The Influence of Indirect Corrective Feedback on the Linguistic Accuracy of Adjectival Clauses in an EFL Context

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Abstract: The goal of this research was to find out which corrective feedback technique would be most effective in some EFL context. Concisely, we wanted to find out whether the feedback techniques commonly used in this context (namely indirect feedback and oral meta-linguistic explanation) were structure-, learner-, and task-dependent. We chose to experiment with all the functional uses of one linguistic structure, namely adjective clauses. Whereas the experimental group received two types of feedback (indirect coded written corrective feedback and oral meta-linguistic feedback), the control group received no corrective feedback at all on the targeted features. Findings showed that the experimental group's linguistic accuracy in using adjectival clauses improved far better than that of the control group. However, this improvement, quite expectedly, declined gradually over the course of time; hence the experimental group's linguistic accuracy was a little better on the immediate posttest than on the delayed post-test. Our argument was that a combination of indirect feedback and meta-linguistic explanation would be rewarding for adult learners with low-proficiency levels probably because such feedback techniques require them to exert maximum cognitive, especially when getting engaged in a problem-solving process.

Keywords: Adjective, Clauses, Indirect, Corrective, Feedback

Introduction

A number of corrective feedback techniques are always available to writing teachers. Feedback can be positive or negative, written or oral, direct or indirect, explicit or implicit, focused or unfocused, linguistic or meta-linguistic, etc. One major concern for almost all writing teachers is to find out the technique that is effective the most for each linguistic structure and for each group of learners in a given context. Researchers have been conducting field investigations to find out the relative effectiveness of these techniques whether independently or in combination. For example, negative, explicit, direct feedback was found to be more appropriate for student writers of low proficiency level (Ferris & Hedgcock, 2005; Ellis, 2009), but oral meta-linguistic explanations, though more time and effort consuming on the part of the instructor, may be more rewarding on the long run for learners of high proficiency levels (Sheen, 2010a, 2010b). Ferris (2002) have shown that indirect feedback options could lead to long-term learning by getting the learners engaged in a problem-solving process of detecting and correcting for themselves the errors they make.

However, a number of renowned researchers have challenged that the gains obtained from the provision of corrective feedback can stand the test of time. Classic work on feedback provision (Semke, 1984; Fathman & Whalley, 1990; Kepner, 1991; Sheppard, 1992) claimed that corrective feedback was only momentarily constructive. Truscott (1996) and his advocates (Polio et al., 1998; Fazio, 2001; Chandler, 2003; Truscott and Hsu, 2008) did not only cast doubt on the effectiveness of feedback provision, but they also dared to claim that it could be harmful. Researchers who have been trying to conciliate between the two sides involved in the

debate would argue that the positive effects of the feedback could be distorted in part (or on whole) by "inconsistencies in research design" (Ferris, 2004; Guénette, 2007) and by the confusion in using the technical jargon when conducting research in this area (Al-Jarrah & Al-Ahmad, 2013). Probably for all these, Guénette, (2007) stressed that the appropriate feedback should be "given at the right time and in the proper context" (p. 11).

Therefore, for a better understanding of feedback provision, attention needs to be turned to the writing practices in general and feedback provision techniques in particular in diverse sociolinguistic contexts outside, to use Leki's (2001) terms, 'the Inner Circle' such as the UK and the USA and more prominent nations in East Asia such as China and Japan and Eastern Europe like Poland, Turkey, and Ukraine. Hence, the socio-educational challenges that EFL teachers need to cope with in order to promote teaching writing at different educational levels are surely different in less prominent nations. A considerable portion of research (Leki, 2001; You, 2004a; Reichelt, 2005, 2009; Cimasko, et al., 2009) has shown how a host of factors (internal and external) could shape foreign language writing instructions and feedback practices in different international settings.

In this research endeavor, we try to bring evidence that contributes to the debate on the feedback technique that is most effective in a given context from one socio-cultural context that is still under-researched. Concisely, we chose to experiment in the _____ EFL context by providing the students in the experimental group with a combination of indirect feedback and some oral meta-linguistic explanation on all the functional uses of one linguistic structure, namely adjective clauses. One main reason why we chose to experiment with such types of feedback was that they are the most common error feedback techniques used in this learning environment. To illustrate, the practical constraints that teachers face (for example, large classes, heavy 15 workloads, and tight teaching schedules) make these feedback techniques most common in this learning environment (Al-Jarrah & Al-Ahmad, 2013). Another less driving force for our choice was that very few studies, to the best of our knowledge, have compared the effects of such feedback types on promoting acquisition of specific grammatical structures such as the adjectival clauses.

Literature Review

A considerable portion of research in second language writing instruction (Lalande, 1982; Robb et al., 1986; Ferris & Roberts, 2001; Sheen, 2007; Sheen et al., 2009; Bitchener, et al., 2005; Bitchener, 2008; Bitchener & Knoch, 2009; Bitchener & Knoch, 2010a, 2010b) has been devoted to finding out the feedback techniques that should be used in different sociocultural contexts. Those researchers' main concern was to settle the dispute about which error correction technique is most effective for a group of learners in some socio-cultural contexts. To them, the problem then lies not only in what to correct but also on how to correct (Cohen & Robbins, 1976; Hyland, 2003, Bitchener et al., 2005); hence treatment of learners' errors is considered by Guénette (2007) "the crux of the matter" (p. 13). A quick survey of the related literature would immediately reveal that the findings of research in this area are still conflicting. For example, Robb, et al. (1986) and Ferris and Roberts (2001) who experimented with different types of indirect feedback found that all types of indirect feedback had relatively equal impact on improving learners' writing capabilities. Bruton (2009), on the other hand, contended, "there is no guarantee that the students' revisions will be correct if only indirect feedback was provided" (p. 30). Lalande (1982), Frantzen (1995), Ferris, et al. (2000), Ferris and Hedgcock (2005) argued that indirect feedback could be more effective than direct feedback. Chandler (2003), on the other hand, found evidence to the contrary. Still, Robb, et al. (1986), Semke (1984), and Ferris and Roberts (2001) found no significant differences between the two correction methods. In one of his experiments, Chandler (2003) found that all correction methods (including coded and uncoded) were relatively equally effective.

The effect of meta-linguistic feedback on improving students' writing performance was investigated in its own right and in combination with other types of feedback. For example, Lyster (2004) claimed that meta-linguistic feedback was more effective than recasts. Likewise, Sheen (2007) showed that oral meta-linguistic feedback was more effective than oral recasts. Concisely, he found that it was meta-linguistic corrective feedback (not oral recasts) that helped learners improve more on their use of English articles. This was, the argument goes, because learners put more cognitive effort when entreated to process information in this way. However, Sheen (2010) argued that both oral meta-linguistics and written meta-linguistic feedback were equally effective in facilitating the acquisition of English articles. Likewise, Ellis et al. (2006) found that meta-linguistic feedback (explicit feedback) was more effective than recasts (implicit feedback) in acquiring regular past tense.

When combined with other feedback techniques, the story was a bit different. For instance, Sheen (2007) compared some learners' performances after providing them with direct feedback alone and after providing

them with direct feedback in combination with some meta-linguistic explanation. She found that the combination approach was far more rewarding because the meta-linguistic feedback, she argued, triggered a deeper level of cognitive processing on the part of the learners (Sheen, 2007, p. 260). Li (2010) and Lyster and Saito (2010) reported higher effect size for explicit feedback type (e.g. explicit correction and meta-linguistic feedback).

What is more intriguing about research in this area is that the relative effect of the feedback technique is structure-specific, i.e. one type of feedback that could be effective for correcting one specific structure may not be equally effective for another. Bitchener et al. (2005), for instance, who stressed that the type of feedback was not equally effective for specific structures, found that those who received direct error correction and oral meta-linguistic explanation outperformed those who did not for the past simple tense and the definite article, but they failed to do so for prepositions. The only explanation that Bitchener and his contingent could provide for this thought-provoking finding was that the past tense and the definite article structures, their argument goes, are more "rule-based" than prepositional forms. However, Bitchener et al. (2005) never told the readers why prepositional forms were more idiosyncratic (Al-Jarrah & Al-Ahmad, 2012). Interestingly enough, Bitchener and Knoch (2009) found no differential effects for the different types of direct feedback on the linguistic accuracy of low intermediate ESL learners' writing for two functional uses of the English article system (referential indefinite *a* and referential definite *the*). What is worth noting here is that Bitchener et al. (2005) and Bitchener and Knoch (2009) used the unfocused approach to feedback provision in that they chose to experiment with very few functional uses of each structure (probably the most salient functions). The question that arises immediately is: Did they adopt the focused approach to experiment with all of the functional uses of each structure, wouldn't the definite article structures, for example, have been no less idiosyncratic? What concerns us most here is this: Would the effect of the feedback technique have then been structure-dependent?

To test this assumption, we used here the focused approach by providing feedback on all functional uses of one specific structure (namely adjective clauses) using a combination of indirect feedback and some oral meta-linguistic explanation. The choice of this approach will be defended in the methodology section below.

Method

Research Questions

The study was intended to address the following questions:

1. Were there any statistical differences at (α=0.05) in the means of the students' performance in identifying and correcting errors in adjective clauses between the pretest and delayed posttest taken by the experimental and control groups due to provision of feedback (feedback/ no feedback)?
2. Were there any statistical differences at (α=0.05) in the means of the use of adjective clauses by the experimental group students on the pretest, immediate test, and posttest due to the feedback provided?

Participants and Setting

Forty-three EFL second-year English majors taking a required writing course participated in this study over a semester of 16 credit hours. The subjects were divided into two groups (25 in the experimental group and 18 in the control group). By making reference to the Common European Framework, the researchers could tell that the subjects' English language proficiency was rated as low-intermediate, judged to be homogeneous in a number of ways, including their previous language instruction in English as a foreign language and their approximately similar scores in the high school leaving examination which is an indispensable condition for their admission to the English program. As for their writing tasks, the participants had to meet in class three times a week.

During each meeting which lasted for 50 minutes, the experimental group received two types of feedback on the targeted structure: indirect coded written corrective feedback over the targeted (e.g. *rel.* for missing a relative pronoun) and oral meta-linguistic feedback. The control group, on the other hand, received no corrective feedback at all, but for ethical considerations, they were provided with general content feedback on the quality of their work.

The 'adjectival clause' was the targeted structure. This structure was chosen for at least two reasons. First, the researchers noticed that students in this learning environment made errors in using adjectival clauses when speaking in English and when composing in English. Second, the findings of recent written corrective feedback studies (Bitchener, 2008; Bitchener & Knoch, 2008a, 2008b, 2009, 2010; Ellis, et al., 2008; Sheen, 2007a; Sheen, et al., 2009) and oral corrective feedback studies (Carroll & Swain, 1993; Ellis et al, 2006; Muranoi (2000) showed that targeting a single specific linguistic form was probably the optimal approach when conducting a research like ours. However, it should be noted that previous research made a distinction between the focused approach and the unfocused approach to corrective feedback provision. Although the terms (focused and unfocused CF) were operationalized in different ways by different researchers, they traditionally differ in the number of errors that were targeted by the feedback. In a nutshell, whereas the unfocused approach targets the errors made by the learners on more than one structure simultaneously, the focused approach targets very few functional uses of some specific structure(s) at a given time. To illustrate, whereas some researchers selected one or two error types of some specific structure (e.g. the indefinite article for first mention and the definite article for subsequent mention), others experimented with a whole range of error types of seemingly unrelated structures (e.g. simple past tense, prepositions, articles). In our view, there were at least two major flaws in this approach. On the one hand, some researchers were fastidious in their choice of the functional uses for each specific target structure. On the other hand, some researchers dealt with the learners' errors as if they were unrelated lists of grammatical features. For example, although Sheen et al. (2009) chose to target articles, past tense, and prepositions, they chose to provide corrective feedback on referential indefinite *a* and referential definite *the*, and for the past tense, they choose copula *be*, regular past tense *-ed* and irregular past tense, and for prepositions, they targeted only temporal and locative prepositions (namely at, in, on).

In the current study, we chose to use the focused approach which, following author (Al-Jarrah, 2016), was operationalized to refer to *all* the functional uses of *one* specific structure (namely adjectival clauses). The motivation for our choice was that the effect of the feedback should not only be noticeable in the improved accuracy rate on the targeted structure only, but also on a broader range of grammatical structures (Sheen et al., 2009: 259). What this basically means is that language acquisition involves subtle processes that require more than just a collection of discrete items. Roughly equivalent to Sheppard's (1992) holistic comments, global approaches towards corrective feedback would establish a meaningful whole.

Data Collection Instruments

Three tests were used to collect data for this study. A pretest which took place at the beginning of the semester, and an immediate posttest, which took place after the participants had received oral meta-linguistic explanation and finally a delayed posttest, which took place two weeks before the end of the semester. The experimental group and control group took both the pretest and delayed posttest, but the control group did not take the immediate posttest. The pretest and posttest consisted of twenty-five statements. Some of these statements had errors in using the adjective clause (e.g. a missing relative pronoun, an incorrect form of relative pronoun, or a misplaced relative pronoun, etc.), and others had adjective clauses correctly used. The participants were asked to find out whether these statements were correct or incorrect. If incorrect, the participants were asked to identify the errors and correct them. In the immediate posttest, only the experimental group was asked to write two coherent and cohesive untimed five-paragraph writing tasks with two drafts each on two different topics at two different times. In the delayed posttest, the two groups were given the same test and were asked to do what they did in the pretest.

Treatment

Before the pretest, the participants were briefed on the study and were asked to sign a consent form if they were willing to participate in the study. On the first week of class, the pretest was administered for both the experimental group and the control group. After the pretest, the experimental group was given half an hour oral meta-linguistic explanation in which the researcher explained the rules that govern the use of the adjectival clauses in English as illustrated in Deborah Philliphs' Longman Preparation Course for the TOEFL. If needed, extra examples were given and discussed with students. A short controlled practice exercise consisting of 10 sentences on adjective clauses was administered shortly afterwards. Some of these sentences were correct and others had a problem in the structure of the adjective clauses. The students were asked to indicate whether the statements were correct or incorrect, and if incorrect they were asked to correct them. They were given 10 minutes to complete the task. On the other hand, the control group received no such feedback on the targeted feature.

Before starting the writing process, the participants in the experimental group were trained on process writing, the approach which consists of three stages of writing, namely pre-writing, writing, and post writing. For almost three weeks, the students were trained on how to write coherent, cohesive, and unified multiple drafts of well-organized essays. Then, the experimental group underwent an immediate posttest in which the participants were asked to write two five-paragraph essays, two drafts each. The writing task was started in the class and then completed at home. Ten days after being exposed to the oral meta-linguistic explanation, the student writers were given 3-4 days to complete the assignments. One of the researchers, as a writing instructor, provided written corrective feedback on the students' first draft in the form of symbols above the targeted error.

It was expected that errors might take place in at least three ways: (1) the relative pronoun is misplaced; (2) it is not used when it is necessary to be used; (3) and/or the inappropriate form of the relative pronoun is used (e.g. the subject pronoun is used instead of the object pronoun and vice versa). The students were asked to revise them in light of the comments provided on their writing tasks. After students handed in back their first draft, they were given enough time to revise the corrections made on their assignments and were given the opportunity to inquire about the errors they committed. The researcher instructor responded to the students' inquiries and drew their attention mainly to the (in)correct use of the linguistic structures (adjective clauses) they used in their first drafts and instructed them on how to avoid such errors when submitting their revised drafts of the assignment for scoring purposes. To motivate students to take the revision process seriously, the first draft was corrected and given nearly half of the total grade. Then, the students were asked to write the second draft and hand it back in in two days' time. This draft received the same treatment the first draft had received. Based on the student writer's positive use of the feedback provided on their first drafts, they were given the second half of the score. Both the experimental and control group were subjected to a delayed posttest two weeks before the end of the semester. The control group's writing assignments were not subjected to any formal instruction on the targeted structure but received instead some general feedback. The researcher instructor did not tell the participants that there would be a posttest lest they revise the corrections the instructor made previously.

Data Analysis

One of the researchers, an experienced writing instructor, made error identification and correction on the students' texts. Another round of scoring took place a month later by the same researcher who scored the essays again to examine the reliability of the writing test. The essays were also scored by another experienced writing instructor. The inter-rater reliability was 92%. To account for descriptive and referential statistics, ANCOVA and ANOVA for repeated measures, and Bonferroni tests were implemented using Statistical Package for the Social 19 Sciences (SPSS).

Findings

In this section, we try to report the findings gathered from the field on the two questions of the study.

R. Q. 1. Were there any statistical differences at (α=0.05) in the means of the students' performance in identifying and correcting errors in adjective clauses between the pretest and delayed posttest taken by experimental and control groups due to provision of feedback (feedback/ no feedback)?

To answer this question, means and standard deviations of the students' performance in identifying and correcting errors in the use of adjectival clauses on the pretest and delayed posttest were calculated, as shown in Table 1.

Table 1. Means and standard deviations of the students' performance in identifying and correcting errors in the use of adjectival clauses in the pretest and delayed posttest

Feedback provision	N	Errors in the use of adjectival clauses identified & corrected (Pretest)		Errors in the use of adjectival clauses identified & corrected (Delayed Posttest)	
		Mean[*]	Std. Dev.	Mean[*]	Std. Dev.
No feedback (Control group)	18	48.22	19.95	45.78	19.41
Feedback (Experimental)	25	32.96	11.15	61.76	14.33

Table 1 demonstrates that there were observed differences in the means of the students' performance in identifying and correcting errors in the use of adjectival clauses on the posttest due to the provision of feedback. To verify whether these observed differences were significant, the ANCOVA test was used, as shown in Table 2.

Table 2. ANCOVA test results of differences between the means of the two posttests

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
Feedback provision	6429.92	1	6429.92	52.41[*]	0.00	0.5671
Error	6740.94	1	6740.94	54.94[*]	0.00	0.5787
Total	4907.75	40	122.69			
	14010.79	42				

*Errors in the use of adjectival clauses identified & corrected (Covariate)

Table 2 shows that there was a statistically significant difference at (α = 0.05) between the means of the experimental and control groups posttests in identifying and correcting errors in the use of the adjectival clauses attributed to the type of feedback provided. To identify which group this significant difference was in favor of, the adjusted means and standard errors of the delayed posttest were calculated, as illustrated in Table 3 below.

Table 3. The adjusted means and standard errors of the delayed posttests of control and experimental groups

Group	Adj. Mean	Std. Error	95% Confidence Interval	
			Lower Bound	Upper Bound
Control	38.57	2.79	32.93	44.22
Experimental	66.95	2.33	62.24	71.65

Accordingly, we notice that the significant difference was in favor of the experimental group which received a combination of indirect coded feedback and meta-linguistic explanation compared with the control group which did not receive such feedback. This means that the experimental group's linguistic accuracy in using adjectival clauses improved significantly, while that of the control group did not.

R. Q. 2. Were there any statistical differences at (α = 0.05) between the means of the pretest, immediate posttest, and delayed posttest regarding the use of adjective clauses by the experimental group students?

To answer this question, means and standard deviations of the students' performance on the pretest, immediate test, and delayed posttest regarding the use of adjective clauses were calculated, as shown in Table 4.

Table 4. Means and standard deviations of students' performance on the pretest, immediate test, and delayed posttest

Measurement	N	Mean	Std. Dev.
Pretest	25	32.96	11.15
Immediate Posttest	25	95.10	9.14
Delayed Posttest	25	61.76	14.33

Table 4 demonstrates that there were differences in the means of the use of adjectival clauses on the pretest, immediate test, and delayed posttest by the students in the experimental group who received a combination of indirect coded corrective feedback and meta-linguistic explanation. To verify whether these observed differences were significant, ANOVA of Repeated Measures test was used, as displayed in Table 5.

Table 5. ANOVA of repeated measures of the means of the students' performance on the pretest, immediate posttest, and delayed posttest due to provision of feedback

Source of Variance	Sum of Squares	df	Mean Square	F	Sig.	Partial η^2
Between Groups	48357.58	2	24178.79	214.97	0.00	0. 8996
Within Groups	5398.92	48	112.48			
Total	4522.87	24	188.45			

*Tests of within-subjects effects (sphericity assumed; Mauchly's W=0.95, Approx. χ2=1.19, df=2, Sig.=0.55)

The figures in Table 5 show that there were statistically significant differences at (α = 0.05) in the means of the students' performance on the immediate posttest in using the adjectival clauses by students who received

indirect coded corrective feedback and oral meta-linguistic explanation. To identify which of the three tests the significance was geared to, Bonferroni test for post hoc was implemented, as shown in Table 6.

Table 6. Bonferroni test of means of students' use of adjectival clauses on the pretest, immediate test, and posttest

Measurement		Pretest	Posttest
[Bonferroni]	Adj. Mean	32.96	61.76
Delayed Posttest	61.76	28.80[*]	
Immediate posttest	95.10	62.14[*]	33.34[*]

We can say that the significant differences were in favor of: first immediate posttest in comparison with both the pretest and the delayed posttest respectively and second the delayed posttest compared with the pretest. What this means is that the students in the experimental group who received indirect coded corrective feedback and meta-linguistic explanation were much far better in improving their linguistic accuracy in the use of the adjectival clauses on the immediate posttest than on the delayed posttest. Additionally, but to a lesser extent, the experimental group students were better off in improving their linguistic accuracy on the delayed posttest than on the pretest. Comparing students' performance on the immediate with that on the delayed posttest, we can say that the students' linguistic accuracy improved much better on the immediate posttest than on the delayed posttest. This indicates that the students, to a lesser extent, were able to retain some of their linguistic accuracy improvement in the delayed posttest overtime, but not as much as it was in the immediate posttest.

Discussion

Writing instructors in EFL/ESL context have been trying to find out which feedback correction technique would be most effective with the least processing effort on the part of the writing teacher. To lend those teachers a helping hand, researchers have been experimenting with all possible alternatives to find out which option is less costly and yet most rewarding. But the question that arises immediately here is: Do we really want the learners to gain the most with the least processing effort on their part? In other words, even if we agree that we want to reduce the effort put forth by the instructor, do we really want to reduce the effort exerted by the learners themselves? Not at all. We want the learners to exert maximum cognitive effort that is needed to process each piece of information provided by the instructor. For this, we chose to experiment with the feedback strategies that stimulate this individual mental processing behavior on the part of the learner. In this research, we tried to find out how adult learners (especially in EFL contexts) picked out what was relevant for them and process it productively. As we do not want to spoon-feed the learner, we can make sure that the gains obtained from the provision of corrective feedback can stand the test of time (Ashwell, 2000; Semke, 1984; kepner, 1991). The question arises here as to how can we tell that some feedback technique(s) would be more rewarding in the long run?

Some previous research found that direct feedback techniques were more appropriate for student writers of low proficiency level (e.g. Ferris & Roberts, 2001; Ferris & Hedgcock, 2005; Ellis, 2009). The problem of these studies, we argue, was that they made no recourse to different age groups of learners. In this research, we brought some evidence that would cast doubt on such previous research findings. Concisely, we found that indirect feedback was more rewarding for learners with low-proficiency levels if they were mature learners.

Probably unlike young learners, adult learners could better work out the indirect feedback on their own. Therefore, we could argue that the division between direct and indirect feedback does not have to do with the level of proficiency but, more importantly, with the level of maturity. What this basically means is that the number of gains is divided by the effort invested to generate them. For young children, you would probably choose the approach which yield greater learning effects and, in the meantime, require less processing cognitive effort on their part. But this is not necessarily the case for adult learners.

As learners keep generating effective inferences while learning, error correction becomes part of the learner's thinking process. Once it becomes a cognitive activity, error correction cannot be comprehended apart from the social context where it takes place. For this, extraneous variables such as maturation of the population and the strategy of avoidance that some learners use cannot be marginalized when choosing the feedback strategy in some EFL context. Probably for this, research findings have shown how oral meta-linguistic explanations, though more time and effort consuming on the part of the instructor, may be more rewarding on the long run for learners of high proficiency levels (Ellis et al, 2006; Sheen, 2007; Sheen, 2010). Renowned researchers (Ferris, 2002).) would agree that both meta-linguistic explanations and indirect feedback options could lead to long-term

learning by getting the learners engaged in a problem-solving process of detecting and correcting the errors they make for themselves. Therefore, our findings substantiate a sizable portion of serious previous research. For example, although Ferris (2002) reported that direct error correction led to more correct revisions (88%) than indirect error feedback (77%), the story was a little different over the course of time. It was noted that learners who received indirect feedback reduced their error frequency ratios substantially more than those who received direct feedback. What seems to us most natural was that the gains of these approaches were more perceptible in the immediate post-test than on the delayed post-test.

This is probably so because adult learners are more likely to have semantic, not episodic, memories; hence their long-term memory is more likely to store abstract concepts and rules (a claim that has been subject to considerable amount of research in information processing, information retrieval and the workings of memory in human psychology). It is true that extra linguistic factors such as motivation, attention, interference and individual cognitive capabilities could all influence learners' retention, but the fact of the matter is that the age of the learners continues to be an independent decisive factor in the learning process. For this, the feedback strategies which proved to be effective for young EFL learners in primary and secondary schools may not be as effective for university students.

Conclusion

All in all, in this research, we tried to bring evidence to writing teachers that the optimal types of corrective feedback (or combinations of different types) in EFL learning environments are the ones which cause the learners to exert maximum mental processing especially if they are adult learners. In simple terms, instead of providing explicit corrections, teachers should draw the attention of mature learners to their writing problems and let them resolve these problems on their own. For this, indirect feedback and metalinguistic explanation on all the functional uses of one structure should, we believe, be the viable options for the writing teacher at some point in time.

Scientific Ethics Declaration

The authors declare that the scientific ethical and legal responsibility of this article published in EPESS journal belongs to the authors.

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