Investigating the impact of learner beliefs and motivation on the uptake and retention of teachers’ corrective feedback

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Investigating the impact of learner beliefs and motivation on the uptake and retention of teachers’ corrective feedback*

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Abstract
The present study is an attempt to examine the role of two learner factors, motivation and beliefs, in predicting uptake and retention of corrective feedback (CF). To this end, a total of (90) high school EFL learners took part in the study and were evenly divided into three groups. To measure uptake and retention, a pretest, an immediate posttest, and a delayed posttest were used. To examine the role of learner factors, the study used an adapted version of Gardner’s (1991) “Attitudes and Motivation Test Battery”. The findings obtained indicate a link between learners’ motivation on the one hand, and the uptake/retention patterns observed among groups on the other. The study also suggested that beliefs had no significant impact on learning gains while learners’ motivation seemed to be a good predictor of the change noticed in learners’ uptake and retention.

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Keywords
Corrective feedback; learner factors; uptake; retention; beliefs; motivation

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1. Introduction

Research on corrective feedback (CF) has moved from investigating the impact of different CF strategies on learning to examining the factors that may predict their effectiveness. Studies into CF have shown that this effectiveness is not only determined by factors that relate to context and pedagogy but also by individual differences, and a host of cognitive and affective variables. Learner characteristics such as readiness, attitudes, motivation and beliefs are thought to predict learners’ engagement with feedback as well as their ability to grasp the intent of teachers’ corrective moves (Ellis, 2010).

Studies investigating the effectiveness of different feedback types have produced inconclusive results. This can be imputed to the fact that previous work has not considered the potential effects of the abovementioned variables on how learners process, engage with, and respond to different types of feedback (Ellis, 2010). To make up for the gap in previous research designs which seem to have neglected the cognitive dimension, recent work on feedback has sought to identify potential variables that need to be explored in this area. Ellis (op.cit) introduced a framework which describes how individual learner variables and contextual factors affect learners’ CF. The author suggests that these factors “mediate between the CF that learners receive and their engagement with it, thereby influencing learning outcomes.” Thus, in order to provide a clearer picture of the impact CF might have on L2 development as well as learners’ linguistic accuracy in, Ellis argues that CF studies must incorporate these variables into their designs. In line with this call, other researchers like Storch and Wigglesworth (2010) emphasize the important role of individual differences in L2 learners’ response to CF. Their studies reveal that uptake of CF is highly dependent on the depth of engagement which in turn can be predicted by a number of affective variables such as beliefs about language use and attitudes towards the form of feedback.

In line with the above facts, the present study is an attempt to test the impact of two learner factors on the efficacy of CF. The study tries to see whether learner uptake and retention, two aspects of engagement with CF, are contingent on the type of CF employed to treat learners’ erroneous utterances, or on the individual difference factors under study, mainly motivation and beliefs. As such, the study seeks to provide possible answers to two major questions: 1) what CF types generate better learner uptake and retention? And 2) to what extent do motivation and beliefs influence the uptake and retention of the correct form?

This article is organized as follows: The first section is a background to the study; it introduces the topic at hand, provides a rationale for the need to study the impact of learner factors on learning and on the uptake and retention of feedback in particular, and presents the objectives of the study. The second
section briefly reviews the literature on corrective feedback and learner factors while the third section presents the methodological framework adopted. The main findings of the study are exposed in the fourth section, and a discussion unfolds in the fifth section. The article then concludes with a few implications.

2. Individual Differences in CF Research

Theoretical and empirical work into SLA identifies a host of affective, cognitive, psychological and contextual variables which might affect, and predict, the success of second and foreign language acquisition. Among these variables, learner characteristics are reported to play a central role (Ellis, 2010). The study of individual differences in SLA has received considerable attention over the years and has shown that there are a number of dimensions of learner differences which are generally acknowledged to affect the way they learn languages as well as their success or failure (Zafar, 2012; Li et al, 2022).

Prior to Ellis (2010), research on the efficacy of CF had started to consider the impact of these individual differences on the noticeability and effectiveness of oral and written feedback. Researchers within the field distinguish various individual learner factors which influence language acquisition. Studies like Oliver (2002), for instance, focused on the impact of age as a factor, while Ammar and Spada (2006) investigated L2 proficiency. Other research studies like Ammar & Sato (2010); Mackey, et al (2002); Trofimovich, Ammar, & Gatbonton (2007) investigated the role of attention, memory, and language aptitude in feedback retention and hence in L2 development. Generally, four main areas are emphasized in the literature when considering individual differences in second and foreign language learning. These areas are language aptitude, learning style, motivation, and learning strategies (Skehan, 2002). A similar classification was suggested by Ellis (1985, p.10) who claims that “there are five general factors that contribute to individual learner differences in some depth”: (1) age, (2) aptitude, (3) cognitive style, (4) motivation, and (5) personality.

Despite the scarcity of research in the area, some of these constructs were investigated in the work of researchers like (Mackey & Oliver, 2002) who suggest that age, proficiency, and other cognitive factors such as memory and attention span affect learners' ability to notice and profit from oral feedback. In terms of age, research found that learners aged between 8 and 12 years old were able to notice more, respond to feedback, and benefit from it sooner than adults, leading to immediate repair in their output. As for language proficiency level, research has shown that advanced learners tend to notice and benefit from recasts more readily than low-proficiency learners (Ammar & Spada, 2006; Philp, 2003). It has also been demonstrated that learners with a large working memory, as well as a broad attention span (Mackey et al.,
2002; Ammar & Spada, 2006) are more likely to notice implicit feedback techniques that provide the correct form like recasts -which is generally the least noticeable strategy- than those which refer to the gap in learners’ output and encourage self-repair like prompts. Likewise, Recent work on CF such as Kartchava (2014 & 2016), and Lorincz (2014) indicate that decrease in students’ motivation, their concern with face, as well as their attitudes towards teachers’ feedback might affect how they respond to different types of feedback. These factors may affect how much feedback is noticed and hence the degree of retention achieved after instruction has taken place.

Among the factors presented above, four main constructs- motivation, attitudes, anxiety and beliefs- have received attention from theorists and researchers alike. Motivation was investigated in relation to learners’ attention to feedback and their uptake in a few studies, (see for instance Uzum & Yazan, (2009); Uzum (2011) and Hajebi, (2018)). Likewise, anxiety and attitudes were investigated in relation to the effectiveness of CF in (Sheen, 2008 & 2011). The results of these studies indicate that although these factors mediated the effectiveness of different types of CF, their impact depended on the mode in which the feedback was delivered. The concept of learner beliefs, on the other hand, was allotted secondary importance in CF research, although the latter is claimed to underlie many aspects of learner behavior and learning outcomes. Thus, little is known about their impact on the efficacy of CF (Loewen et al. 2009). In a recent study, Kartchava & Ammar, (2014) tried to establish a link between learner beliefs about feedback and their noticing of teachers’ correction as well as their learning of target language norms. Beliefs about the necessity of feedback and its negative consequences were found to affect noticing but with no significant correlations shown between beliefs and learning outcomes. This implies that while learner beliefs and perceptions about CF and its effectiveness predict how much feedback is noticed, they do not necessarily predict learning (op. cit).

A more comprehensive view is provided by Storch and Wigglesworth (2010), who claim that the importance attributed to learner beliefs in explaining how they process feedback is emphasized only in research studies in line with sociocultural theoretical perspectives on learning. This is so because sociocultural theorists view learners as intentional agents in their language learning who assign relevance and significance to certain events and whose behavior is guided by specific goals (Lantolf and Pavlenko, 2001; Lantolf and Thorne, 2006). Beliefs, intentions and goals are therefore considered important factors that may affect learners’ emotional response to corrective feedback, predict what they notice, whether they accept or reject the feedback provided, and how much of the feedback is retained.

It is worth pointing out that although a number of studies have acknowledged the important role of individual differences and presented
intriguing results, they fail to reach conclusions that would inform both research and classroom practice. This is due to the fact that the designs adopted in these studies did not include any type of experiment, but relied instead on observational notes, interviews and videotaped sessions for data collection. This precipitates the need for more studies on the subject in order to probe into the complex relationship between uptake and retention of CF and individual differences.

2.1 Motivation in CF Research

SLA researchers agree that motivation is one of the most predicting factors of the success of a language learning experience (Dörnyei, 2005). The combination of effort and desire that this construct implies can affect learners’ determination, learning strategies, choices, goals and all other aspects of classroom learning. It can therefore affect learners’ response to teachers’ feedback in just the same way. A number of research studies have probed into the issue and produced different results. Hyland (2011) for instance, studied the impact of motivation and attitudes on learners’ engagement with written feedback. He concluded that learners’ accuracy development was associated with diverse motivational profiles. The study also indicates that learners’ willingness to engage with teachers’ feedback depended on their learning goals.

Other researchers looked at the impact of low motivation and lack of orientation on feedback. Uzum, (2011) found that lack of interest can also decrease engagement with CF. Low motivation, or demotivation, can result from a number of factors that may relate to the complexity of the subject, the type of feedback used, or to anxiety and aptitude. This was confirmed by Dörnyei (2001) who refers to these factors as “motivational pitfalls” which can result from negative attitudes, the complexity of the subject, teaching method, or class characteristics Cankaya (2018). Regardless of their sources and nature, demotivating factors all result in classroom behaviors that may affect uptake and retention.

The idea that Corrective feedback and motivation are interrelated was expressed in a number of works demonstrating that the two constructs interact at different stages of the learning process, thereby facilitating the acquisition of the target language. (Hajebi, 2018; Dörnyei, 2005; DeKeyser, 1993; Jean & Simard, 2011). In a quasi-experimental study, Dekeyser argues that students with high motivation benefited more from corrective feedback and did better in oral accuracy tests than those with low motivation who would take feedback as mere criticism. Similarly, Ellis and Sheen (2006) have revealed that students with low extrinsic motivation have benefited more from teaching with constant feedback. A recent study by Zoubaidi and Hermessi (2019) Shows that providing corrective feedback can lead to an increase in learners’
intrinsic motivation. Their results reveal that prompts and teachers’ motivational practices positively affect intrinsic motivation.

2.2 Learner Beliefs in CF Research

The term “learner beliefs” is used in the SLA literature to refer to constructs that delineate “significant learner characteristics” that “shape and affect how they go about the task of learning” (Dörnyei and Ryan 2015, p. 187). Although there exists a plethora of terms and concepts associated with the word “beliefs”, there is consensus among researchers about the pedagogical and theoretical merits of beliefs as an important individual difference factor that counts in the study of language learning. This was expressed in a number of works, particularly in Horwitz (1988) and Pajares (1992), Dörnyei (2005). In a recent book, Dörnyei & Ryan (2015) prophesied that research into learner beliefs may help researchers explain factors behind the success of second and foreign language learning. Beliefs are also related to other constructs in the sense that beliefs shape attitudes and eventually influence motivation, which in turn guides learning behaviors and learning outcomes.

Beliefs about CF have been defined as learners’ and teachers’ attitudes, views, and opinions, about the importance and utility of CF in second language (L2) learning and teaching. posits that the reason why beliefs about CF are important to study is that the efficacy of the practice might be dependent on how learners conceive of feedback as well as on their readiness to receive it. It might also be affected, he adds, by their motivation, noticing and receptivity of CF. Similarly, Russell and Spada (2006) declared that investigating learner beliefs about CF is necessary because it can reveal students’ ideas about effective language instruction, which may lead to increased learning. In the same vein, Sheen (2007) cited in Li (2017), found that learners who were more positive about CF benefited more from metalinguistic feedback. Li (op.cit) further argues that the study of CF in relation to beliefs is of paramount importance as it helps compare learners’ and teachers’ conceptions of CF in order to avoid incongruities between learners’ expectations and teachers’ assumptions.

Beliefs were conceptualized in CF literature as main views and attitudes that relate to the provision of feedback. Research indicates that beliefs may affect not only how learners perceive feedback, but also how they engage with it (Han, 2017; Han & Hyland, 2015). Common beliefs have been summarized into themes that represent main issues in feedback research by Sheen (2006). These themes were grouped under five main questions about the importance, utility, and timing of feedback. These can be summed up into a) whether errors should be corrected, b) how errors should be corrected, c) when errors should be corrected, d) what errors should be corrected, and e)
who should do the correction. The first question represents beliefs about the controversy of whether providing CF is necessary. A good number of teachers believe that CF should be avoided to allow more space for verbal engagement without any interruption, and that any intervention may have detrimental effects on learners’ motivation and willingness to engage in classroom talk. The second question, on the other hand, relates mainly to whether correction should be overt, indicating the errors in an explicit manner, or covert and implicit to avoid interruption. Question (c) above is another controversial question that resulted in a set of beliefs about the timing of CF. While practitioners may believe that the best timing for CF depends on whether instruction is form-or meaning-focused, learners were found to expect to receive information about the grammaticality of their oral interactions. Another question that is often asked when the issue of CF is brought to the fore is question (e). It is generally assumed in this regard that learners prefer to receive feedback on form and correctness from teachers although research has shown abundant benefits for peer feedback too (see for instance Patchan & Schunn, 2015; and Sackstein, 2017 and Filius et al, 2018 for comprehensive reviews of the impact of peer feedback on learning).

The questions articulated above represent what can be called the main tenets of investigating learners’ and teachers’ beliefs about CF. Among these questions, the one that stands out with regards to the objectives of this study is whether learners’ beliefs have an impact on their L2 proficiency, and to what extent can they influence learners’ uptake and retention of CF?

A few studies have investigated the relationship between beliefs and learners’ engagement with feedback. Swain and Lapkin (2003) found a link between affective variables such as beliefs, goals and attitudes and successful uptake and retention. They confirmed that learner beliefs are directly related to their learning behavior which subsequently influence learning outcomes (Mori, 1999 and Burg, 2003).

While the studies mentioned above have looked into the impact of learner beliefs about teachers’ feedback in general, there are a few inquiries into learner beliefs about the use of specific types of CF, though no conclusive results could be attained in this respect. Brandl (1995) reports that learners prefer the prompting types of CF to the reformulating type of CF, particularly where higher-level proficiency learners are in question. On the contrary, Brown (2009) compared first- and second-year university students and found that more advanced second-year students preferred indirect CF to direct and immediate moves, while first year students preferred to receive explicit correction on their errors.

In sum, research on learner beliefs about teachers’ feedback indicates that L2 learners desire to be corrected, have a preference for more explicit strategies, and expect CF on both form and meaning. Research also indicates
that beliefs and attitudes towards CF are neither constant, nor consistent, and may vary across different levels and contexts. Beliefs might be affected by learners’ cultural backgrounds and proficiency levels and even their gender. Thus, research may reveal different patterns of beliefs across different contexts.

3. Method

Participants in the present study are Second Year Baccalaureate students who studied English as a foreign language, together with Standard Arabic and French. The final sample that took part in the quasi-experiment amounts to 90 students, evenly divided into three groups of 30 students. The three groups of participants belong to the same scientific stream, namely physics. Females make (55%) of the total number of participants, whereas (45%) of the overall number are males. (80%) of the participants are aged between 17 and 19, while (20%) are over 19. The present study did not rely on a proficiency test to assign learners to different treatment groups. Given that all the participants belong to one academic level, the researcher sought to elicit data on the number of years spent learning English to get a general idea about the participants’ language proficiency level.

Uptake and retention were measured by means of a pretest, an immediate posttest and a delayed posttest and the scores obtained were compared to see whether progress from pretest to posttest (uptake), and from immediate to delayed posttest (retention), is contingent on CF type. To measure learner factors, participants completed an Attitude and Motivation Test Battery (AMTB) which was adapted from the model developed by Gardner (2004). The AMTB consists of three main sections. The first one is devoted to background information about the respondents, including their gender, their age group, their first encounter with English as a foreign language, the academic level at which they started learning English, and the number of years they have spent learning the language. In the second section, 20 statements were used to elicit from the respondents the extent to which they are motivated to learn English and whether they show interest in improving their accuracy and benefit from corrective feedback. The third section, on the other hand, consisted of 20 statements that centered mainly on the importance of teachers’ CF, learners’ expectations and preferences for CF, the CF strategies that are considered more effective, learners’ readiness to receive CF, the suitable timing for the provision of CF, the mode of CF and finally who should do the correction. The respondents were required to indicate their choices on a Likert scale of five choices from 1= (Strongly Agree) to 5= (strongly disagree). The items provided a set of responses that show whether students hold positive or negative beliefs towards teachers’ feedback, whether they see it as a crucial part of the learning process or as a face threatening act.
that limits their use of the language. It also provided information on students’ preferences regarding the strategies used to correct their errors.

The participants were assigned into two experimental groups and a control group. The experimental groups were in turn assigned to two treatment conditions and were instructed using two different feedback strategies, which fall into the explicit/implicit feedback spectrum. Feedback was provided in the form of metalinguistic explanations and prompts to correct errors of form in the explicit feedback group. As for the implicit group, the teacher swapped between reformulations and elicitation, whereas the control group was instructed with no feedback whatsoever. The three groups completed a test prior to and after the intervention, whereas a delayed posttest followed after two weeks.

To check reliability and internal consistency of the items included in the test battery, a reliability analysis was run using Cronbach’s alpha. The output of Cronbach’s alpha summarized in table above indicates a value of (α=.73). This value was obtained after dropping five items that were indicated by an initial reliability analysis. The initial decrease in alpha level is probably due to the reversed coding of test items. Reversing items on a scale is said to affect the alpha level and may even make the Cronbach’s value negative (Field, 2005). The items retained resulted in an increase in Cronbach’s alpha from (.59) to (.73) after the deletion of the individual items that were problematic. The Cronbach’s Alpha value of (α=.73) represents a statistically reasonable level of reliability since it lays between (0.8), which is the perfect level of consistency, and (0.6), which is a slightly acceptable alpha coefficient.

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Number of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.737</td>
<td>35</td>
</tr>
</tbody>
</table>

The results of reliability analysis indicate that the test battery used to collect data on learner factors reaches acceptable reliability. It also reveals a satisfactory level of internal consistency and correlation among test items and can safely be submitted to statistical analyses.

4. Data analysis

The tests completed by the participants were coded, analyzed and compared to check for differences in the participants’ performance. In line with the first research objective stated in the present study, the pretest and posttest of the experimental and control groups were compared to see whether there are any significant differences in the performance of the three groups after the
intervention. The test battery was analyzed using reversed coding and a score was obtained per participant. A multiple regression analysis was run to test the impact of learner factors on the efficacy of CF. Multiple regression was chosen because it allows to test the impact of multiple predictor variables on an outcome variable. The results of the analysis are presented in the section that follows.

5. Results

This section presents the results obtained from the analysis of the data sets. The results presented were obtained mainly through multiple comparisons of the pretest, the posttest and the delayed posttest scores, the analysis of the Attitudes and Motivation test battery as well as a multiple regression analysis. Prior to presenting the results of the comparisons run to determine whether feedback has any bearing for learners’ L2 accuracy development, and whether learner factors predict learning outcomes after the intervention, a preliminary correlation analysis was run. The analysis determines whether a link exists between the variables in question; mainly between the type of feedback received and learner uptake and retention. The results of the correlation analysis are presented in the table below.

Table 2
Pearson Product Moment Correlation

<table>
<thead>
<tr>
<th></th>
<th>Pretest</th>
<th>Post-test</th>
<th>Delayed Posttest</th>
<th>Group (CF Type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>1</td>
<td>.174</td>
<td>-.090</td>
<td>-.028</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.102</td>
<td>.397</td>
<td>.795</td>
</tr>
<tr>
<td>N</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>.174</td>
<td>1</td>
<td>.488**</td>
<td>.681**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.102</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Delayed Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.090</td>
<td>.488**</td>
<td>1</td>
<td>.618**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.397</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
<tr>
<td>Group (CF Type)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pearson Correlation</td>
<td>-.028</td>
<td>.681**</td>
<td>.618**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.795</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>90</td>
<td>90</td>
<td>90</td>
<td>90</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).
The Pearson Product-Moment Correlation coefficient for the variables group and posttest revealed a positive correlation between the variables (r=.68), which implies that there is a positive relationship between the type of feedback learners receive and their posttest scores. The level of significance displayed in the correlation matrix for group and uptake is (.00) revealing a highly significant level. The correlation coefficient for the variable group in relation to delayed posttest is (r=.61), indicating a positive correlation with a high significance level of (.00) indicating a link between the type of feedback and learners’ retention. The dependent variable uptake correlates positively with the variable retention (r=.48), with a P value of (.00) which is statistically significant. The table below further illustrates the inter group differences in uptake and retention.

Table 3

<table>
<thead>
<tr>
<th></th>
<th>Sum of Squares</th>
<th>Df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pretest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>13.089</td>
<td>2</td>
<td>6.544</td>
<td>.546</td>
<td>.581</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1042.867</td>
<td>87</td>
<td>11.987</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1581.956</td>
<td>2</td>
<td>790.978</td>
<td>50.462</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1363.700</td>
<td>87</td>
<td>15.675</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Delayed Posttest</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Between Groups</td>
<td>1256.089</td>
<td>2</td>
<td>628.044</td>
<td>31.455</td>
<td>.000</td>
</tr>
<tr>
<td>Within Groups</td>
<td>1737.067</td>
<td>87</td>
<td>19.966</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The differences displayed among groups indicate that the dissimilarity in learners’ performance in the two feedback groups where the immediate and delayed post-test are concerned is highly significant. This indicates that the variation in the uptake and retention scores in both groups is predicted by the type of CF the two groups received. The analysis of variance displayed a high level of significance between groups particularly where the immediate and delayed post-tests are concerned (sig=.00), while differences in the pre-test of the three groups is not significant since they were not exposed to any feedback prior to the test. A comparison of the delayed posttest of the feedback groups, however, reveals different results. While the explicit group has improved in the delayed posttest, no progress was indicated for the implicit group. This shows that most of the feedback was not retained.
5.1 CF and learner factors

The analysis of the test battery revealed common beliefs and motivational factors that may predict the efficacy of feedback. Instances of the reported learner classroom behavior also indicate that learners’ motivation predicted the degree of effort they are willing to exert on learning. In this regard, (42%) of the learners reported their willingness to work towards improving their language on a daily basis, (84%) of the respondents, enjoy their English classes, spend more time learning language rules, are willing to work on their inaccuracies, have a preference for learning about the language and hence prioritize and enjoy content presented through discussions, listening and reading. Likewise, (42.2%) of the students tend to ask questions in the classroom while (27%) rarely do. Differences in willingness to ask questions that relate to language form or meaning may reflect different levels of motivation and interest. While learners who are motivated are more inquisitive, less motivated learners are more reluctant to talk in class.

Generally, learners tend to differ in terms of their readiness, as well as the rate and ease with which they learn a language. Regardless of their curiosity about the English language and culture, many of them lose interest and become discouraged due to their low motivation. Learners who find interest in studying the language are more focused on their productive skills such as speaking and writing, and as a result more likely to demonstrate an ability to communicate accurately both in oral and written forms. Motivation for and excitement about learning the language directs their attention to understand the intent of teachers’ feedback, and thus apply what they have learnt in subsequent language episodes. Lack of interest in learning the language, on the other hand, is one reason why learners do not easily absorb feedback, and another reason why they avoid it in the first place. The analysis of learner beliefs on the other hand revealed that learners expect feedback on their language errors, have a preference for explicit and direct feedback, and are aware of the ambiguous nature of implicit feedback. As for the timing and mode of correction, the majority of learners prefer immediate feedback given the instant effect it has on repair and noticing of gaps, have a preference for teachers’ feedback and tolerate peer feedback.

5.2 Impact of motivation and beliefs on uptake and retention

To measure the impact of the two learner factors under study, mainly motivation and learner beliefs, on uptake and retention of feedback, a series of multiple linear regression analyses were conducted. The sample was reduced to (60) participants in the regression analysis, to include only the two treatment groups (explicit and implicit feedback groups). The regression output provides a detailed analysis that encompasses descriptive statistics,
correlations, model summary, ANOVA and coefficients. The results of regression analysis for the impact of motivation and beliefs on uptake on the one hand, and retention on the other hand, are presented below.

5.2.1 Impact of motivation and beliefs on uptake

This subsection presents the results of multiple regression analysis testing for the impact of motivation and beliefs on uptake. In table (4) below, a preliminary correlation analysis is presented.

Table 4
Correlations among variables

<table>
<thead>
<tr>
<th></th>
<th>Uptake</th>
<th>Motivation</th>
<th>Beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uptake</td>
<td>1.000</td>
<td>-.478</td>
<td>-.117</td>
</tr>
<tr>
<td>Motivation</td>
<td>-.478</td>
<td>1.000</td>
<td>.069</td>
</tr>
<tr>
<td>Beliefs</td>
<td>-.478</td>
<td>1.000</td>
<td>1.000</td>
</tr>
<tr>
<td>Sig. (1-tailed)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uptake</td>
<td>.</td>
<td>.000</td>
<td>.186</td>
</tr>
<tr>
<td>Motivation</td>
<td>.000</td>
<td>.</td>
<td>.301</td>
</tr>
<tr>
<td>Beliefs</td>
<td>.186</td>
<td>.301</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

A cursory glance at the results of the correlations between the two independent variables, motivation and beliefs, and the dependent variable, uptake discloses that there is a link between learners’ performance in the posttest and their motivation to learn the target language form. The Pearson Product-Moment Correlation matrix indicates a negative correlation between the variables “motivation” and “posttest” (r = -.47). This value indicates that the two variables interact in a way that the higher the motivation score, the lower the posttest score. Given that a lower posttest score in this study indicates a lower number of errors, the results below suggest that the higher the motivation the higher the amount of uptake learners achieve. Furthermore, the correlation between motivation and posttest is shown to be statistically significant (p = .00), indicating a perfect relationship between the two variables under study.

The second predictor variable, “beliefs”, is shown to interact negatively with “posttest” with a correlation coefficient of (r = -.11). However, this correlation is not statistically significant (p = .18). This suggests that learner beliefs about teachers’ feedback may not shape how well they perform on a class task and might not be a good predictor for their posttest scores.
To see whether the above factors have any impact on the dependent variable “uptake”, and to measure the general impact that motivation and beliefs might have on learners’ performance in the posttest, a closer look at the regression model is required. The results in the table below indicates the degree of variance in the dependent variable uptake explained by the independent variables, motivation and beliefs. The adjusted R square in the table below indicates that (20%) of the change in learner uptake is predicted by the learner factors in question.

Table 5
Impact of independent variables on uptake

<table>
<thead>
<tr>
<th>Model</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.486</td>
<td>.236</td>
<td>.209</td>
</tr>
</tbody>
</table>

The results imply that learners’ motivation and beliefs predict how well they perform in the posttest, hence their subsequent uptake after instruction has taken place. This also entails that the variance in learner uptake shown in their posttest scores is affected by the degree of motivation they show towards learning the target language form, and their beliefs about the practice of error correction. Therefore, much of the development observed in students’ performance between pretest and posttest can also be explained by how motivated they are to improve their target language form. It is also possible that progress from pretest to posttest is predicted by the nature of learner beliefs and perceptions about the provision of feedback.

Although the above results confirm that learner factors have a significant impact on their posttest scores, it is not clear what predictor variable has more impact on the outcome variable. The coefficients table below provides more details about the presumed impact of learner factors on uptake. A look at the coefficients of each variable in the table below reveals that the hypothesis that learner factors predict the amount of uptake they achieve is only partially retained. This is so as only one of the predictor variables, notably motivation, is shown to affect learner uptake.
Impact of Motivation and Beliefs on Corrective Feedback

Table 6
Coefficients for the variables under study

<table>
<thead>
<tr>
<th>Predictor variable</th>
<th>Unstandardized coefficients</th>
<th>t Value</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>-.147</td>
<td>-4.070</td>
<td>.00</td>
</tr>
<tr>
<td>Beliefs</td>
<td>-.055</td>
<td>-.732</td>
<td>.467</td>
</tr>
</tbody>
</table>

It can be observed from the coefficients of each variable that motivation is the only factor that affects the change in the dependent variable uptake. The significance level for the coefficient of motivation in the table is (p=.00), which is statistically significant. On the other hand, the coefficient of the predictor variable beliefs refers to a value of (p=.46), which is statistically insignificant, and insufficient to presuppose that learner beliefs may predict learner uptake. This suggests that the effect of this variable on the outcome variable is minor. This is further illustrated in the ANOVA table below.

Table 7
Results of Anova

<table>
<thead>
<tr>
<th>ANOVAa</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Model</td>
<td>Sum of Squares</td>
<td>Df</td>
<td>Mean Square</td>
<td>F</td>
</tr>
<tr>
<td>1</td>
<td>Regression</td>
<td>323.354</td>
<td>2</td>
<td>161.677</td>
<td>8.796</td>
</tr>
<tr>
<td></td>
<td>Residual</td>
<td>1047.646</td>
<td>57</td>
<td>18.380</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total</td>
<td>1371.000</td>
<td>59</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Dependent Variable: Posttest  
b. Predictors: (Constant), Beliefs, Motivation

The results of ANOVA confirm those presented in the model summary table. The analysis of variance indicates that the model used above is significant. Hence, the predictor variable motivation is a good factor that explains change in the outcome variable uptake. This result is not surprising given the impact motivation has on almost all aspects of learning and L2 development. This significance is seen in the p-value which is (p=.00). Since the p-value is lower to (.05), the model is highly significant.
5.2.2 Impact of motivation and beliefs on retention

This section presents the results of multiple regression analysis run to test for the impact of the predictor variables, motivation and beliefs, on learner retention of the correct form. Prior to displaying the summary model and the coefficients of the variables under study, a correlation analysis is presented in table (8) below.

Table 8
Correlations among variables

<table>
<thead>
<tr>
<th></th>
<th>Delayed Posttest</th>
<th>Motivation</th>
<th>Beliefs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearson Correlation</td>
<td>1.000</td>
<td>-.586</td>
<td>-.268</td>
</tr>
<tr>
<td>Delayed Posttest</td>
<td>.</td>
<td>.000</td>
<td>.019</td>
</tr>
<tr>
<td>Motivation</td>
<td>.000</td>
<td>.</td>
<td>.301</td>
</tr>
<tr>
<td>Beliefs</td>
<td>.019</td>
<td>.301</td>
<td>.</td>
</tr>
<tr>
<td>N</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>

The correlation analysis indicates that the independent variable “motivation” interacts in a negative manner with the dependent variable “delayed posttest” (r=-.56). This interaction implies that a link exists between how motivated learners are to acquire the target language and how well they perform on a delayed posttest. The negative relationship between the two variables suggests that as one variable increases, the other tends to decrease—the higher the motivation, the lower the number of errors made in the delayed posttest. Besides, the correlation between the two variables is highly significant (p=.00). No interaction between learner beliefs and delayed posttest scores is indicated in the Pearson correlation. The coefficient of the independent variable beliefs (r=-.26) denotes a weak correlation with delayed posttest, which is referenced with a low level of significance (p=.03). The results suggest that the interaction between the independent variable beliefs and the dependent variable retention is weak and insufficient to draw any conclusions.

The correlation analysis presents only a general overview of relationships between variables and does not provide any hint on whether a given variable in the matrix had any impact on other variables and provide no conclusion as to the direction of this correlation.

The model summary below explores the relationship between the aforementioned variables in some detail. The table summarizes the general
impact of learner factors on learner retention. The adjusted R Square in the regression model refers to a value of (.37), which statistically means that (37%) of the change observed in learners’ delayed posttest scores can be explained by the learner factors addressed. This indicates that learner retention is, to a large extent, dependent on how high their motivation to learn the target language form is, as well as whether they hold positive or negative beliefs towards the practice of feedback.

Table 9
Impact of independent variables on retention

<table>
<thead>
<tr>
<th>Model Summary(^b)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>1</td>
</tr>
</tbody>
</table>

\(a\). Predictors: (Constant), Beliefs, Motivation

\(b\). Dependent Variable: Delayed Posttest

Although the results presented in the table remain general and provide no detail as to which of the two independent variable has an impact on learner retention, the model is shown to be significant in the Analysis of variance presented below.

Table 10
Results of ANOVA

<table>
<thead>
<tr>
<th>ANOVA(^a)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model</td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

\(a\). Dependent Variable: Delayed Posttest

\(b\). Predictors: (Constant), Beliefs, Motivation

The analysis of variance indicates that the regression model above is highly significant at F (1.57) =18.634, p=.00, a value lower than (.05). This shows that the two learner factors addressed in the analysis play a significant role in predicting how much feedback is retained in the delayed posttest. However, to see which of the two factors actually have an impact on retention, the coefficients table in the regression model provide more details as to the impact of each of the independent variables on the dependent variable.
The results in the table indicate that although the adjusted R square in the model above shows that both factors have an impact on how much retention is attained in the participants’ delayed posttest, the coefficients of these variables reveal important differences in the impact that each exerts on retention.

Table 11  
Coefficients for the variables under study

<table>
<thead>
<tr>
<th>Independent Variable</th>
<th>Unstandardized Coefficients</th>
<th>t Value</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motivation</td>
<td>-.281</td>
<td>-5.522</td>
<td>.00</td>
</tr>
<tr>
<td>Beliefs</td>
<td>-.199</td>
<td>-2.217</td>
<td>.031</td>
</tr>
</tbody>
</table>

A look at the coefficient of the independent variables reveals that motivation has a major impact on retention while the impact of learner beliefs remains minor. The coefficient of the predictor variable motivation refers to a value of (.00), which is highly significant. The impact of learner beliefs on the other hand is less significant as the coefficient (.03) indicates. This shows that motivation plays a key role in predicting change in test scores with regard to the retention rate attained in the delayed posttest. The impact of learner beliefs, though observable, remains insignificant compared to that of motivation. This implies that the independent variable beliefs, is not a good predictor of the change in learners’ delayed posttest scores and thus has no effect on the amount of retention attained.

Although the analysis indicates the degree of variance in the dependent variables predicted by the independent variable motivation, no conclusions can be made as to whether students with high motivation scores, regardless of the feedback group they belong to, perform differently in the post and delayed posttest. It is also useful to have a closer look at individual cases to see whether there is a direct link between a learner’s motivation level and their test scores. The analysis presented in the chart below was conducted as a follow up to the regression analysis to thoroughly scrutinize learners’ motivation scores and compare them to their test scores.

The purpose of the data presented in this section is to highlight the impact of learners’ high and low motivation on how much uptake and retention they achieve after instruction. Students with high motivation scores were selected from the samples of data entered into SPSS. These scores were obtained through reversed coding. The variables were computed to obtain a motivation score per learner and these were compared to test scores in each group.
The data presented in figure 1 above indicates that the higher the motivation score in both groups, the lower the number of errors in the posttest. Motivation here determined not only how much uptake occurs for each student in the selected sample, but also how much of the CF received is retained. The delayed posttest score of the highly motivated learners which shows that the higher the motivation score, the lower the number of errors made in the delayed posttest, which measure retention. This analysis allows for a closer look at the relationship between test scores and learner motivation in both the implicit and the explicit feedback groups. The chart below further illustrates the data presented in the table.

6. Discussion

The present study tried to uncover the impact of two CF types in relation to two learner factors. The rationale for the choice of these factors is that motivation and beliefs are two individual difference factors that shape learner behavior, and hence affect many aspects of the learning experience. As such, they might also have a significant impact on how learners process and engage with the instances of feedback they receive. The results presented in the previous section indicate a salient difference between the two experimental groups, in terms of their immediate and delayed posttest scores. The results suggest that the more explicit the feedback learners receive, the more they are able to retain. Ultimately, the instances of feedback that the explicit group was exposed to have led to better gains in accuracy both in the short and the long run. For the implicit group, the covert nature of feedback made retention lower than uptake. This implies that although implicit feedback has generated a good uptake rate, its effect could not be sustained in the long run.
6.1 Impact of learner factors on learner uptake

Although the results obtained show that the type and amount of feedback can predict learning gains, the effectiveness of feedback could be determined by the factors under study. The findings of the present study suggest that learners with a high motivation score had better uptake and retention scores. This implies that learners with a high level of motivation can actively access and process the feedback they receive. The results of multiple regression analysis testing the impact of learner factors on uptake revealed a statistically significant relationship between learners’ motivation and their performance in the posttest, while no link was found between performance and learner beliefs. Although the adjusted R square shows that 20% of the change observed in learner uptake is due to their motivation and beliefs, the highly significant level indicated for motivation (.000) and the insignificance indicated for the variable beliefs (.467) is evidence that learners’ motivation has the most significant impact on learning. The findings provide an answer to research question (2) which addresses whether and the extent to which motivation and beliefs affect learner’s uptake and retention. The findings imply that much of the uptake that learners achieved after the intervention is predicted by the motivational factors discussed in the previous section while learner beliefs about feedback did not have any effect on how they responded to feedback, and hence had no significant impact on the proportion of uptake achieved.

6.2 Impact of learner factors on retention

As for retention, the results of multiple regression analysis presented in the previous section revealed that motivation had the most significant impact on the amount of feedback retained. Although the adjusted R square indicates that almost (37%) of the change in learner retention scores is predicted by the two learner factors under study, a look at the coefficients of the two variables reveals that motivation had the most significant impact on retention indicated by a significance level of (.00). The impact of learner beliefs on retention remains minor and less significant (.03). The impact of motivation on learning gains is not surprising. Motivated students may consider CF as an instructional tool, and hence expect it while they are engaged in a classroom activity. They are also more likely to show readiness to receive feedback than low motivation students. Besides, motivated learners are generally autonomous learners who try to improve themselves and use all the resources available to excel in their learning, thus making good use of teachers’ feedback. It is no surprise that motivated learners are more likely to benefit from feedback because they consider it a tool that provides additional input and empowers them with a well-formed and meaningful language.
The results found in this study find support in the theoretical assertion made by Ellis (2010) that an interaction is to be found between individual differences and contextual factors. The results are in line with a few empirical investigations into the efficacy of feedback in relation learners’ motivation. A study by Rahimi (2015) attributed differences in learner performance after feedback to motivational factors and reported a significant relationship between learners’ short-term retention of feedback and their writing motivation. Although his study focused on motivation to write, his findings remain supportive of the assertion that CF efficacy can be predicted by individual differences and by motivation in particular.

The results of the present study differ from those found by DeKeyser (1993) on the impact of language aptitude, language proficiency, extrinsic motivation and anxiety on learner proficiency. He found that there is no relationship between learner motivation and their performance in the posttest. Contrary to what the present study has found, DeKeyser reported that learners with high intrinsic motivation who received no error correction performed better in the posttest. While learners with low motivation who received systematic correction showed better accuracy. The results of his study show that none of the factors affected test scores in the language measure used. In the same way, Alavinia and Gholizadeh (2017) compared the effect of motivation scores on students’ posttest scores; and learners who were highly motivated could not obtain a good score.

In a similar fashion, Havranek and Cesnik (2001) found that learners’ extrinsic motivation had no effect on learning outcomes as both high and low extrinsic motivation groups learned less from the feedback they received, on the other hand, they found that good language competency, attitudes and verbal intelligence predicted the efficacy of CF in their study. It is worth pointing out that the majority of studies which investigated the impact of motivation focused on the impact of one type of motivation and neglected the others, perhaps the tendency shown in this study is due to the fact that it considered learners’ general motivation regardless of the type.

Concerning learner beliefs, the lack of a significant link between this construct and learning gains confirms the results reported in the following studies: Kartshava (2012), Kartshava and Ammar (2014), Ellis (2008), Mori (1999), Tanaka (2004), Tanaka and Ellis (2003). The quasi-experimental study by Kartshava (2012) revealed no significant correlation between belief factors and the overall learning gains. She stated that apart from the belief in the importance of feedback which triggered learners’ noticing, no link could be established between other learner beliefs and the learning gains achieved. These findings are also congruent with previous research on the link between learner beliefs and L2 proficiency in the work of Tanaka (2004) and Tanaka and Ellis (2003). All of
these studies have shown that the observed change in learners’ proficiency level was not predicted by any of the beliefs that learners held about CF.

The results of this study are inconsistent with some studies which found that some beliefs can predict gain scores. Park (1995) for instance, investigated the relationships between learner beliefs and L2 proficiency and found that three variables predicted students’ scores to some extent. One was a belief variable (i.e., beliefs about self-efficacy and social interaction) learners who reported having confidence in learning English and the intention of speaking to others in English tended to use English actively, especially outside the classroom, and to monitor their progress in English carefully.

Different findings were revealed in the case studies conducted by Zhong (2008) and Tanaka, (2004) both of which suggest a neutral stance on the issue. Zhong 2008 found that beliefs had a clear effect on learning because the learners involved in the study were able and prepared to act on their beliefs. While in the study by Tanaka (2004) beliefs were shown to have little effect on learning because learners did not engage in learning activities. Their results suggest that beliefs do not directly impact learning, but particular beliefs can trigger some action in the learners, and hence the latter can make efforts to promote their L2 development. A stronger justification for the weak and insignificant relationship between learner beliefs and learning outcomes was presented by Ellis (2008). The latter puts forward that the fact that learners hold a particular belief is no guarantee that they will act on it, because conflicts with other strongly held beliefs, situational constraints or personal reasons may prevent them. If beliefs do impact learning, it is likely that they do so indirectly by influencing the kinds of learning strategies learners employ. He concludes that the relationship is necessarily an indirect one. That is “beliefs do not have a direct effect on language learning but are mediated by the actions that learners perform.

7. Conclusion

This study is an attempt to uncover the role of individual learner factors in predicting the efficacy of CF where uptake and retention of the correct form are concerned. The study used a pretest, a posttest and a delayed posttest to measure uptake and retention whereas an attitudes and motivation test battery was used to examine the role of learner factors. The findings reveal that while different types of feedback may yield different uptake and retention rates, its impact on learning can be mediated by learners’ motivation and their beliefs about the importance of CF. The results of this study indicate that different types of CF can yield different uptake and retention rates. It was also shown that learner factors had a significant impact on the uptake and retention patterns observed among groups cannot be ignored in the study of feedback. Learner factors cannot be ignored in the study of feedback as the efficacy of
the practice might be contingent not only on the type of feedback used and the
timing and the focus of instruction but can also be predicted by individual
differences. The practice should therefore be adapted to context, focus of
instruction, and individual learner variables.

While this study attempted to examine the link between these two
learner factors and uptake/retention of feedback, further research can address
the impact of other equally important cognitive and affective variables.
Examples of such variables can include age, gender, aptitude, learning style,
working memory and apprehension, all of which might affect learners’
response to- and engagement with- teachers’ corrective feedback.

References


