

The Role of Individual Differences in Second Language Writing Corrective Feedback

Haytham Bakri

English Department, Indiana University of Pennsylvania
Indiana, United States

Abstract

As can be deduced from current research on the effects of written corrective feedback (CF) on raising the accuracy level of the second language (L2) writers, there seems to be a gap in the literature, namely that individual differences have not received careful investigation as they may affect the usefulness of CF. This article examines the most recent studies in L2 written CF and individual differences with the intention of building an intersection between the two fields. It suggests that the contradictions in the findings of the effectiveness of different types of CF can be attributed to individual differences. Given the limited scope of this article, only aptitude and working memory will be discussed. Although individual variations in aptitude, motivation, working memory, and L2 proficiency have been proven to be useful in Second Language Acquisition (SLA) research, it would appear that these differences have been overlooked by researchers in the field of written CF in L2 writing. Based on the most recent studies in L2 written CF and individual differences, this paper hypothesizes that direct metalinguistic correction would benefit learners with higher aptitude than those with lower aptitude. It also assumes that learners with higher working memory capacity will benefit more from different types of CF than learners with lower working memory capacity.

Keywords: aptitude, corrective feedback, individual differences, second language writing, working memory

Introduction

In 1996, a specialist in the field of second language learning and teaching by the name of Dr. John Truscott threw a large stone into the pond of second language writing. The thrown stone was his claim that grammar correction in L2 writing is not useful. Not only that, he also added that such correction might even be harmful to L2 writers. This assertion created waves in the field of L2 writing, waves that have roiled the field until this day. These waves represent different ideas, applications, and approaches by other specialists in the field of L2 writing. Some of these waves intersected with each other, some moved in the same direction, and some clashed with each other. While Truscott's work in this area began in 1996, the topic has remained interesting and significant to this day. Articles and books continue to be published on the matter of corrective feedback (Bitchner & Knoch, 2010; Farrokhi & Sattarpour, 2012; Frear, 2010; Kassim & Ng, 2014; Lee, 2010; Li, J., et al. 2015; Shintani & Ellis 2013) by major journals and presses (Arab World English Journal, ELT Journal, International Journal of English Studies, Journal Of Second Language Writing, TESOL Quarterly). The reaction to Truscott (1996) has influenced specialists in L2 writing to study various types of corrective feedback.

As can be deduced from previous research on the effects of written CF on raising the accuracy level of L2 writers, there seems to be a gap in the literature, namely that individual differences have not received careful investigation as they may affect the usefulness of CF. These individual differences include aptitude, motivation, working memory, anxiety, attitude, gender, age, and many other variables. Thus, some researchers in the field of L2 writing have called for further examination of the effects of these individual differences (Sheen, 2007, 2011; Ferris, 2010). Also, Flashive (2010) observed that "few studies have been undertaken in the L2 writing literature whose primary focus is individual differences" (p. 135).

The aim of this study is to address this gap in the written corrective feedback research in L2 writing and individual differences to provide a starting point for future studies. To that end, rather than examining different feedback treatments on groups of learners using more controlled methods, this study will highlight the relationship between various types of CF and two individual differences variables: aptitude, and working memory. The current article reviews studies in both fields published from 2005 until 2014. The following research question will guide the investigation:

1. How might individual differences such as language aptitude and working memory influence L2 learners' ability to benefit from corrective feedback in their writing?

Corrective feedback in L2 writing

Corrective feedback is defined as the information given by teachers or peers to L2 learners in regard to linguistic errors that they have made (Sheen, 2007). "Corrective feedback can take place either in classrooms, where it is provided by language teachers or other students, or in naturalistic settings, where it is provided by native speakers or other non-native speakers." (Sheen, 2011). In this section, different types of written CF will be presented based on the current literature. Discussing these diverse types of CF will provide ideas regarding how researchers approach these types of studies in attempts to prove that one type of CF is more useful than another type. However, considering individual differences as a variable that might affect their research outcome.

Types of corrective feedback in L2 writing

Inspired by Truscott (1996), a number of different researchers have undertaken new programs of investigating the different effects of diverse types of CF. The main, diverse types of corrective feedback addressed in L2 writing CF studies have ranged from direct CF, indirect CF, metalinguistics CF, focused CF, and unfocused CF to electronic CF (Ellis, 2009). The following section addresses these different types of CF.

Direct and indirect CF.

One focus of research is the effectiveness of direct versus indirect CF on raising the written accuracy level of L2 students. CF is considered direct when the teacher clearly provides the corrected form of the error. Indirect CF, however, is when the teacher merely indicates the error with a mark or by coding, making the student the one responsible for determining the correct form.

To date, the research into CF has not settled the debate as to whether indirect CF is more effective than direct CF or vice versa. Bitchener & Knoch (2008) claim that indirect CF may promote deeper language processing by requiring the student to engage in guided learning and problem solving, which will result in long-term acquisition (p. 415). Therefore, indirect CF might be more useful for L2 students at higher proficiency levels due to their rather advanced linguistic knowledge and their ability to relate the feedback they have received with the knowledge they have about the second language.

On the contrary, Bitchener (2012) claims that direct CF might be more useful than indirect CF because it “reduces confusion,” provides students with information to “resolve more complex errors,” and is “more immediate” (p. 355). For this reason, direct CF might be more useful for learners at lower proficiency levels, as they have fairly limited linguistic knowledge. However, in response to other research (van Beuningen, De Jong & Kuiken 2012; Bitchener & Knoch, 2010) claim that direct CF has a more significant long-term effect on grammatical errors than indirect, Bitchener (2012) suggests that further research is still needed.

Also, van Beuningen, De Jong & Kuiken (2012) have expanded the understanding of the effects of direct and indirect CF by comparing them to both lower proficiency and higher proficiency L2 students. The results of their study showed that “Direct correction is better suited for grammatical errors, and indirect correction is better suited for non-grammatical errors,” and “Only direct CF has the potential to yield long-term grammatical gains” (van Beuningen et al., 2012, p. 33). Also, this study did not find a significant interaction between the effectiveness of the two types of CF and students’ educational level (p. 33).

It seems possible that the disagreements among current research findings might be the result of methodological issues, or that individual differences among L2 students, as appears likely, are playing a role in the uncertain outcomes. Individual differences present themselves as a possible cause because none of the previously discussed studies considered individual differences as a variable that might play a role in the effectiveness of direct or indirect CF. The debate continues, and more research is needed to understand the relationship between direct and indirect CF on one hand and individual differences on the other.

Metalinguistics CF

As defined by Ellis (2009), “Metalinguistic CF involves providing learners with some form of explicit comment about the nature of the errors they have made” (p. 100). Metalinguistic CF is coded, encoded, or grammatically explained. Ellis (2009) mentioned that the use of error codes is the most common form of explicit comments. These codes label the different errors, and they are placed above the error or in the margin. Also, Bitchener et al. (2005) mentioned that a code indicates coded feedback that points to the exact location of an error and the type of error involved. While the encoded feedback involves a teacher showing the location of errors by circling or underlining them, it becomes the student’s responsibility to diagnose and correct the mistake. This form of correction is also considered to be indirect metalinguistic feedback. Another form of metalinguistic feedback is brief, grammatical explanations of the errors, i.e. the teacher numbers errors and writes a grammatical description for each numbered error at the end of the text. This is time-consuming and, also, calls for the teacher to be able to write clear and accurate explanations for a large variety of errors (Ellis, 2009).

It is also important to know that metalinguistic feedback comes in oral and written forms. Written metalinguistic feedback requires that the teacher provides explanations on each student’s paper while oral metalinguistic feedback can be provided in the form of a short lecture to a whole group of students (Bitchener et al. 2005, Bitchener 2008).

There are a number of studies that demonstrate the significance of metalinguistic feedback. For instance, the study by (Bitchener, Young & Cameron 2005; Sheen 2007; Bitchener 2008) in which they compared different types of direct CF, and particularly metalinguistic feedback, on second language student writing. Sheen (2007) compared direct error correction with metalinguistic feedback. Three groups were in this study: a control group and two treatment groups. The first treatment group received only direct error correction while the other treatment group received metalinguistic feedback. The results of the study showed that the group that received direct metalinguistic feedback outperformed both other groups in the delayed post-test.

Following the above study, Bitchener (2008) investigated the effects of metalinguistic feedback on improving accuracy in the use of the English article (the/a). The participants were divided into four groups. The control group received no feedback. The first experimental group received direct CF together with oral and written metalinguistic feedback. The second experimental group received direct CF but just written metalinguistic feedback, and the third group received only direct corrective feedback. The results showed that the group that received both oral and written metalinguistic feedback in combination with direct error correction and the students who only received direct feedback outperformed the students in the control group. This means that oral metalinguistic feedback did not make a difference when used with written metalinguistic feedback.

Research on metalinguistic feedback has shown some valuable findings. However, a firm conclusion cannot be drawn regarding oral or written metalinguistic feedback. This could be achieved if research compared the effects of oral and written metalinguistic feedback separately. None of the studies mentioned above has compared a group in which the students received only written metalinguistic feedback with a group receiving only oral metalinguistic feedback. In addition, and as a reflection of this paper’s focus, only Sheen (2007) has studied the effect of

direct metalinguistic feedback in relation to one significant variable of individual differences: aptitude. Again, the limitation of research calls out for more investigation on how individual differences might play a role in the success or failure of different types of metalinguistic feedback.

Focused and unfocused CF.

Another concern of research is the comparison of the effectiveness of focused versus unfocused CF. Focused CF targets only one or a few error types while unfocused CF targets many or all error types.

On one hand, Bitchener (2012) claims that focused CF may be more useful for students at lower proficiency levels. Such students might be more likely to notice and understand corrections targeted at only one or a few categories. On the other hand, for learners with higher proficiency levels, Bitchener (2012) claims that unfocused CF may prove more useful as it would enable such students to attend to a larger range of linguistic concerns (p. 357). However, Bitchener indicates, "It is clear that the jury is still out on whether focused or unfocused CF is more effective," and further research is needed (p. 357).

Van Beuningen (2010) criticized the findings of positive effects of focused CF in recent studies (Bitchener, 2008; Bitchener & Knoch, 2008; Bitchener & Knoch, 2009; Bitchener & Knoch, 2010; Ellis, Sheen, Murakami, & Takashima, 2008; Sheen, 2007), mentioning that most of these studies targeted only a narrow range of grammatical features selected for maximum simplicity, primarily that of English article usage. He posited that generalizing these results to cover other grammatical and linguistic errors is questionable (van Beuningen, 2010, p. 15).

Moreover, Hartshorn & Evans (2012) claim that if teachers only target, for example, mistakes concerning the use of subordinating conjunctions and conjunctive adverbs in student papers, their students may just choose to avoid constructing sentences that employ such grammatical forms. (Hartshorn et al. 2010; Beuningen, 2010) favor unfocused CF because it helps in improving all aspects of writing simultaneously. In addition, Hartshorn & Evans (2012) cite several studies (Anderson, 2010; Ferris, 2006) that indicate L2 learners express a clear preference for unfocused over focused CF (p. 5).

Most of the studies reviewed in this section conclude that focused CF is more beneficial than unfocused CF. It can be assumed that focused CF is better used for L2 beginners and a mixed approach of focused and unfocused CF is better suited for more advanced levels. The reason for such an assumption is that beginners still have a lot to learn about the target language, which will naturally cause them to make many more errors than advanced L2 learners. A large amount of CF might raise students' anxiety, which could reflect negatively on their attitude toward CF.

Electronic corrective feedback

The use of computers and other technology has become common in educational contexts and is often preferred by students and teachers of L2 writing (Hyland, 2010). Nowadays, it has become common for teachers of writing to require students to submit their papers electronically, and teachers will also provide CF on student papers electronically in online chatrooms, forums, or by using word-processing software. Studies on CF in L2 writing and computer-assisted

language learning (CALL) use the term electronic feedback (e-feedback) to refer to any comments about student writing delivered electronically via a computer by teachers or students' peers.

The current research on teachers' e-feedback is limited. There would appear to be no research that comprehensively describes its use and the impact on students' writing by skilled teachers. A few studies analyzed e-feedback strategies provided by tutors in written interactions with L2 language learners in discussion forums. Martin-Beltran & Chen (2013) conducted a case study of one tutor's feedback on two graduate ESL students in an online forum discussion. They analyzed 47 comments in which the tutor used a variety of speech acts. The feedback, formulated as interrogatives, hedges, and indirect CF, led to most revisions, and the results reported an increase in the students' awareness of language and revisions. Samburskiy & Quah (2014) studied the online written interaction of tutors with college-level English learners and found that most of the feedback provided by the tutors focused on meaning rather than form. The study also found that lexical errors were more frequently targeted than grammatical errors.

As mentioned, the research conducted on e-feedback so far is scarce, even though most scholars believe teacher feedback is more useful than peers' e-feedback. Also, like many experimental studies on written CF, most CALL studies on e-feedback either pick and choose the type of feedback that is analyzed or neglect individual differences and their role in students' reactions to CF. Importantly, more attention has been focused on written responses from discussion forums rather than essay-writing improvement as a result of e-feedback.

This section of the paper examines the various options for correcting students' written work. While feedback is a central aspect of L2 writing programs across ESL writing classrooms, the existing literature produced inconclusive results regarding the role of different types of CF in L2 development. See Table 1 below for a summary of the different forms of feedback.

Table 1. Different Types of CF in Recent Studies

Type of CF	Description	Studies
Direct CF	Gives an indication of the error and provides the correct form.	Santos et al. (2010), Shintani & Ellis (2013)
Indirect CF	Gives an indication that an error has been made by: <ul style="list-style-type: none"> • underlining the error • indicating the number of errors in the margin • inserting error codes in the text 	Bitchener and Knoch (2008), De Jong, and Kuiken (2012)
Metalinguistics	To provide some kind of a metalinguistic clue as to the nature of the error by: <ul style="list-style-type: none"> • Use of error code • Brief grammatical descriptions 	Shintani, and Ellis (2013), Mansourizadeh, and Izwan Abdullah (2014), Ferris (2006), Sheen (2007), Ferdouse (2011)
Focused CF	To select one or two error types to correct.	Bitchener (2008), Bitchener & Knoch (2009), Bitchener et al. (2005), Ellis et al.

		(2008), Farrokhi & Sattarpour, (2012), Ferris (2006) Sheen (2007), Sheen et al. (2009), Ferris et al. (2013)
Unfocused CF	To correct all of the students' errors or at least a large number of them.	Van Beuningen (2010), Van Beuningen et al. (2012)
Electronic CF	The teacher indicates an error and provides a hyperlink to a concordance file that provides examples of correct usage.	Hyland, 2010, Martin-Beltran and Chen (2013), Li, J., et, al. (2015)

L2 written CF research and individual differences

The literature in the field of L2 writing CF has focused mainly on answering “how” rather than “why” one approach of CF is more efficient than the other. As for Ferris et al. (2013), several authors in the field of L2 writing have recently called for more attention to individual differences in investigating the effects of CF (Bitchener & Ferris, 2012; Ferris, 2010). Moreover, Flahive (2010) observed that “few studies have been undertaken in the L2 writing literature whose primary focus is individual differences” (p. 135). Based on these calls, the author of this study might assume that individual differences may serve as a useful direction for future second language writing research. As shown in Table 2, there have been few attempts in previous studies to identify possible individual differences variables that might explain student variation in responding to written CF.

L2 learners' utilization of written CF for improvement is impacted by individual differences (Ferris, 2006). Sheen (2011) explored some individual differences in L2 writing CF but focused only on anxiety, aptitude, and attitude. In contrast, individual differences in the field of SLA have been the center of so many studies for a long time. SLA research on language learning motivation has found that integrative motivation significantly correlated with learning outcomes while learners with higher proficiency tend to adopt more to language learning strategy (Dörnyei, 2005).

Since individual differences, such as motivation, strategy and L2 proficiency, have been found important in SLA, the way they play a role in learners' responses to written CF deserves to be explored.

Table 2. Summary of studies, which include Individual Differences as Variables in Written CF

Study	Individual differences	Aim of the study
Li, S., & Li, P. (2012)	motivation, strategy, and L2 proficiency	A multi-case study exploring individual differences that impact learners' responses to WCF.
Sheen (2007)	aptitude	To examine the differential effect of two types of written CF and the extent to which language analytical ability mediates the effects of CF on the acquisition of articles by adult intermediate ESL learners of various L1 backgrounds.

Sheen (2011)	anxiety, aptitude, and attitude	Sheen explores whether and to what extent individual differences influence the effectiveness of CF. She sheds light on this under-researched field of research and presents insightful findings from her doctoral study, thus making a timely and useful contribution to the wider research community.
Kormos (2012)	Aptitude, motivation, working memory	Review of the most important individual difference factors that might explain variations in L2 writing processes and discuss the influence of these factors on how L2 learners exploit the language learning potential of writing tasks.
Ferris et al. (2013)	attitude, confidence	A longitudinal (16-week semester) multiple-case study exploring the ways L2 student writers (specifically “Generation 1.5”) describe their strategies for applying feedback to existing texts after receiving focused, indirect, explicit WCF And the different individual and contextual factors that might influence L2 student writers’ ability to benefit from WCF?

Individual Differences and CF

The importance of considering individual differences in SLA has been widely explored with considerable attention in many language-teaching studies. It is undoubtedly the case that students, as different individuals, come to class with different characteristics. The study of individual differences has a long history that even precedes the beginnings of the SLA field of study (Ellis, 2008).

Dörnyei (2005) defines individual differences as “enduring personal characteristics that are assumed to apply to everybody and on which people differ by degree” (p.4). In other words, this means that an individual difference is a variable, shared by all, but which makes each individual distinct from others. As shown in Figure 1, Ellis (2004) pointed out four categories that are responsible for individual differences in SLA. The first category is abilities, which has three factors: intelligence, working memory, and language aptitude. The second category is propensities; this consists of five factors: learning style, motivation, anxiety, personality, and willingness to communicate. The third category is learner cognition about L2 learning; this refers to the student beliefs. The last is student actions, which includes learning strategies as the only subdivision. As shown in Figure 2, Dörnyei (2005) listed the different factors of individual differences that have an impact on SLA. He divided them into major factors and peripheral factors. The primary factors are personality, language aptitude, motivation, learning cognitive styles, and language learning strategies. The peripheral factors are anxiety, creativity, willingness to communicate, self-esteem, and learners’ beliefs.

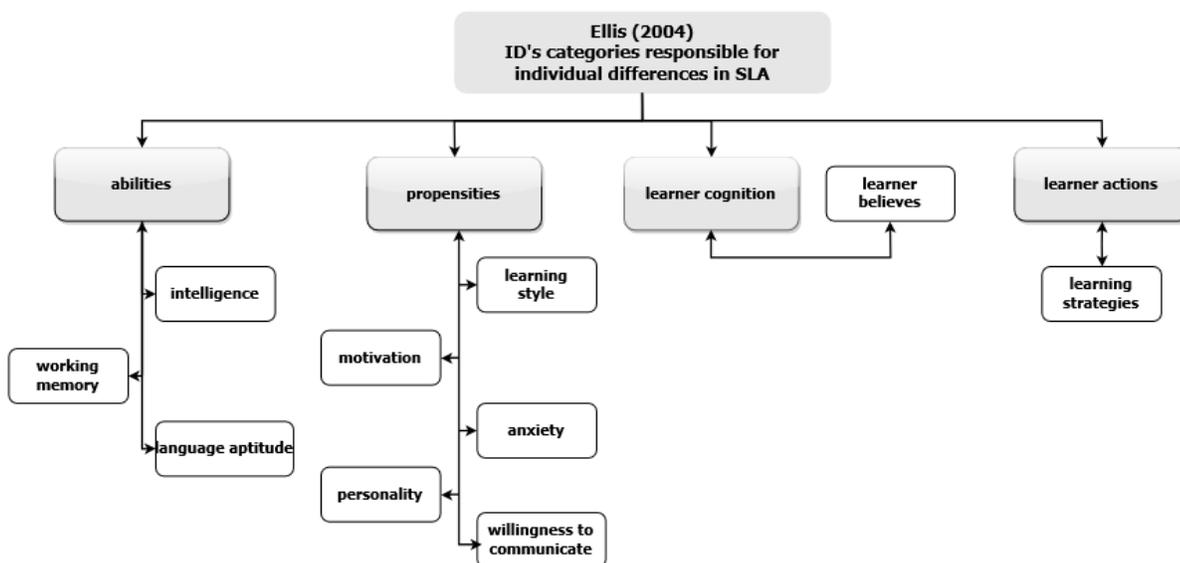


Figure 1. Categories Responsible for Individual Differences in SLA

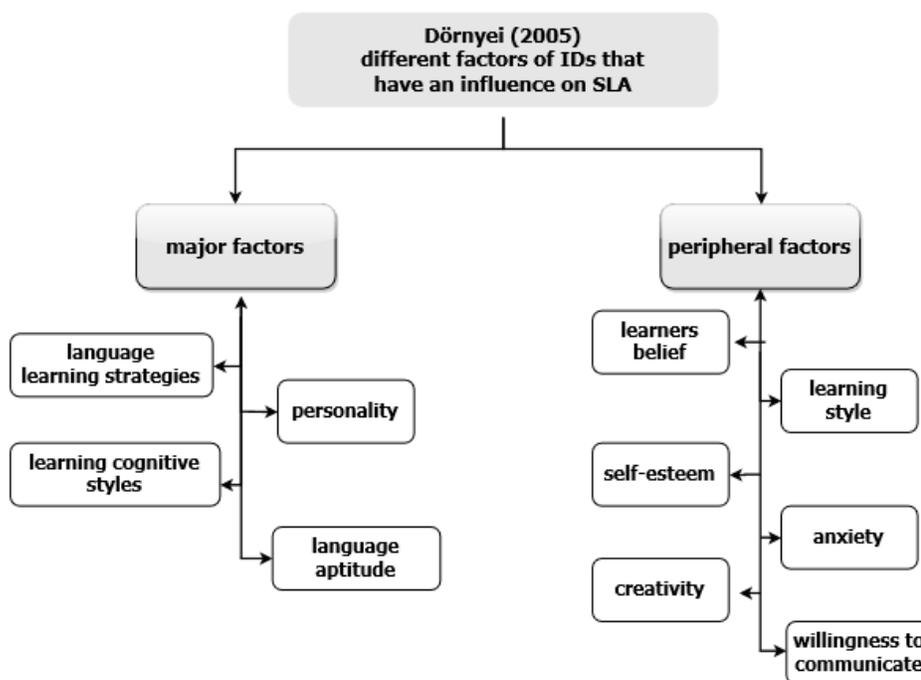


Figure 2. Factors of Individual Differences that have an Impact on SLA.

The research in SLA has shown that these many individual difference factors play a significant role in the success of acquiring a second language. Based on (Dörnyei, 2005; Ellis, 2008), “Language learning motivation” research has found that integrative motivation is positively associated with learning outcome, while “language learning strategy” research has shown that learners with higher proficiency levels tend to adopt more and deeper language learning strategies. Based on such findings, these factors might well play the same role when it comes to L2 writers’ utilizing different types of written CF. Sheen (2011) explored some

individual differences in written CF in detail but only focused on anxiety, aptitude, and attitude. The results showed that the effects of different types of CF are mediated by learners' analytical ability; anxiety and attitude towered CF (Sheen, 2011. p. 155). To provide useful corrective feedback, teachers should look at their students as different individuals and try to understand why some learners may or may not respond to some types of corrective feedback (Bitchner, 2010). In order to understand such variation of student responses to any given feedback, it is important to look closely at individual differences among our students. There are personal factors that influence students' engagement in the teacher's corrective feedback. In the following, due to the limitation of this paper, only language aptitude, and working memory are being analyzed in relation to the different types of CF.

Aptitude and CF in L2 writing

Robinson (2005) defined aptitude within a cognitive information processing paradigm by saying that "second language aptitude is characterized as strengths individual learners have in the cognitive abilities information processing draws on during L2 learning and performance in various contexts and at different stages." This means that language aptitude refers to an individual's potential for learning languages. This potential is often measured by the use of various aptitude tests, which claim to predict the degree of success the individual will have with a new language. A list of different aptitude measurement tests is listed in Table 3.

Table 3. Aptitude Measurement Tests.

Measurement	Description
Modern Language Aptitude Test	mainly used by government and military institutions to select and place employees for language training
Defense Language Aptitude Battery	developed and used by the United States Department of Defense to select candidates for jobs that will require them to attain fluency in a foreign language
Pimsleur Language Aptitude Battery	used to assess the language learning aptitude of students in grades 7 to 12
Modern Language Aptitude Test – Elementary	appropriate for children in grades 3 to 6
Cognitive Ability for Novelty in Acquisition of Language	uses a new concept of language aptitude as a theoretical base

According to Sheen (2011), aptitude consists of three different abilities:

- 1- Auditory ability: enables an individual to discriminate and retain sounds for deeper processing and analysis.
- 2- Language analytic ability: the capacity to understand rules of language and make linguistic generalization.
- 3- Rote learning ability: engages memory to make associations between L1 lexis and L2 language items.

“Auditory ability” and “rote learning ability” are more relevant to how learners process oral CF while “language analytic ability” seems more germane to how learners process written CF. This is because most of the recent research in written CF has focused on the effect of different types

CF on one or only a few grammatical features. Sheen (2007), Skehan (1998) claim that grammatical sensitivity and inductive language learning ability are the components of “language analytic ability.” (p. 259).

To date, only a few studies have explored the role of aptitude in the efficiency of CF, in general (Kormos, 2012, p. 390). DeKeyser (1993) found that learners with high language aptitude and low anxiety benefited more from CF (Kormos, 2012, p. 393). Similarly, according to Kormos (2012), Havranek & Cesnik (2001) claimed that students with a positive attitude toward error correction and strong language ability are likely to benefit more from CF. However, these two studies examined language aptitude as a whole and did not investigate the effects of language aptitude on different types of CF targeting particular linguistic structures. This raises the question whether various types of CF are affected by differing language analytical ability.

It can be assumed that learners with different aptitude levels might benefit to varying degrees from different types of CF. It would seem that only Sheen (2007, 2011) has investigated the relations between written corrective feedback and language learning aptitude. Sheen (2007) analyzed how language analytical ability is associated with uptake from direct correction with or without metalinguistic feedback. Her findings show that students with strong language analytical ability benefit more from CF than students with lower levels of metalinguistic skills. Also, the results indicate that high aptitude learners will benefit more from metalinguistic CF. Sheen’s (2007) findings also suggest that a high level of language aptitude assists students in acquiring L2 knowledge through CF. Additionally, the results also show that students with high aptitude benefit more from focused CF. Even with these findings, the question remains regarding the possibility of generalizing such results among all L2 learners, especially that all Sheen’s participants in this study were attending the same American Language Program at the same community college. The limitation in generalizing such results calls for further investigation of the nature of the relationship between language aptitude and CF in L2 writing.

Working memory and CF in L2 writing

Zhao (2013) described working memory as a cognitive construct that temporarily stores and processes the information required to perform complex cognitive tasks. Similarly, as cited by Mackey & Sachs (2012), Baddeley (2003) described working memory as “an integrated system for temporarily storing and manipulating information.” In other words, working memory is a temporary storage system that utilizes short-term memory and links it with prior memory so that an individual can effectively process new information as quickly as possible. Working memory is also measurable with the use of different tests, as listed in Table 4.

Table 4. Working Memory Measurement Tests

Table 4. Working Memory Measurement Tests.Measurement	Description
Working Memory Rating Scale (WMRS)	developed for educators to facilitate easy identification of children with working memory deficits.
Working Memory Test Battery (WMTB-C)	provides an accurate assessment of working memory in 5 to 15-year-olds.
The Rivermead Behavioural	designed to predict everyday memory problems

Memory Test (RBMT)	in people with acquired, non-progressive brain injury and monitor change over time.
The Speed and Capacity Language Test (SCOLP)	sensitive to slowing of language and cognitive functioning that often occurs following brain damage.

According to Cowan & Nelson (2008), working memory consists of subsystems that store and manipulate visual images or verbal information. A central executive coordinates these subsystems. It consists of a visual representation of the possible linguistic moves and awareness of the flow of information into and out of memory, which is stored for a limited amount of time. This complex system must play a significant role; however, that role, how different learners process written CF, has not yet been explored.

Based on Mackey & Sachs' (2012) study of task-based interaction with feedback, Mackey et al. (2002) found that learners with higher working memory capacities show better lasting L2 learning benefits than those with lower working memory capacity. In a more recent study by Mackey et al. (2010), the results showed a positive relationship between working memory and L2 production in response to interactional feedback. This suggests that learners with higher working memory capacity may show such benefits in relation to an enhanced ability to allocate attention toward reformulating their utterances. The relationships among L2 written CF and working memory may differ from one learner to another. Unfortunately, to date, little research has empirically explored this relationship. Although learning opportunities through CF in writing are less constrained by time pressure due to the off-line nature of writing, it can be hypothesized that, similar to speaking contexts, L2 writers will also show variation in how they respond to feedback, depending on their working memory capacity.

Conclusion

As discussed earlier, and as the literature shows, the inconclusive findings in written CF research are not only the result of research methodology but also a result of individual differences among L2 learners. One type of CF might be helpful for one individual but not so useful for another. Each student is unique; there are no two students who are the same in their methods of receiving and processing feedback. It is reasonable to hypothesize that learners with high aptitude will be better able to engage in the kind of cognitive comparison that is required if CF is to result in learning. It can be further argued that direct metalinguistic correction will benefit learners with higher aptitude than those with lower aptitude because analytically strong language learners would likely find it easier to use metalinguistic information. It could also be assumed that learners with higher working memory capacity will benefit more from different types of CF than learners with lower working memory capacity. L2 students come to classrooms with individual differences that might be a result of learning style, aptitude, motivation, anxiety, working memory, attitude, or educational background. It is necessary for teachers as well as researchers to consider most if not all of these factors by always keeping in mind that every student is a different individual and that these differences can enhance the learning experience of the entire group.

The present paper provoked more questions than it has provided answers. Considering the complexity of research on individual differences in the classroom, future studies can benefit

from the findings of already advanced studies on individual differences and their effect on SLA. One of the major implications of this paper is that future investigation of the effectiveness of written CF on L2 learners' writing needs to take into account individual differences as an important factor that is highly likely to affect how students process feedback in an L2 writing class.

About the Author:

Haytham Bakri is a Ph.D. candidate in English (Composition and TESOL), Indiana University of Pennsylvania, Indiana, PA, USA. He holds a Masters degree in TESOL from West Virginia University, Morgantown, WV, USA. His research interests include corrective feedback in second language writing, second language creative writing, second language teaching, and identity construction in a second language learning context.

References

- Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing, 17*, 102–118.
- Bitchener, J. (2012). A reflection on 'the language learning potential' of written CF. *Journal of Second Language Writing, 21*(4), 348-363.
- Bitchener, J., & Ferris, D. (2012). *Written corrective feedback in second language acquisition and writing*. New York: Routledge.
- Bitchener, J. & Knoch, U. (2008). The value of written corrective feedback in migrant and international students. *Language Teaching Research, 12*, 409-431.
- Bitchener, J., & Knoch, U. (2010). Raising the linguistic accuracy level of advanced L2 writers with written corrective feedback. *Journal of Second Language Writing, 19*, 207–217.
- Bitchener, J., Young, S., & Cameron, D. (2005). The effective of different types of corrective feedback on ESL student writing. *Journal of Second Language Writing, 14*, 191–205.
- Cowan, Nelson (2008). What are the differences between long-term, short-term, and working memory?. *Prog Brain Res. 169* (169): 323–338.
- Dornyei, Z. (2005). *The psychology of the language learner: Individual differences in second language acquisition*. Mahwah, NJ: Lawrence Erlbaum.
- Ellis, R. (2004). 21 Individual Differences in Second Language Learning. *The handbook of applied linguistics*, 525.
- Ellis, R. (2009). A typology of written corrective feedback types. *ELT Journal, 63*(2), 97-107.
- Ene, E. e., & Upton, T. t. (2014). Learner uptake of teacher electronic feedback in ESL composition. *System, 46*80-95.
- Farrokhi, F., & Sattarpour, S. (2012). The effects of direct written corrective feedback on improvement of grammatical accuracy of high-proficient L2 learners. *World Journal of Education, 2*(2), p49.
- Ferdouse, F. (2013). Learning from Mistakes: Using Correction Code to Improve Student's Writing Skill in English Composition Class. *Stamford Journal of English, 7*, 62-86.
- Ferris, D. (2006). Does error feedback help student writers? New evidence on the short and long-term effects of written error correction. In K. Hyland & F. Hyland (Eds.), *Feedback in*

- second language writing: Contexts and issues (pp. 81-104). Cambridge, UK: Cambridge University Press.
- Ferris, D. R. (2010). Second language writing research and written corrective feedback in SLA: Intersections and practical applications. *Studies in Second Language Acquisition*, 32, 181–201.
- Ferris, D. R., Liu, H., Sinha, A., & Senna, M. (2013). Written corrective feedback for individual L2 writers. *Journal of Second Language Writing*, 22(3), 307-329.
- Flahive, D. (2010). A reconsideration of “pedagogical implications” and “further research needed” moves in the reporting of second language writing research and their roles in theory building. In T. Silva & P. K. Matsuda (Eds.), *Practicing theory in second language writing* (pp. 126–158). West Lafayette: Parlor Press.
- Goldstein, L. (2010). Finding “theory” in the particular: An “autobiography” of what I learned and how about teacher feedback. In T. Silva & P. K. Matsuda (Eds.), *Practicing theory in second language writing* (pp. 72–89). West Lafayette, IN: Parlor Press.
- Guénette D. (2007). Is feedback pedagogically correct? Research design issues in studies of feedback on writing. *Journal of Second Language Writing*, 16, 40-53.
- Hartshorn, K. J., & Evans, N. W. (2012). The differential effects of comprehensive corrective feedback on L2 writing accuracy. *Journal of Linguistics and Language Teaching*, 3(2), 25-50.
- Hartshorn, K. J., Evans, N. W., Merrill, P. F., Sudweeks, R. R., STRONG-KRAUSE, D. I. A. N. E., & Anderson, N. J. (2010). Effects of dynamic corrective feedback on ESL writing accuracy. *Tesol Quarterly*, 44(1), 84-109.
- Hyland, F. (2010). Future directions in feedback on second language writing: Overview and research agenda. *International Journal of English Studies*, 10(2), 173-182.
- Kormos, J. (2012). The role of individual differences in L2 writing. *Journal of Second Language Writing*, 21(4), 390-403.
- Li, S., & Li, P. (2012). Individual Differences in Written Corrective Feedback: A Multi-case Study. *English Language Teaching*, 5(11), 38-44. doi:10.5539/elt.v5n11p38
- Mackey, A., Adams, R., Stafford, C., & Winke, P. (2010). Exploring the relationship between modified output and working memory capacity. *Language Learning*, 60, 501–533.
- Mackey, A., & Sachs, R. (2012). Older learners in SLA research: A first look at working memory, feedback, and L2 development. *Language Learning*, 62(3), 704-740.
- Mackey, A., Philp, J., Egi, T., Fujii, A., & Tatsumi, T. (2002). Individual differences in working memory, noticing of interactional feedback and L2 development. In P. Robinson (Ed.), *Individual differences and instructed language learning* (pp. 181–209). Philadelphia: Benjamins.
- Mansourizadeh, K. k., & Izwan Abdullah, K. (2014). The Effects of Oral and Written Meta-Linguistic Feedback on ESL Students Writing. *3L: Southeast Asian Journal Of English Language Studies*, 20(2), 117-126.
- Martin-Beltrán, M., & Chen, P. J. (2013). From monologue to dialogue: A case study on mediated feedback in a transnational asynchronous online writing tutorial. *Academic Exchange Quarterly*, 17(1), 145-150.
- Reynolds, D. (2010). Beyond texts: A research agenda for quantitative research on second language writers and readers. In T. Silva & P. K. Matsuda (Eds.), *Practicing theory in second language writing* (pp. 159–175). West Lafayette, IN: Parlor Press.

- Robinson, P. (2005). Aptitude and second language acquisition. *Annual Review of Applied Linguistics*, 25, 46-73.
- Samburskiy, D., & Quah, J. (2014). Corrective feedback in asynchronous online interaction: Developing novice online language instructors. *CALICO Journal*, 31(2), 158-178.
- Santos, M., Serrano, S. L., & Ruiz, R. M. M. (2010). The differential effect of two types of direct written corrective feedback on noticing and uptake: Reformulation vs. error correction. *IJES, International Journal of English Studies*, 10(1), 131-154.
- Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly*, 41, 255-283.
- Sheen, Y. (2011). *Corrective feedback, individual differences and second language learning*. Springer.
- Shintani, N., & Ellis, R. (2013). The comparative effect of direct written corrective feedback and metalinguistic explanation on learners' explicit and implicit knowledge of the English indefinite article. *Journal Of Second Language Writing*, 22286-306.
- Storch, N., & Wigglesworth, G. (2010). Learners' processing, uptake, and retention of corrective feedback on writing. *Studies in Second Language Acquisition*, 32, 303-334
- Tahriri, A. a., Tous, M. m., & Majouri, A. a. (2014). Models of individual differences in SLA and the role of intelligence. *Modern Journal Of Language Teaching Methods*, 4(1), 104-113.
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning* 46.(2), 327-369.
- Williams, John N. (2012). Working memory and SLA. In Susan Gass & Alison Mackey (Eds.) *Routledge Handbook of Second Language Acquisition*. New York: Routledge
- Van Beuningen, C. (2010). Corrective feedback in L2 writing: Theoretical perspectives, empirical insights, and future directions. *International Journal of English Studies*, 10(2), 1-27.
- Van Beuningen, C. G., De Jong, N. H., & Kuiken, F. (2012). Evidence on the effectiveness of comprehensive error correction in second language writing. *Language Learning*, 62(1), 1-41.
- Zhao, Y. (2013). Working Memory and Corrective Recasts in L2 Oral Production. *Asian Journal of English Language Teaching*, 23(1), 57-82.