster and Ranta's Coding Scheme

The coding system of error correction sequence developed by Lyster and Ranta (1997) was employed in the present study, beginning with a student's erroneous statement at least in one aspect of the language. The error made by a student is accompanied either by the instructor's CF or the maintaining of the topic. If feedback is provided by the teacher, there two conditions; the provided CF is either pursued by uptake on the part of the student or topic is continued. If uptake occurs, the student's original erroneous statement is either corrected by the teacher or yet requires to be corrected. As tabulated below, the total learner turns were coded as either containing erroneous structure or not. To have a better judgement, short turns with little or no potential for error were removed from the study, such as the likes of yes, no, thank you, please, ok. According to this scheme, error turns were categorized as phonological, lexical or grammatical. However, the focus of attention in the present study is merely on grammatical errors.

Table 1: Lyster and Ranta's Coding Scheme for Error Treatment Sequence

Sequences	Categories
Learner error	Grammar
	Lexical
	Phonological
Teacher feedback	No feedback
	Recast
	Clarification request
	Metalinguistic feedback
	Elicitation
	Repetition
Learner uptake	No uptake
	Uptake: repair/need repair

a. Grammatical errors (all the errors in terms of tense, verb morphology, auxiliaries, pluralization, question formation, word order, subject/verb agreement, and the use of closed classes such as prepositions, pronouns, determiners)

    Example 1:

    S: Does it has a tail? (grammatical error)

    T: We don't say it that way, Ali

    S: Aha does it have a tail?

b. Lexical errors (inexact and improper choosing of lexical items in open classes such as nouns, verbs, adverbs, and adjectives)

    Example 2:

    S: She is trust. (lexical error)

    T: Aha very good. She's trustworthy

c. Phonological errors (wrong pronunciations in terms of reading aloud or spontaneous dialogues)

    Example 3:

    S: skientist. (phonological error)

    T: scientist.

    S: scientist.

The different error treatments are enumerated and explicated as listed below: explicit correction, recast, clarification request, metalinguistic feedback, elicitation and repetition.

a. Recasts (reformulation of all or part of a learner's erroneous utterance without changing its original meaning)

    Example 4:

    S: I was study.

    T: studying (recast)

S: oh sorry… I was studying.

b. Explicit correction (providing the correct form with a clear indication of what is being corrected)

    Example 5

    S: Could you tell me what time is it?

    T: Ok, listen. We don't ask a new question inside our question.

    Could you tell me what time it is? (explicit correction)

    S: Could you tell me what time it is?

c. Elicitation (Techniques to elicit the correct form from the students without providing the correct form.)

    Example 6:

    S: He was arrest.

    T: He was…….. (elicitation)

    S: Arrested.

d. Metalinguistic feedback (metalinguistic information regarding the student's erroneous utterance

    Example 7

    S: If you had a car, you would have gone there.

    T: Remember, when we use the second conditional, the result clause is could/would/

    Might plus the base form of the verb (metalinguistic feedback)

e. Clarification request (moves that indicate to learners that their utterances were either not understood or were ill-formed such as 'Sorry?' or 'Pardon?')

    Example 8:

    S: It's a coat blue.

    T: Excuse me?

    S: It's a blue coat.

f. Repetition (a repetition of the student's erroneous utterance)

    Example 9:

    S: She do like it.

    T: She do? (repetition)

    S: She does like it.

    The following is also the categories of uptakes:

a. Repair (uptake that leads to the correct reformulation of an error as a response to feedback)

> Example 10:
> S: If I had went.
> T: had gone.
> S: If I had gone there.

b. Needs repair (uptake that does not contain the provided CF)

> Example 11:
> S: He were studying.
> T: Was studying.
> S: Aha, thank you.

c. No uptake (occurs when the learner does not provide any answer to the instructor's CF and maintains the topic)

> Example 12
> S: If I am going to there.
> T: If I go.
> S: I will visit the museum.

4. Results

4.1 The Quantitative Phase of the Study

As it was previously stated, the present study aimed at exploring the following research questions:

RQ1: Do learning styles of visual, interpersonal, auditory, intrapersonal, kinesthetic, logical-mathematical and verbal, have any significant effect on the amount of uptake by EFL learners?

RQ2: Do types of feedback moderate the effects of learning styles on the amount of uptake?

The data collected through this study were analyzed using structural equation modeling (SEM) and linear regression. Before discussing the results, it should be noted that the assumptions of univariate and multivariate normality were retained. As displayed in Table 2, the absolute values of skewness and kurtosis indices were lower than +/- 2 (Bachman, 2005; Bae & Bachman, 2010); hence univariate normality of the data. The Mardia's index of multivariate normality; i.e. -.321, was lower than +/- 3 (Bae & Bachman, 2010).

Thus, it can be concluded that the assumption of multivariate normality was also met.

Table 2: Testing Univariate and Multivariate Normality

Variable	Min	Max	Skew	Ratio	Kurtosis	Ratio
Uptake	6.000	22.000	-.442	-1.112	-.358	-.450
Intrapersonal	12.000	33.000	-.001	-.002	-.648	-.816
Kinesthetic	8.000	21.000	-.091	-.228	-.632	-.795
Auditory	12.000	33.000	-.098	-.246	-1.049	-1.320
Logical	5.000	22.000	-.336	-.844	-.220	-.276
Verbal	7.000	23.000	-.221	-.555	-.222	-.280
Interpersonal	7.000	21.000	-.115	-.289	-.578	-.727
Visual	7.000	25.000	.017	.043	.079	.099
Multivariate					-1.316	-.321

Table 3 displays the Cronbach's alpha reliability, composite reliability and average variance extracted for the learning style questionnaire. The Cronbach's alpha reliability for the learning style was .775 (t = 36.81, p < .05). The composite reliability or scale reliability of the data was .839 (t = .65.63, p < .05); and finally, the average variance extracted, convergent validity of the data, was .426 (t = 18.81, p < .05). These results supported the internal consistency of the learning style data, its scale reliability measuring seven sub-sets, and its convergent validity; i.e. not measuring irrelevant variables.

Table 3. Cronbach's Alpha, Composite Reliability and Convergent Validity

Variable	Statistics	T	P
Composite Reliability	.839	65.63	.001
Average Variance Extracted	.426	18.81	.001
Cronbach's Alpha Reliability	.775	36.81	.001

The assumptions of lack of univariate and multivariate outliers were also checked. As displayed in Table 4, the minimum and maximum of standardized scores were within +/- 3 to indicate that the present data did not have any univariate outliers.

Table 4: Descriptive Statistics for Standardized Scores

	N	Minimum	Maximum	Mean	Std. Deviation
Zscore(Intrapersonal)	266	-2.13	2.96	.0000	1.000
Zscore(Kinesthetic)	266	-2.93	2.29	.0000	1.000
Zscore(Auditory)	266	-2.97	2.89	.0000	1.000
Zscore(Logical)	266	-2.65	2.71	.0000	1.000
Zscore(Verbal)	266	-2.76	2.02	.0000	1.000
Zscore(Interpersonal)	266	-2.91	2.72	.0000	1.000
Zscore(Visual)	266	-2.46	2.54	.0000	1.000
Zscore(Uptake)	266	-2.72	2.80	.0000	1.000

Lack of multivariate outliers was checked through the Mahalanobis Distance. The maximum Mahalanobis Distance observed, i.e. 20.96 (Table 5), was lower than the critical value of chi-square at .001 level and eight degrees of freedom (26.12) – there are eight dependent variables in this study. Thus, it can be concluded that the assumption of lack of multivariate outliers was also retained.

Table 5: Descriptive Statistics of Mahalanobis Distance

	N	Minimum	Maximum	Mean	Std. Deviation
Mahalanobis Distance	266	.811	20.962	7.969	3.588

Table 6 and Model 1 display the standardized relationships between the components of learning style with uptake. Based on these results, it can be concluded that; all of the standardized regression weights were higher than .30 indicating that all of the components of learning style had at least moderate and significant contributions to their latent variables; moreover, they exercised a large effect on the amount of uptake.

More specifically, the regression weights were .519 (visual), .481 (interpersonal), .472 (verbal), .482 (logical), .433 (auditory), .505 (kinesthetic), .956 (intrapersonal) and finally .912 (uptake). Based on these results, the first research question can be answered as follows; learning styles of visual, interpersonal, auditory, intrapersonal, kinesthetic, logical-mathematical and verbal, had a significant effect on the amount of uptake by EFL learners.

Table 6: Unstandardized and Standardized Regression Weights of Uptake Model

			Unstandardized	S.E.	Ratio	P	Standardized
Visual	<---	Styles	1.000				.519
Interpersonal	<---	Styles	.871	.360	2.419	.016	.481
Verbal	<---	Styles	.936	.392	2.388	.017	.472
Logical	<---	Styles	.917	.378	2.423	.015	.482
Auditory	<---	Styles	1.266	.565	2.241	.025	.433
Kinesthetic	<---	Styles	.945	.377	2.505	.012	.505
Intrapersonal	<---	Styles	2.547	.727	3.506	.001	.956
Uptake	<---	Styles	1.797	.518	3.471	.001	.912
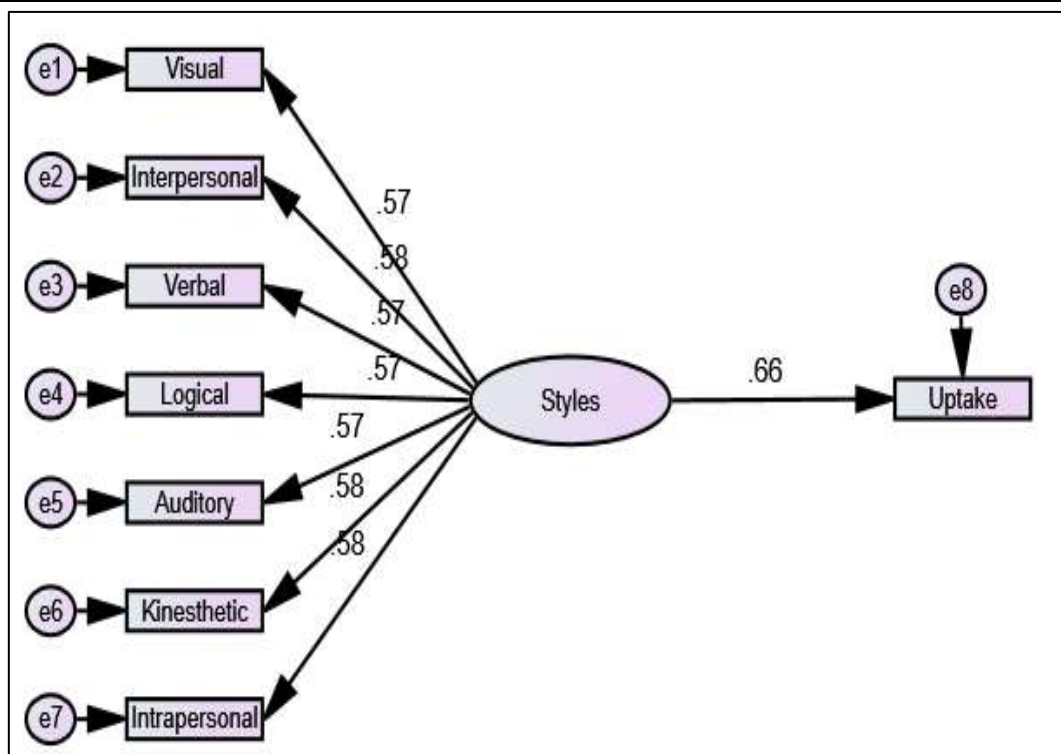
Model 1: Effects of Learning Styles on the Uptake

The uptake model enjoyed a good fit. As displayed in Table 7, the non-significant results of the chi-square test (χ^2 (160) = 129.71, p = .962) indicated the absolute fit of the model. Its ratio over the degree of freedom, i.e. .811, was lower than three which further proved the fit of the model. The GFI of .924 and TLI, CFI and IFI indices of one also showed the fit of the present model. The RMSEA value of zero and its 90 per cent confidence intervals of zero supported the model fit; and finally, the PCLOSE value of one was higher than .05.

Table 7: Model Fit Indices of Uptake Model

Indices	Model	p	Recommended Level
Chi-square	129.71 (160)	.962	None significant
Chi-square Ratio	.811	-	=< 3
GFI	.924		=>.90
TLI	1	-	=> .90
CFI	1	-	=> .90
IFI	1	-	=> .90
RMSEA	.000	-	=< .05
90 % CI RMSEA	[.000, .000]	-	=< .05
p-close	1.000	-	> .05

The second research question targeted if types of feedback moderated the effects of learning styles on the amount of uptake. Seven separate linear regressions were run to probe the second research question. The results (Appendix I, a summary of which is displayed in Table 8) indicated that;

Table 8: The Results of Linear Regression Analyses

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.891b	.793	.788	1.819	.793	138.221	1	36	.000	2.094

a. Feedback = Recast
b. Predictors: (Constant), Intrapersonal
c. Dependent Variable: Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.765b	.585	.573	2.539	.585	49.352	1	35	.000	1.939

a. Feedback = Clarification
b. Predictors: (Constant), Kinesthetic
c. Dependent Variable: Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.652b	.425	.410	2.974	.425	28.071	1	38	.000	1.923

a. Feedback = Explicit
b. Predictors: (Constant), Auditory
c. Dependent Variable: Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.813b	.661	.652	2.241	.661	68.319	1	35	.000	2.141

a. Feedback = Metalinguistic
b. Predictors: (Constant), Logical
c. Dependent Variable: Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.686b	.471	.456	2.739	.471	31.186	1	35	.000	2.135

a. Feedback = Elicitation
b. Predictors: (Constant), Verbal
c. Dependent Variable: Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.829b	.687	.679	2.239	.687	81.214	1	37	.000	1.970

a. Feedback = Repetition
b. Predictors: (Constant), Interpersonal
c. Dependent Variable: Uptake

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.713b	.509	.495	2.671	.509	37.313	1	36	.000	2.061

a. Feedback = Written
b. Predictors: (Constant), Visual
c. Dependent Variable: Uptake

Linear Regressions; Predicting Uptake through Learning Styles Controlling for Types of Feedback

- Intrapersonal learning style was the best predictor of amount of uptake for the recast feedback group (R = .891, R = .793, F = 138.22, p < .05).
- Kinesthetic learning style was the best predictor of amount of uptake for the clarification feedback group (R = .765, R = .585, F = 49.35, p < .05).
- Auditory learning style was the best predictor of amount of uptake for the explicit feedback group (R = .652, R = .425, F = 28.07, p < .05).
- Logical/mathematical learning style was the best predictor of amount of uptake for the metalinguistic feedback group (R = .813, R = .661, F = 68.31, p < .05).
- Verbal learning style was the best predictor of amount of uptake for the elicitation feedback group (R = .686, R = .471, F = 31.18, p < .05).
- Interpersonal learning style was the best predictor of amount of uptake for the repetition feedback group (R = .829, R = .687, F = 81.21, p < .05).
- Visual learning style was the best predictor of amount of uptake for the written corrective feedback group (R = .713, R = .509, F = 37.31, p < .05).

4.2 The qualitative phase of the study

Before conducting the interview, a general structure was set up by deciding the main topics and subtopics in advance so that more detailed questions could be asked as they emerged during the interview. Because of this approach, the interviewees had flexibility and freedom in deciding what needed to be described or argued, how much explanation was needed to be offered, and how much detail was required to be used.

Class 1 (Auditory learning styles)
I always like to be corrected by my teacher in the class because I want to learn the right grammar. I learn things by listening to my teacher because I never write things in my notebook. I want my teachers to correct me by explaining the grammar points. I really liked the comments when I made mistakes because you explained everything directly and clearly (a pre-intermediate 2 learner's comments)

[Student #1, Reconstructed from notes]

Class 2 (Auditory learning styles)
I like comments from my teachers, they are very important for learning English. I always try to learn by listening to what my teacher is saying to me. I can remember them better in the future. (a pre-intermediate 3 learner's comments)

[Student #2, Reconstructed from notes]

Class 3 (interpersonal learning styles)
I like the comments when my sentence is wrong. I like to learn from my teachers and my friends why not? When you repeated my wrong sentence, I understood that something was wrong in the

sentence and I corrected my sentence quickly. I always like to learn from others in the class. (an intermediate 2 learner's comments)

[Student #3, Reconstructed from notes]

Class 4 (interpersonal learning styles)

I prefer to communicate with my teacher in the class a lot. I know this communication has always been helpful for me to learn everything both at school and in the institute. Repeating my errors gives me a signal. (a high-intermediate 1 learner's comments)

[Student #4, Reconstructed from notes]

Class 5 (intrapersonal learning styles)

When my English teachers give me a very small clue about my errors, I try to correct my wrong sentence myself, since I don't like to learn from another person in the class. I think I'm smarter than anybody in the class and don't need a lot of help (an intermediate 3 learner's comments)

[Student #5, Reconstructed from notes]

Class 6 (kinesthetic learning styles)

When I am listening to somebody, I pay attention to everything in them, such as voice, movements, and face. When I make a mistake and my teacher changes his or her intonation or is surprised by my sentence, I can understand there is something wrong with my sentence and try to correct my problem. (a high-intermediate 2 learner's comments)

[Student #6, Reconstructed from notes]

Class 7 (logical/mathematical learning styles)

I learn much better if my teacher informs me about the subject by explaining more about its details and reminding me of other points about it. (an intermediate 3 learner's comments)

[Student #7, Reconstructed from notes]

Class 8 (verbal learning styles)

When I make a mistake, I don't like anybody to correct my mistake if I receive a little help from the teacher it will be enough for me. The teacher should make me aware of my mistake by repeating the sentence or giving some hints then I will correct my sentence because I pay attention to the teacher's talking a lot and later, I remember the lesson by a teacher's voice when he was teaching. (an intermediate 3 learner's comments)

[Student #8, Reconstructed from notes]

Class 9 (visual learning styles)

I always like to see the comments. If my teacher doesn't write them on the board or in my notebook, I will not learn them. I can't understand a lesson by listening I should write them down and also the teacher must write the grammar point down. (a pre-intermediate 3 learner's comments)

[Student #9, Reconstructed from notes]

Class 10 (visual learning styles)

Whenever somebody explains something with pictures or in sentences, I learn better. It takes me a long time to learn a lesson by listening to my teacher I think. (a high intermediate 3 learner's comments)

[Student #10, Reconstructed from notes]

5. Discussion

This study, with a relatively big population size and a lengthy focused teaching span, has obtained results which allow for making substantiated claims. The main conclusion that can be drawn is that individual differences are the elephant in the room in EFL classes. While providing CF for their students, EFL teachers disregard factors such as age, language aptitude, memory, motivation or beliefs, contextual factors, and learning styles (Ellis, 2010). In the same vein, Kang (1999) maintains, ESL/EFL students are different not only regarding their aims for studying the English language, but also in terms of individual differences in learning because of educational, ethnic, and cultural diversities that they bring with them to the classroom. The results of the studies conducted in the past have shown providing CF for the learners is absolutely helpful in a specific context, provided that it focuses on particular structures and is delivered in the way which suits the learners' individual needs. However, those projects tended to address collective findings, and the reasons behind some learners' failure to benefit from the CF in the class were ignored by the previous researchers (see also Choi and Li, 2012). I personally reckon that this issue must be, of utmost importance to EFL/ESL teachers and researchers in the field.

The results of the study will be advantageous for standardized classes where there are at most eight to ten students sitting in the classroom, otherwise, it might be highly idealistic in practice to adapt the CF types to every language learners' learning style when it comes to king-size classes. In such classes, the teachers will rightly have to adopt a one-size-fits-all approach by providing only one kind of CF for all the learners' errors. In small-size classes, the teachers are expected to utilize variegated CF types according to the learners' learning styles which have already been explored through questionnaires upon the launch of the course. It is a fact universally acknowledged that language learners do need to be corrected, yet, the crucial point to consider is that EFL/ESL teachers ought to repair their faulty sentences so pertinent to their learning styles that they can grasp the CF as smoothly as possible. The learners, as some of them stated in the semi-structured interviews, expect their teachers to pay the required amount of attention they deserve individually, rather than collectively. As soon as they are regarded as an important entity, they come to participate in the process of learning more actively and listen to the CF types provided by their teachers more attentively consequently leading to a high level of lesson achievement. (Martínez Esteban & Roca de Larios, 2010), El Ebyary & Windeatt, 2010)To conclude, individual attention on the part of the teacher to adapt the CF types to the learning styles of the learners, is the building block of an English

class seeking to achieve the maximum learning outcome (see also Matthews and Hamby, 1995). One specific CF prescribed for all the students attending a foreign language course will not bear the desirable fruits the seeds of which are planted by curriculum developers and course designers at schools and language institutes.

6. Conclusion

Simply put, the findings of the present study can be best tabulated as follows:

Table 9: Suggested CF types suitable for each learning style based on the findings of the study

Learning styles	CF Preferences
Auditory	They tend to like to be corrected explicitly and directly. Teachers had better correct their errors right after they are made.
Interpersonal	Considering their tendency to learn with others, the best thing teachers may do for them is to repeat their erroneous sentence to make them aware of their error.
Intrapersonal	As they do things in solitary, teachers could reformulate the learner's erroneous sentence without changing its meaning, they can understand the problem.
Kinesthetic	Since they like to use body movements, teachers are advised to use clarification request through surprised intonations and gesticulations.
Logical/ mathematical	Given they tend to use reasoning, teachers ought to provide some metalinguistic information for them.
Verbal	They like to hear or use the word. Teachers can do a great job if they try to use some methods or words in their speech to elicit the correct structure out of the learners without giving them the correct form.
Visual	As their learning styles suggest, they need to see the CF so that they can understand what the intended problem is.

The broad implications of the present research for EFL/ESL teachers are that it is incumbent upon them:

1) To make use of various devices to pinpoint EFL/ESL learners' learning styles and provide instructional alternatives to address their differences. By doing so, teachers, (not merely those teaching English) would help the learners recognize their own dominant learning styles, because even the students themselves have the faintest idea about their prevailing learning styles.

2) To make ESL learning/teaching successful, educators are required to understand and respect learners' variegated learning styles and attempt to produce a maximum learning atmosphere for individuals.

3) To offer CF types to adapt to learners' learning styles while simultaneously motivate learners to diversify their learning style preferences.

4) To promote students' interpretation of the nature of human differences in the process of learning so that they can optimize the strength of their workable, open-ended curriculum and personalized teaching.

7. Suggestions for Further Research

The findings of the study may also cast a new light on the future research investigations aiming to explore the significance of individual factors the likes of personality types, age, gender, motivation, learning strategies etc. in a given learning environment to maximize the rate of the uptake of the CF the teachers provide in EFL and ESL classrooms since more studies do need to be conducted in this research territory. Furthermore, considering the fact that gender was not a variable of focus in this study, exploring the impact of the female EFL/ESL learners' preferred learning styles on their uptake of the CF types could give future researchers food for thought in this area for their upcoming research endeavors.

Conflict of Interest

I, the author, hereby declare that there are no financial or non-financial conflicts of interest to disclose. I attest to the fact that I have read the manuscript, certify the validity and legitimacy of the data and its interpretation.

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