

**LEARNER PERSONALITY AND ORAL CORRECTIVE FEEDBACK IN AN ADULT
LANGUAGE CLASSROOM**

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Abstract

A great deal of the variation in language learning outcomes is attributable, either directly or indirectly, to various learner characteristics. One of these characteristics are personality traits, which have been shown to influence learning outcomes. Moreover, teachers have an intuitive belief that personality has substantial importance for learning and make pedagogical decisions, such as choosing an oral corrective feedback (CF) approach, based on their assumptions about student personality. Whereas research has established that CF effectiveness is mediated by several individual differences, research on the influence of learners' personality traits on CF effectiveness is virtually neglected.

This classroom study aimed to fill this gap. It investigated a relationship (if any) between student personality traits and the effectiveness of oral CF, and how students with different personalities respond to and experience oral CF. Using a mixed-methods approach to data collection and analysis, this study took place in a class of adult language-learners in an academic context. Personality was measured using a personality test, the effectiveness of CF was measured using a pretest/posttest measure of past tense use accuracy using audio/video recordings of classroom activities. Qualitative data were collected through semi-structured interviews and stimulated recall (SR) sessions to explore students' response to and experience of CF. Findings showed that personality differences emerged in student response to (and perceived effectiveness of) different CF techniques. Personality traits appeared to play a role in how students experienced CF and responded to it.

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Chapter 1: Introduction

When I started out as a language teacher, I discovered an interesting phenomenon: on the one hand, my students were vocal about wanting oral corrective feedback and requested that I correct their errors more often. On the other hand, when I did provide corrective feedback, it was not always well-received. When I provided oral corrections, some students became more alert, and more conscious of that particular language feature; some diligently wrote down everything I said and repeated every correction, while others looked visibly shaken at the first interruption and shut down after the second or third interruption. As a student of psychology, I understood that embarrassed students do not benefit from feedback because negative emotions hinder their learning. Yet not all students were embarrassed. The question, then, is how can I know which students might accept my corrections and which might not? Why would one student respond differently to the same type of correction than another? I suspected student response to correction might be an attribute of their personality. Thus, from the very beginning of my teaching career, what emerged as one of my biggest challenges was providing corrective feedback in a way that was effective for students with different personalities.

My own anecdotal teaching experience regarding the impact of individual differences on my students' learning does not appear to be isolated and, in fact, has been documented by researchers. Nabei and Swain (2002) reported a case study of a student in a second language classroom who tended not to listen when the teacher was talking to other students. When asked why she did not listen, the student attributed this behaviour to her personality, saying that she preferred to speak, as opposed to listening to others talk. Doughty and Varela (1998) described another student who was willing to accept his teacher's first and second correction, but waved his hand at a third correction, indicating that he had had enough. This teacher noted to the

researchers that some students, by their nature, were uncomfortable receiving more than one or two instances of correction within one exchange. These accounts all demonstrate how individual differences may impact the language learning process. The critical nature of the connection between pedagogy and individual differences motivated me to look more closely at this topic and led to the conception of this study: an empirical exploration of how students with different personalities respond to different types of oral corrective feedback (CF) in a language classroom and how personality influences CF's potential effectiveness.

Pedagogical Rationale

My own teaching experience and that of other teachers indicates that teachers have an “intuitive” belief that personality has substantial importance for learning (Sharp, 2008, p. 21) and that teachers make pedagogical decisions about students’ potential language learning success based on their assumptions about the role of personality in learning. This is manifested in their tendency “to be sensitive to students’ affective or personality variables while giving oral CF” (Kim & Mostafa, 2021, p. 565-566). In Sun (2017), teacher interviews revealed that their CF approach depended on student personality, with one teacher saying “If I point out directly where students were wrong, they may get discouraged, especially for those introverted and not talkative students. It would be a bit too direct as well if you ask them to clarify what they said” (p. 179). Argüelles et al. (2019) reported that teachers tended to consider students’ personality, and, accordingly, the possibility of hurting students’ feelings, when deciding whether to use a specific CF technique. Some teachers also assume extroverts are more successful in language learning (Wakamoto, 2000). Fazeli (2012a) describes “a general belief that the relationship between personality and second language acquisition is a two-way process [in] which they modify each

other” (p. 2252). In order to either support or refute assumptions such as these, more research is needed on individual differences in language learning and CF, and particularly on the relationship between personality and the effect of CF.

Tailoring oral CF to students’ affective states and personality traits has the potential to enhance teaching practices by creating greater alignment between teachers and students. Han (2002) discusses observational evidence of students being taught something that they are cognitively and psychologically not ready to learn to highlight a common mismatch between teaching and learning. A mismatch between teacher-created salience and student-perceived salience, or student's attentional focus and the teacher's call for attention, can have a negative impact on learning (Han, 2002; Kim & Mostafa, 2021; Schultz, 1996; 2001). Research on individual learner differences, such as research on learner personality and learning styles, emphasizes that teachers need to allow their students' strategies, preferences and predispositions to inform their practice (Goo & Takeuchi, 2021; Nassaji, 2016; Oliver & Adams, 2021). Instead of imposing on students the teacher's syllabus and the teacher’s view of how students should learn, teachers need to use students’ built-in syllabus, with particular emphasis on individual differences. This idea is aligned with the principles of Communicative Language Teaching, which advocates learner-centeredness and accommodation of student differences; it supports more teacher-adaptation to learners’ needs and learning styles, in addition to learner-adaptation (with students having to adapt to the teacher's teaching styles), for a balance between the two (Han, 2002). Thus, grounded in these recommendations and principles, and acknowledging that different students have different personalities and different learning preferences and needs, there does not appear to be a need to apply a consistent set of CF practices for all students (Ellis, 2009).

Relevance and Importance for Second Language Acquisition Research

The bulk of empirical evidence indicates that oral corrective feedback (CF) is an important part of effective second language (L2) instruction (Li, 2010; Lyster & Saito, 2010; Lyster et al., 2013; Nassaji & Kartchava, 2017; Oliver & Adams, 2021; Russell & Spada, 2006; Sheen, 2011), and it is particularly effective for the acquisition of explicit knowledge (Ellis, 2002, 2007; Ellis, 2005; Sheen, 2011; Spada & Tomita, 2010). Research has also turned to examining factors that influence and mediate CF effectiveness (Basturkmen & Fu, 2021; Goo & Takeuchi, 2021; Lyster & Saito, 2010; Lyster et al., 2013; Nassaji, 2013; 2016; Pawlak, 2021). Historically, however, instructed second language acquisition (SLA) research has focused on groups and not individuals. From this perspective, individual differences do not matter, as the researcher is interested in what groups have in common rather than what makes each individual unique (Dewaele, 2005). Defined as “cognitive and psychological variables affecting how learners learn and how successful they are” (Sheen 2007, p. 304), these individual characteristics, however, can significantly influence student thinking and behaviour (Dörnyei, 2006) and act as important moderating variables in the process of second language acquisition (Dörnyei, 2006; Sheen, 2011).

Accordingly, there has been a consistent call for more research on individual differences and CF (DeKeyser, 1993; Ellis, 2021; Lyster & Saito, 2010; Lyster et al., 2013; Russell & Spada, 2006; Sheen, 2007; 2008; 2010; 2011; Spada, 2011; Spada & Tomita, 2010). Lyster and Saito (2010) found that students display different magnitudes of improvement through various outcome measurements, and advocated for more research to investigate the many student characteristics, which were not accounted for in their meta-analysis of 15 studies, but were

known to mediate the effects of CF for individual students (e.g., students' proficiency, perfectionism, literacy levels, degree of anxiety, L1 background). In another meta-analysis of 15 studies, Russell and Spada (2006) concluded with a comment that "few studies have investigated the impact of individual learner factors in relation to CF" and that "compelling arguments have been made for the important role that they play in relation to CF and L2 learning" (p. 155).

In fact, there is evidence that individual differences play a role in CF effectiveness (Ammar & Spada, 2006; Banaruee et al., 2017; Sheen, 2007, 2011). Higher proficiency learners and those who are more skilled in the target form appear to benefit from correction in the form of recasts more than lower proficiency learners (Ammar & Spada, 2006; Lyster & Izquierdo, 2009; Lyster et al., 2013; Panova & Lyster, 2002; Pawlak, 2021; Sheen, 2004; Trofimovich et al., 2007). Research has also shown that language aptitude (Havranek & Cesnik, 2001; Sheen, 2007; 2011; Trofimovich et al., 2007), anxiety (DeKeyser, 1993; Goo & Takeuchi, 2021; Havranek & Cesnik, 2001; Sheen 2008; 2011), age (Sheen, 2007; Vuono & Li, 2021), previous knowledge of the language (Trofimovich et al., 2007), grammatical sensitivity (DeKeyser, 1993), motivation (DeKeyser, 1993; Uzum, 2011), and working memory (Mackey et al., 2002) all to some degree mediate the effects of different aspects of second language instruction.

One important individual variable that has been far less researched, however, is personality (Dörnyei & Skehan, 2003; MacIntyre & Charos, 1996; Sharp, 2008). Personality is conceptualized as an individual's pattern of thinking, feeling and behaving (American Psychological Association, 2020). Little progress has been made in our understanding of its impact on the language learning process, despite the fact that interest in how different personality traits correlate with academic performance had been growing since the 1990s. Within this literature, the most frequently studied personality traits in relation to language learning, strategy

use, and academic achievement are neuroticism, particularly relating to the impact of anxiety, and introversion/extroversion (Ehrman & Oxford, 1990; 1995; Fazeli, 2011a; 2012a; MacIntyre & Charos, 1996; Robinson et al., 1994). The findings for extroversion and neuroticism are, however, mixed: both have been shown to play both a positive and a negative role in learning. Meanwhile research into other traits such as conscientiousness, agreeableness and openness to experience is limited and thus, even more inconclusive.

Research on personality and language learning highlights the importance of individual differences in SLA, and how crucial it may be to tailor corrective feedback practices to student personality. Carrell et al. (1996) advocate that “in order to provide effective and sensitive instruction teachers need to learn to identify and understand students' individual differences” (p. 76). Han (2002) argues that it is of “tremendous importance” (p. 12) that a teacher knows their students well enough to be able to recognize students' readiness to learn a particular target feature at a certain point in time. Clearly, teachers should be sensitive to a student's readiness for correction, be it linguistic or psychological, and research on how personality and other individual differences affect language learning may shed light on this important issue.

Research Questions

This study endeavours to fill the gaps in the existing literature by investigating how a student's personality may have an influence on the effectiveness of CF provided in a classroom context. This study was guided by the following research questions:

Q1: What is the relationship between student personality traits and the effectiveness of oral corrective feedback in the classroom?

Q2: How do students with different personality traits respond to and experience oral corrective feedback in the classroom?

In the next chapter, I review literature investigating the effectiveness of different CF types in the classroom, followed by the relevant literature on personality and language learning. In chapter three, I describe the study design and methodology: a series of individual cases and a mixed-methods two-phased approach to both data collection and data analysis. In chapter four, I outline findings on the relationship between individual personality traits and learning outcomes, as well as the role of personality in how students respond to and experience different types of CF. I conclude with chapter five, which includes discussion of the findings as well as limitations and implications of this study.

Chapter 2: Literature Review

In this chapter, I review research relevant to the two fundamental components of this study: the provision of oral corrective feedback in a language classroom, and personality as a dimension of individual differences. In the first section of this chapter, I review the literature on oral corrective feedback, including an overview of the CF theoretical framework, a brief discussion of how CF impacts explicit and implicit knowledge, and which types of CF are more effective than others. Then selected literature is outlined on the debate of the relative effectiveness of recasts, prompts and explicit correction, the three CF types utilized in this study. I conclude with important considerations and a discussion of gaps and limitations of existing research. In the second section, I review the literature relevant to personality and language learning. I draw on existing literature to define personality, outline how it has been operationalized, and then provide a more fulsome rationale for examining its impact on learning, L2 instruction, and corrective feedback specifically. I conclude with a discussion of limitations emerging from the existing research and how some of these limitations are addressed in this study.

Corrective Feedback in the Language Classroom

A majority of empirical evidence indicates that oral CF is beneficial for SLA, particularly for the acquisition of explicit knowledge (Li, 2010; Lyster & Saito, 2010; Lyster et al., 2013; Norris & Ortega, 2000; Oliver & Adams, 2021; Russell & Spada, 2006). While CF is positively associated with L2 learning, this relationship is mediated by the student noticing of L2 form (Mackey, 2006; Schmidt, 2010). When CF allows the student to notice the gap or mismatch between the target form (as found in the input) and the learners' interlanguage, then it may be

deemed successful. When feedback is provided, it functions as a “notice this” sign; this noticing serves as a nudge to initiate a wave of cognitive explicit analysis, which begins explicit cognitive processing, which serves as a nudge that affects the explicit/implicit knowledge interface (Ellis, 2005, p. 328).

Explicit knowledge may become implicit (or highly automatized explicit knowledge, which is functionally indistinguishable from implicit knowledge) with activation of cognition through the use of CF and adequate communicative practice (Han, 2002; Pawlak, 2021).

Scholars believe that under some conditions, such as priming of key acquisitional processes such as noticing the gap between existing language and target language, explicit knowledge may be converted to implicit knowledge (Ellis, 2006). This idea suggests that explicit knowledge of a grammatical structure increases the likelihood that students will attend to the structure in the input and carry out the cognitive comparison between the input and their own output.

Considerations of how CF impacts explicit and implicit knowledge is at the core of the debate about different types of CF (Ellis, 2021), and the research that examines how the different CF types influence its effectiveness.

Typology of CF

An important consideration for this study is the different variables that affect the effectiveness of CF, particularly which types of CF are more effective than others and why. First it is important to establish a typology of CF, so it is clear what is being examined. Lyster and Ranta’s (1997) observational study of four elementary French immersion classrooms aimed to describe the frequency and distribution of the different CF types, and the learner uptake following each feedback type, as used by the four teachers of those classes. They identified six types of CF based on classroom observations: explicit correction, recasts, clarification requests,

metalinguistic feedback, elicitation/prompts, and repetition of error. These CF types range from very explicit to very implicit, but this classification is not categorical, with each of them having characteristics along the explicit/implicit continuum. These CF types are defined below.

- Explicit correction refers to an explicit provision of the correct form and a clear indication that what the student had said was incorrect.
- Metalinguistic feedback provides grammatical metalanguage that refers to the nature of the error, without explicitly providing the correct form.
- A Recast is a teacher's reformulation of all or part of a student's utterance, minus the error.
- A prompt is a technique when a teacher directly elicits the correct form from the student, either by eliciting completion of their own utterance and pausing strategically, by using questions to elicit correct form, or by asking the student to reformulate their utterance.
- A clarification request is when a teacher signals to the student that their utterance has been misunderstood, or that it is incorrect, and that a student should repeat or reformulate their utterance.
- A repetition of error is when a teacher repeats the student's incorrect utterance, in isolation, usually adjusting their intonation to highlight the error.

In addition to the implicit/explicit continuum, another consideration of CF typology is whether the feedback is focused or unfocused (Lyster & Saito, 2010; van Beuningen, 2021). Highly focused or specific oral CF has been found to be more effective and more noticeable than generalized CF (Ellis et al., 2008; Lyster & Saito, 2010; Nassaji & Swain, 2000; van Beuningen, 2021). Likewise, Bitchener and Knoch, (2009) found that focused and specific written error

correction is more effective than comprehensive/unfocused error correction. They also suggested that focused feedback may be able to improve consistency of feedback.

This review will focus on the most pedagogically relevant (most commonly used) and the most prominent in the literature CF types from the above classification: recasts, prompts and explicit correction types, including metalinguistic feedback.

Recasts. In the CF literature, recasts have risen to a particular prominence because they are the most frequently-used type of CF in the classroom (Dilans, 2016; Ellis & Sheen, 2006; Nabei & Swain, 2002; Sheen, 2010; 2011; Zyzik & Polio, 2008), especially for adult students (Lyster et al., 2013). However, recasts are also the most controversial CF type among researchers due to a debate about their effectiveness (Sheen, 2011), as they have been shown to be the least effective type of CF in promoting student learning as indicated by measurements of learner uptake, noticing and opportunities for student repair (Lyster & Ranta, 1997; Nabei & Swain, 2002; Panova & Lyster, 2002). However, some argue that this evidence suffers from methodological limitations, so it is not yet fully convincing (Goo & Mackey, 2013).

First, it is useful to consider the evidence of recasts' pedagogical popularity and the reasons behind it. Ding (2012) suggests that "Many L2 teachers correct learners' erroneous utterances instinctively, using a recast" (p. 89). In fact, recasts represent over 60% of teachers' feedback (Dilans, 2016; Lyster & Ranta, 1997; Panova & Lyster, 2002). Their popularity and frequency prevail in L2 classroom interaction, regardless of setting or learning context, with a prevalence of 54-65%, followed by prompts at 26-38% and then explicit correction at 7-9% (Lyster & Mori, 2006; Sheen, 2004). Dilans' (2016) classroom observation indicated that recasts represented 72% (134) of all CF (112 being what can be called partial recasts, which makes them 60% of all CF provided), whereas explicit correction and elicitation (prompts) each represented

13% of the total (24 and 25, respectively). Sheen (2004) found that native speaker teachers in New Zealand English as a Second Language (ESL) classes and Korean English as a Foreign Language classes (EFL) rarely use feedback other than recasts in responding to student errors. Recast dominance in Canadian Immersion classrooms is slightly lower, but still at 55%. Given the popularity of recasts, Sheen (2008) argues that “it would be of obvious advantage to language teachers to know whether and under what conditions they facilitate acquisition” (p. 838).

Recast research is particularly pedagogically valuable since recasts are a type of CF that can keep the students’ focus on meaning, and simultaneously allow the teacher to draw student attention to grammatical form, making them a “pedagogically expeditious” and “time-saving” way to deal with student errors, while other types of correction may require more time (Ding, 2012, p. 88). Recasts allow instructors to maintain the focus on teacher-fronted instruction, and quickly continue on after making a correction, which is the type of classroom interaction they are comfortable with (Zyzik & Polio, 2008), and research-based good practices of recast implementations can help teachers “find a balance between promoting L2 development and improving classroom efficiency” (Ding, 2012, p. 89). Furthermore, recasts are also implicit enough so that they do not interrupt communication, so they satisfy a dual requirement of the Communicative Language Teaching (CLT) approach (Han, 2002).

Second, recasts’ mixed effectiveness needs to be considered. Recasts are hypothesized to be effective because they provide both positive (model the target-like utterance) and negative (reformulate non-target utterances) evidence and promote focus on both form and meaning (Ellis & Sheen, 2006). There is no question of their input providing function; however, if students do not notice their corrective function, recasts do not necessarily provide negative evidence (Nicholas et al., 2001). Ellis and Sheen (2006) caution that it is not possible to say with certainty

if a recast provides negative evidence since that depends on the student's perception and interpretation of the recast. If a student is not consciously aware that the recast is intended to be corrective, then it only provides positive evidence. One aspect that may reduce recast effectiveness is their multifunctional nature. They have been operationalized in many different ways because there are many functionally different types of recasts: full vs. partial, single vs. multiple, simple vs. complex, and didactic vs. communicative (Ellis & Sheen, 2006). Recasts can be non-corrective repetitions of well-formed utterances, or they can be corrective recasts. This multifunctionality increases their ambiguity (Panova & Lyster, 2002), and they can be misinterpreted by students as confirmation checks, thus overlooking their corrective force (Ellis & Sheen, 2006), or as feedback on content instead of form (Nassaji, 2016).

Thus, recasts can be too implicit to be noticed, and their corrective force is often ambiguous. For example, Egi's (2007) laboratory study found that only 57% of recasts were noticed, when measured using individualized introspective measures such as immediate reports or stimulated recalls. They can also be inaccurately perceived as much as 75% of the time (Mackey et al., 2000). Because of these findings, there are doubts about the effectiveness of recasts in promoting learning, and the question of recasts' effectiveness remains critical for pedagogy.

Recasts have been theorized to be implicit feedback that leads to implicit knowledge (Doughty & Williams, 1998; Ellis, 2002; Sheen, 2008). However, it seems that in practice, recasts are not purely implicit, and can lie at various points on a continuum of implicitness-explicitness (Ellis, 2021; Ellis & Sheen, 2006; Mayo & Milla, 2021). In fact, recasts can actually be as explicit as explicit correction (Ding, 2012), and the implicit-explicit distinction is more useful for research than actual practice. Yang and Lyster (2010) state that "recasts can also be

quite explicit” (p. 237), Nassaji (2009) uses the expression ‘explicit recasts’, and Nabei (2012) describes partial recasts as “the teacher’s feedback in this episode is explicit, with phonological emphasis and alternative provisions” (p. 45). Sheen (2004) states that for some partial recasts “the illocutionary force is more or less the same as an explicit correction. This suggests that recasts can be more or less explicit and thus salient depending on their form” (p. 293).

Prompts. Another bulk of literature on CF types is focused on the existing debate of relative effectiveness between the most-popular type, recasts, and the second most popular type of CF (Dilans, 2016; Lyster & Mori, 2006; Lyster & Ranta, 1997): prompts. At 26-38% prevalence in classroom interaction (Lyster & Mori, 2006), while considerably less popular than recasts, prompts have been shown as the most effective type of interactional feedback (Lyster & Mori, 2006; Nassaji, 2009), which is “a kind of corrective feedback that occurs in the context of communicative interaction” (Nassaji, 2016., p. 536).

Prompts involve the teacher initiating students to self-repair (Lyster & Mori, 2006). Proponents of prompts argue that if students self-correct when provided with CF, they are more likely to remember this correction as opposed to the corrections they received with recasts (Basturkmen & Fu, 2021; Nassaji, 2009). Moreover, while recasts provide both positive and negative evidence to students, prompts provide negative evidence only (Nassaji, 2009). Thus, recasts are a form of input, while prompts are a form of pushed output. Input-based feedback provides the correct form for a student (recast), whereas output-based feedback encourages production of the correct form from the student (prompt) (Basturkmen & Fu, 2021; Ding, 2012). Pushed output supports language learning by promoting the retrieval of the target language form, and helping students notice the discrepancy between the correct input and their incorrect non-target output (Nassaji, 2016). Pushed output CF also serves a hypothesis-testing and a

metalinguistic/conscious reflection function since the students must figure out how to correct their erroneous output themselves (Doughty & Williams, 1998). Research on whether prompts or recasts are more effective fuels the theoretical debate over the relative roles of input or output in L2 learning (Ding, 2012).

Output-based CF such as prompts has been shown to lead to increased uptake (Basturkmen & Fu, 2021; Lyster & Mori, 2006; Lyster & Ranta, 1997; Panova & Lyster, 2002; Vuono & Li, 2021), although Sheen (2004) suggested that student opportunities for uptake from recasts are limited due to insufficient wait time provided by the teachers, which is not an inherent problem of recasts themselves. Moreover, output-prompting and input-providing CF may be equally effective when the length of CF treatment is very short (Basturkmen & Fu, 2021).

Panova and Lyster (2002) reported that students notice word forms more when they are pushed to self-repair, than when the correction is provided by teachers. After reviewing existing research, Nassaji (2016) concluded that interactional feedback that promotes modification of learner output may be more beneficial than feedback that does not.

Out of all implicit feedback types, prompts have been found to be the most effective (Ammar & Spada, 2006; Havranek, 2002; Lyster & Mori, 2006; Lyster & Ranta, 1997; Nassaji, 2009; Panova & Lyster, 2002). Nonetheless, similar to recasts, prompts also have both explicit and implicit elements, and Ellis et al. (2006), Yang & Lyster (2010) and Sarandi & Celik (2018) acknowledge that some classifications of prompts include metalinguistic clues, thus, those types of prompts can be classified as an explicit type of feedback.

Explicit CF. Another type of CF, explicit correction, is third most popular type in classroom prevalence (at 7-9%) and assumed by teachers to be the most threatening type of CF, because being corrected and told that one is incorrect, especially in front of others (Nassaji,

2013) can cause embarrassment, anxiety and feelings of distress. However, research has found explicit types of CF to be the most effective (Ellis, 2021; Lyster & Mori, 2006; Nabei, 2012; Nassaji, 2009; Oliver & Adams, 2021; Sheen, 2004; 2007; Yilmaz, 2012).

Teachers fear that explicit correction could hinder students' participation and are frequently concerned about embarrassing their students (Zyzik & Polio, 2008). While explicit feedback receives a lot of support from research on student expectations, it is perceived by some as socially harmful (Mak, 2011) due to its potential in causing distress and elevating student anxiety when publicly told they made an error.

On the other hand, many researchers support the use of explicit CF. This is due to their usefulness in drawing student attention to form unambiguously, and due to their value in conscientiousness-raising of the target language (Ellis, 2021; Foster & McGettigan, 2021; Nassaji & Swain, 2000; Pawlak, 2021), thus, resulting in the most learner-generated repair (Lyster & Ranta, 1997; Wu, 2019). Metalinguistic feedback is a form of explicit feedback, which allows students to develop awareness of the target language at the level of both, noticing and understanding of the rules, which theoretically improves its effectiveness (Sheen, 2007). In fact, explicit metalinguistic knowledge that results from explicit correction may contribute to development of both explicit and implicit knowledge (Nassaji, 2009).

In fact, Ellis (2005) argues that through practice, explicit processing can result in implicit processing. Ellis (2002) suggests that explicit knowledge can aid in acquisition of implicit knowledge by making forms salient to students. Thus, if explicit CF can lead to implicit knowledge, then perhaps we do not have to bother to teach implicit knowledge directly, through often ineffective implicit CF techniques (Ellis, 2002).

Empirical Findings on Type and Effectiveness

Researchers have attempted to empirically answer the question of which type of CF is more effective. In their research synthesis, Lyster et al. (2013) concluded that “Although the provision of oral CF is undoubtedly more effective than no CF, there are still many variables that interact to influence CF effectiveness differentially” (p. 30). Other examinations of existing studies found that in general, CF has a positive effect on L2 learning, yet significant differences have been observed in existing research about the effectiveness of various types of CF (Nassaji, 2013; Nassaji & Kartchava, 2021). In the following section, I examine select empirical evidence regarding the three types of CF examined above: recasts, prompts, and explicit types of CF. Because of their prominence in the literature, and popularity in the classroom, recasts will feature prominently in this examination of existent literature. I will begin with an examination of select research on recast effectiveness, and then, to reflect important debates in the literature, I will briefly compare two other types of CF to recasts: explicit types of CF and recasts, and implicit CF (prompts) and recasts.

Recasts. A number of meta-analyses have found that recasts are effective. In Mackey and Goo's (2007) meta-analysis of 28 studies, recasts were shown to be effective at generating learning, with large effect sizes (indicating the strength of the relationship) on all posttests. However, the authors cautioned against drawing any definitive conclusions from their findings on the delayed posttests because of the limited number of studies used in their analysis. Due to this limitation, while the authors can assert that recasts are effective, they cannot definitively state whether recasts are more or less helpful than other types of feedback. In fact, Lyster and Saito's meta-analysis (2010) of 15 studies found that recasts have a medium beneficial effect, and that the groups exposed to prompts made significantly more progress than the groups exposed to

recasts. They concluded that CF is more effective when it is delivered in a more pedagogically oriented (prompts) than a conversationally oriented (recasts) manner. Li's (2010) meta-analysis of 33 studies found a medium strength association between recasts and L2 learning, with long-term effects for recasts larger than in the short-term. In fact, the effect of implicit feedback, such as recasts, was better maintained over time than the effect of explicit feedback. This suggests that while the positive effects of recasts on L2 learning may not be as apparent at first, they may increase over time and have durability.

While the focus of this study and this literature review is on classroom research, it is important to note when discussing research on recast effectiveness that laboratory research has found them to be effective as well. For example, Trofimovich et al.'s (2007) laboratory study examined how different cognitive factors influenced the effectiveness of recasts among French ESL students. They found that students benefited from recasts, but with a caveat that noticing (and thus, effectiveness) may have been inflated due to provision of additional positive evidence to the students through non-corrective repetitions, and due to the nature of laboratory studies in general.

A concern about laboratory studies such as this one is that the laboratory setting (individuals interacting with a computer, as in this study) may inflate noticing, and thus, the effectiveness of recasts. This inflated noticing may be a result of lab-based CF studies being highly focused, for example, if a particular target feature is corrected intensively, whereas in classroom-based studies CF may be more unfocused; due to this high focus, the CF is more likely to be noticed and understood by students (van Beuningen, 2021). Moreover, contextual differences between laboratory and classroom studies may also contribute to inflated noticing: while laboratory studies by their nature are very controlled and generally distraction-free, there is

a lot more opportunities for distraction in a classroom where CF is not as easily recognizable from other aspects of classroom interaction, and where CF may often not be directed towards individual students (Li, 2010; van Beuningen, 2021).

Egi (2007) set out to investigate how student interpretations of recasts mediate their effectiveness in a laboratory setting. The author investigated three possible interpretations of recasts: as positive evidence (when students become aware of the target-like model), as negative evidence (when students recognize that they made an error), or as responses to content. The participants were 49 Japanese as a foreign language students of high-beginner to intermediate L2 proficiency. Egi (2007) found that student performance significantly differed depending on how they interpreted the recasts. They found evidence that recasts are less effective when they are interpreted as a response to content. Moreover, no significant difference between interpreting recasts as negative evidence or as response to content was found. The author concluded that interpretation of recasts as negative evidence was not very effective for L2 development, and that positive evidence interpretation was much more beneficial than negative evidence interpretation. Finally, Egi (2007) found that the greatest language development occurred when students interpreted recasts as both positive and negative evidence. Thus, it appears that how students interpret the recasts is a mediating variable that serves a filtering function in determining how much the student will benefit from them.

What adds fuel to the argument that laboratory research may be inflating recast effectiveness, is that classroom research on recast effectiveness is mixed, showing they are more effective when they are more salient and explicit, or in more laboratory-like conditions. For example, Nabei and Swain (2002) conducted a case study in an EFL classroom and found that, overall, teacher recasts do not contribute to students' immediate learning. However, some of their

findings suggested that different types of classroom interactions impact recast effectiveness. Specifically, recasts provided during group interaction, which were more like dyadic interaction, were more explicit and more effective, and were more likely to be perceived accurately as a correction. Based on these findings, Sheen (2004) suggests that smaller classes, like the one used in this study, may facilitate more salient and better uptake opportunities for recasts.

Doughty and Varela (1998) showed that explicit recasts can be effective in an ESL classroom. They found that the students who received recasts initially showed large accuracy gains on the simple past and conditional, and this effect was maintained on the delayed posttest. In this study, the teacher used repetition and emphatic stress to make recasts more explicit, and thus more effective, leading to higher levels of learner uptake.

Recasts Compared to Explicit Types of CF. Other primary research into the effectiveness of CF compares the effectiveness of different types of CF to one another. Some studies have compared recasts to explicit types of CF such as explicit correction or metalinguistic feedback.

In an ESL classroom study, Ellis et al. (2006) compared metalinguistic CF and recasts on the past tense “-ed”, and found a distinct advantage for metalinguistic CF, despite the recast group receiving substantially more CF than those in the metalinguistic group. Moreover, they found that metalinguistic feedback contributed to system as well as item learning, and that unlike recasts, metalinguistic feedback was more likely to lead to a deeper awareness of the gap between the utterance and target form. Furthermore, they found that metalinguistic feedback did not detract from the communicative flow of the lesson, which is used as one of the main arguments against its use. Moreover, the authors argued that explicit knowledge can become implicit with the help of metalinguistic explanation. The metalinguistic time-out, which is a brief

break in communication that the teacher makes to explain the correction, allows for a perfect context to meld conscious and unconscious learning processes. Thus, explicit feedback may cater not only to explicit learning and knowledge, but also to implicit learning and knowledge.

In her classroom study, Sheen (2007) found that the metalinguistic group outperformed the recast and control groups, whereas the recast group did not perform significantly better than the control. Explicit correction and metalinguistic explanation allowed students to receive both positive and negative evidence, resulting in an immediate effect, and not just a delayed effect, as seen in other studies. Sheen suggested that recasts were not effective because the recast treatment was short and not salient enough for students to notice recasts' corrective force. In addition, this study used articles as the linguistic target, which may not be an ideal target form for recasts in communicative tasks because articles lack salience. The impact of the target feature on the results of this study became quite evident when no one in the recast group identified articles as the target of the treatment on the exit questionnaire. A similar phenomenon was observed by Sheen (2010) when no students in the oral recast group showed any awareness of the CF's focus on grammar.

Ellis (2007) conducted a study in a private ESL school in New Zealand and found that recast gains on the use of comparative “-er” and past tense “-ed” structures were only moderate, with no overall difference between participant performance in the recast group and the control group. Meanwhile, the metalinguistic group overall outperformed the control group. Even though it was not intensive, and it was short, metalinguistic feedback was salient enough for students to benefit their language acquisition. Furthermore, metalinguistic feedback had a stronger effect on the comparative, and it was immediate. The authors suggested that this was due to students starting at different levels of knowledge of these forms: the students knew less about the

comparative, as shown by the pretest, and thus, it was possible for results to show increases in explicit knowledge on this structure. Also, metalinguistic CF allowed for delayed implicit learning of -ed. Thus, findings indicated that metalinguistic feedback works differently on different structures, depending on 1) how much explicit knowledge students have about that structure and 2) the frequency of subsequent exposure to the structure.

Faqeih and Marsden (2014) examined how recasts and metalinguistic feedback impacted the learning of modals in an ESL classroom. They found that both types led to L2 development. The metalinguistic feedback led to a significant improvement in modal use on the posttest and delayed posttest (seven weeks), whereas the recast group showed a significant improvement on the delayed posttest, and the growth from posttest to delayed posttest was also significant. Again, this research supports the suggestion that benefits of recasts become evident later, on delayed posttest measures. Moreover, the authors, again, found evidence that metalinguistic feedback led to improvements in both implicit and explicit knowledge on posttests and delayed posttests.

In a laboratory study, Yilmaz (2012) compared the effectiveness of recasts and direct explicit CF on the acquisition of two Turkish morphemes during communicative tasks. The participants were 48 students with no Turkish background, all native English speakers. The author used oral production, comprehension and recognition tests to document student improvement, and found that explicit feedback was more effective than recasts, on both immediate and delayed posttests.

Overall, research appears to indicate that recasts are less effective than explicit types of CF (Ellis, 2021). However, the two techniques may not be directly comparable, so other researchers compare recasts to other types of implicit feedback.

Recasts Compared to Prompts. In her EFL context study, Havranek (2002) observed

various CF techniques used in classrooms involving 207 English students of different age and proficiency levels (ranging from first, second, third and seventh year of English learning, from 10-year-olds to university students), and then evaluated the effectiveness of these techniques using class-specific language tests. The author found that elicited self-correction (prompts) was the most effective type of CF, with a 65.2% learning success rate, while recasts were the least effective. Recasts, while “unobtrusive” and “the least threatening form of correction,” were “clearly also the least successful type of corrective feedback” (Havranek, 2002, p. 262). In fact, the outcome measure scores revealed that student learning for recasts was 10% lower than for other types of CF, and the 42.8% rate of repeating the same error after the provision of recasts was higher than their 40.7% success rate.

Panova and Lyster (2002), in their observational study of a low language proficiency level adult ESL classroom, found that learners did not notice recasts (noticing was measured by uptake and repair moves after the correction), yet they noticed implicit prompts. In fact, recasts were shown to be the least effective type of CF, with some data suggesting that recasts may be more noticeable to higher proficiency learners. The authors concluded that prompts and repetitions of error with emphasis are the most effective types of CF for immediate repair.

The possibility of proficiency having an impact on effectiveness of prompts and recasts has also been studied. In their quasi-experimental study of 64 students in three intact grade 6 ESL classes, Ammar and Spada (2006) compared the effectiveness of prompts and recasts on learning of the third-person possessive determiners (his and her). They found that prompts were more effective than recasts, and they were also effective for learners of a broader range of proficiency levels than recasts: Prompts were more effective than recasts for lower proficiency learners, while higher proficiency learners benefited equally from recasts and prompts.

Lyster and Mori (2006) conducted an analysis of interactional feedback and uptake in fourth and fifth grade classrooms in French Immersion (FI) and Japanese Immersion (JI) settings, where students were exposed to the target language for 50-60% of their school day. The authors compared the effectiveness of recasts, prompts, and explicit correction and they found that prompts were equally effective in both settings, but much more effective than recasts in the FI setting. Meanwhile, recasts in the JI setting led to repair as effectively as explicit correction. The setting played a significant role in the amount of uptake and repair observed after each type of CF, as recasts led to twice as much uptake as prompts did in JI classrooms, while prompts led to twice as much uptake as recasts did in FI classrooms.

In addition to context, target feature can also impact the relative effectiveness of recasts and prompts. In their quasi-experimental EFL classroom study (using three intact classes), Yang and Lyster (2010) compared the effectiveness of prompts and recasts on 72 Chinese undergraduate students' learning of regular and irregular past tense. They found that the prompt group made significant improvements in past tense use on all oral measures, and these gains were found both in the short and the long term. Meanwhile, the recast group showed improvement on irregular past tense use on the posttest, but these gains disappeared on the delayed posttest. For the regular past tense, the recast group showed no significant gains in accuracy on either the posttest or the delayed posttest (measured immediately after and two weeks after treatment). Yang and Lyster (2010) attributed prompts' effectiveness to the fact that they consistently elicited self-repair and had greater saliency during oral production activities.

Kartchava and Ammar (2016) conducted a quasi-experimental classroom study of ESL learners of high beginner proficiency, and compared recasts, prompts and a combination of the two on noticing and learning of simple past and questions in the past. The results showed that

those in the prompt and mixed (recasts and prompts) groups noticed significantly more CF overall than those who were exposed to recasts, especially when the target feature was the past tense. Those in the mixed condition noticed more feedback on both the past tense and questions than those in the recast condition; whereas those who were exposed to prompts differed in noticing from the recast condition only on questions. This suggests that while prompts still appeared to be superior to recasts, the combination of the two is the best approach to maximize noticing and learning.

Nassaji (2009) compared recasts and prompts as incidental CF in dyadic ESL interactions. Both recasts and prompts had some effect on learning the target forms, but explicit recasts and prompts were more effective. The rate of correction on post-interaction error identification/correction tasks for recasts was low, with 41% on an immediate posttest and 28% on a delayed posttest. Furthermore, there was a large drop for recasts from immediate to delayed posttest. In contrast, if students self-corrected when provided with a prompt, they were likely to remember this correction, as opposed to the corrections they received with recasts. The author suggested that recasts could have been more effective if the target forms were more salient and the recasts had been less implicit. He found that for both CF types, students were more likely to remember their corrections when the feedback was more explicit than implicit, but the effects of explicitness were more pronounced for recasts than prompts: there was stronger benefit from increased explicitness for recasts. Thus, while explicitness may be important for determining effectiveness of recasts, it may not be equally important for prompts. Furthermore, the author suggested that recasts are beneficial for learning new knowledge, whereas prompts could be more effective if students already have declarative knowledge of the forms. This may be because, as Nassaji (2016) suggests in his research synthesis:

[Prompts] could lead to self-repair only if learners have already some declarative knowledge of the target form and use that knowledge to repair their errors in response to feedback... If learners are not able to self correct their errors, they are likely to benefit more from feedback that provides the correct form such as recasts (p. 555).

This may suggest that prompts are the better CF type when there is grammar instruction in the class and students have declarative knowledge of the language, while recasts are better when there is no explicit grammar instruction and students may not need that basis of declarative knowledge for recasts to be effective.

Since explicit recasts are of a particular interest for this review because they are used in this study, other studies that highlighted the effectiveness of explicit recasts, even when compared to prompts, are examined next. Lyster and Izquierdo (2009) conducted a combination of classroom and laboratory study, and found that in dyadic settings, both recasts and prompts work. Both participant groups in a French as a second language context made similar progress, regardless of the type of feedback they received. It is important to note that the recasts used in this study were quite explicit. Nicholas et al. (2001) argue that it is the enhanced salience and not the implicit negative evidence that makes recasts successful. Explicit recasts' illocutionary force, that is the speaker's intention at producing them, is similar to explicit error correction, and as both Lyster and Izquierdo's (2009) and Doughty and Varela's (1998) findings suggest, the more salient recasts are, the more they facilitate uptake and repair. Explicitness of recasts may even lead to them outperforming prompts. In their quasi-experimental study, Sarandi and Celik (2018) compared explicit recasts and prompts on the acquisition of English third person '-s' in an EFL context. They used oral narration tasks to measure students' implicit knowledge. They found an

advantage for explicit recasts over prompts on the immediate posttest, and this advantage was maintained, though reduced in strength, on the 10-day delayed posttest.

Important Considerations that Impact CF Effectiveness and Individual Differences

Existing research that has tried to definitively answer the question of different CF types' effectiveness has been inconclusive, particularly regarding the impact of recasts on language development (Ellis, 2007; Havranek, 2002; Panova & Lyster's 2002; Sheen, 2007). Lyster et al. (2013) concluded that experimental classroom CF studies consistently confirm that oral CF is significantly more effective than no CF, and that there is a tendency for prompts or explicit correction to result in more gains than students receiving recasts. Thus, current research findings may not justify the prevalence of recasts in the classroom, as observed in Lyster and Ranta (1997), Panova and Lyster (2002) and Dilans (2016). Nonetheless, recasts are better than no CF at all, effective in the laboratory settings, in dyads, and in classroom settings where language is emphasized; there is also evidence that they work when delivered intensively, and when they are more salient (Doughty & Varela, 1998; Lyster & Izquierdo, 2009; Lyster & Mori, 2006; Nassaji, 2016; Sarandi & Celik, 2018; Trofimovich et al., 2007). Therefore, recasts still have value because they provide positive evidence; however, based on the existing research findings, they should not be advocated as the most effective source of negative evidence (Panova & Lyster, 2002; Yilmaz, 2012).

DeKeyser (2012) argues that in order to untangle the conflicting findings we need to study interactions between variables. Interactions unmask more sophisticated relationships between variables, beyond simply describing CF as either effective or ineffective. An initially non-significant finding may turn out to be much more than that. Interaction can reveal qualitative differences about the learning process: In his paper, DeKeyser (2012) noted that a strong

interaction between variables may end up “showing that the two groups did not just differ quantitatively but also qualitatively, that is, in terms of learning processes” (p. 192). Interactions can reveal why a treatment sometimes works, and at other times it does not. For example, metalinguistic correction was found to be more effective than recasts, but there was also an interaction with analytic aptitude (Sheen, 2007). In another example, an age by aptitude interaction shows that children rely on implicit instruction while adults rely on explicit instruction, and instead of advocating that a younger age of instruction is needed, we can conclude that we need to provide different instructions for different ages.

Emerging from existing research are several important considerations that mediate and influence the effectiveness of the different types of CF. Two considerations such as target feature (see Ellis, 2007; 2021; Kartchava & Ammar, 2016; Nassaji, 2016; Sheen, 2007; 2011; Yang & Lyster, 2010), and context (see Lyster & Mori, 2006; Nassaji, 2013; Nabei & Swain, 2002; Sheen, 2004), while significant, are not the focus of this study. Another important consideration, individual differences, which are defined as cognitive and psychological variables that affect learning, will be discussed here because of their relevance to the present study.

There is evidence that different types of feedback work best for different stages of learner development (Ammar & Spada, 2006; Nassaji, 2016). Recasts and prompts may be complementary techniques with different purposes. Moreover, as stated by Nabei and Swain (2002), CF provides opportunities for learning, but uptake depends on the learner. In other words, research repeatedly shows that individual differences play a role in CF effectiveness. For example, higher proficiency learners and those who know the target form more accurately benefit from recasts more than lower proficiency learners (Ammar & Spada, 2006; Lyster & Izquierdo, 2009; Panova & Lyster, 2002; Sheen, 2004; Trofimovich et al., 2007). High and

intermediate proficiency learners are also more likely than low proficiency learners to notice the negative evidence in recasts, although, low proficiency learners may still benefit from the positive evidence recasts provide. High-proficiency students benefit equally from both prompts and recasts, while low-proficiency students benefit more from prompts than recasts (Ammar & Spada, 2006). DeKeyser (1993) found that CF effectiveness interacts with individual difference variables, and individuals with high previous achievement, extrinsic motivation and low anxiety benefited the most from CF. Havranek and Cesnik (2001) argued that individual differences impacted students' ability to benefit from CF. They found that those with below average language competence benefit from CF (of their own and their peers' errors) the least. The reason for this is that the correct version is likely outside of their ability level, and they need more processing time than is available to them to incorporate it into their speech. Individual difference variables such as phonological memory, attention control and analytical ability also mediate recast effectiveness (Trofimovich et al., 2007). Trofimovich et al. (2007) found that phonological memory may play an essential role in shaping long-term benefits of interactional feedback because the student can maintain the utterance in an active state and make it available for subsequent storage and processing. Analytical ability was found to result in the student being more likely to engage in deeper processing.

Learners' beliefs, the cognitive components that inform and influence attitudes (which, in turn, are made up of cognitive, affective and behavioural components), have been identified as an important individual difference variable, and are conceptualized as having both a dispositional, static, trait-like dimension, and a situational, situated, dynamic dimension (Goo & Takeuchi, 2021; Kim & Mostafa, 2021). Another aspect that makes learner beliefs particularly interesting is that student anxiety as an individual difference variable has also been investigated

as a factor influencing learner beliefs about oral CF, with mixed findings: some research has found that low foreign language anxiety participants were better at noticing the gap between their errors and target forms (and more successful at noticing CF) than the participants with high anxiety, whose perception of CF were affected by their anxiety. In contrast, other research did not find anxiety to have an impact on learners' beliefs about oral CF (Kim & Mostafa, 2021).

Their trait-like (personality) dimension and potential influence of anxiety on learner beliefs and attitudes towards CF make student beliefs and attitudes particularly meaningful to the research on language learning, CF, and personality. One area of this research examines student attitudes towards CF. Schultz (1996, 2001) conducted a series of studies on students' attitudes towards CF and found that students consider CF helpful in language learning. In fact, most students, 94%, were quite positive towards negative feedback and 65% indicated that they would feel cheated if the teacher did not correct them. In this sample, 90% of the respondents welcomed oral correction, while 97% welcomed written correction. They seemed to expect such interventions as an intrinsic part of the classroom process, suggesting that classes that lack any kind of CF may actually cause anxiety for some students (Schulz, 1996). One interesting finding from Schulz (1996) was a disconnect between the attitudes of the students and the teachers; 90% of the students wanted correction and believed their errors should be corrected, while only 34% of teachers recognized this. Moreover, only 33% of teachers believed that students had a positive attitude towards CF. Although it is true that negative feedback can sometimes have a negative and detrimental effect on student confidence and learning, Hyland and Hyland (2006) suggested that it is still more preferable by students than gratuitous praise: "Teachers often praise frequently as a means of building students' confidence, but students expect to receive constructive criticism rather than simple platitudes" (p. 87).

Similar results were obtained by Agudo (2013), who surveyed 208 EFL Spanish secondary school students on their attitudes towards CF in L2 classrooms and found that 85.15% believed that oral CF was needed and useful, and 66.33% said that they learned a lot from the oral CF provided. These students saw CF as essential and helpful for language learning. Likewise, Faeih and Marsden (2014) found that 89% of students believed their errors needed to be corrected.

Harmandaoglu Baz, et al. (2016) used questionnaires to survey 100 Turkish EFL students and ten instructors to compare their perceptions of CF. Unlike Schulz's findings of a disconnect between teacher and student attitudes, results showed that the two groups mostly shared their perceptions: Both groups believed that students liked CF and learned a lot from it, preferred teacher correction to peer correction, and both groups believed that the students felt cheated when the instructors did not correct their written work. The one source of disagreement was that only instructors believed that teachers should not correct students' pronunciation or grammatical errors in class unless these errors interfered with comprehensibility, but the students actually expressed a desire to be corrected, and they expressed a desire to be corrected explicitly.

Kartchava (2016) surveyed college-level students in Canada and Russia, and found that students in both contexts believed that oral CF was an important factor in a language learning classroom, and they valued oral CF. She concluded that "learners generally prefer to have their errors corrected rather than ignored" (Kartchava, 2016, p. 31). Unlike Harmandaoglu Baz et al.'s (2016) finding, both groups felt that only errors that interfered with comprehension or were recurrent should have been corrected.

Does CF Cause Psychological Harm?

While, as outlined above, researchers grapple with the nuances of CF and the relative effectiveness of its various types, a more macro discussion in the debate between implicit and explicit types of CF is the suggestion that CF may cause psychological harm to students. This has had a strong impact on teachers and their teaching philosophies. Truscott (1999) suggests that “people in general do not enjoy being told that they are wrong; for students who must constantly deal with public correction, the experience can be quite distressing” (p. 445). He argues that the presence of other students will only elevate anxiety and distract the corrected student. Panova and Lyster (2002) found a clear preference among teachers for implicit forms of CF, such as implicit recasts and prompts. Zyzik and Polio (2008) found that teachers consider implicit feedback non-threatening, and a key aspect of their practice. Accordingly, implicit recasts and prompts are an example of “gentle” correction and “mitigated feedback” because teachers do not want to openly tell students that they are wrong (Basturkmen & Fu, 2021, p. 381; Nicholas et al., 2001, p. 740).

The possibility that CF may be distressing to students has been explored by researchers who have found that stress negatively affects learning (Robinson et al., 1994), and reduces strategy use (Fazeli, 2011a). Schulz (1996) described the reasoning behind this: the suggestion is that because CF activates students’ “affective filter” (p. 344), and raises student anxiety, crippling students’ ability to learn and communicate. Studies show that students can indeed experience negative emotions towards CF, particularly anxiety and fear. In her study, Mak (2011) found that being corrected in class was anxiety-inducing, the anxiety mainly caused by fear of negative evaluation. In fact, this fear was the most important factor contributing to L2 in-class speaking anxiety for Chinese EFL students, compared to other factors such as

uncomfortableness when speaking with native speakers, negative attitudes towards the English class, negative self-evaluation and fear of failing the class. Mak (2011) concluded that “although error correction by teachers as part of the learning process is considered normal, correction by peers or teachers when speaking is regarded as anxiety-provoking when the highlighting of learner mistakes is used to elaborate teaching points” (p. 209). An important caveat to interpreting the findings of this study is that CF effects may have been conflated with generalized in-class speaking anxiety. Students with in-class speaking apprehension learn less from CF of their (and their peers’) errors than those who find speaking easier (Havranek & Cesnik, 2001). Thus, CF can be harmful only for some students, those who have a tendency to be anxious, and this does not apply to many others who experience little or no anxiety when they are pushed to speak (Sheen 2008).

Moreover, other research has shown that when teachers provide feedback, students appear neither traumatized nor frustrated (Lyster et al., 1999). Pennington (1995) found that students appreciate feedback and become more engaged and motivated when they receive it. Studies on student attitudes on CF shows that students have an overwhelmingly positive attitude towards CF, and research consistently finds they feel cheated if they do not receive it (Agudo, 2013; Harmandaoglu Baz et al., 2016; Schultz, 1996; 2001). In fact, in their analysis, Lyster et al. (2013) concluded that this phenomenon of students’ preference for CF is consistent across most contexts, but qualified that some studies suggest that the magnitude of this preference varies according to students’ cultural backgrounds, language learning experiences, and proficiency levels.

Gaps and Limitations Addressed by this Study

The empirical research on CF effectiveness has a number of recurrent methodological flaws that need to be addressed. Some commonly acknowledged limitations include short interventions, overly complex designs, and a need for open-ended spontaneous speaking task or oral elicited-imitation outcome measures (Sheen, 2007; 2008, 2010; Spada & Tomita, 2010). Another common limitation is small samples (Egi, 2007; Ellis et al., 2006; Lyster & Izquierdo, 2009; Nassaji, 2009), which impact whether or not an effect reaches significance (Lyster & Saito, 2010; Spada & Tomita, 2010). A further limitation is that a significant portion of existing research is focused on immediate effects and not long-term learning (Mackey, 2006; Ellis, 2006; Lyster & Izquierdo, 2009) which prevents it from capturing nuances of long-term effectiveness (Faqeih & Marsden, 2014). Finally, there is inconsistent and limited operationalization of variables, and a lack of replication of variables. The different CF types are heterogeneous and diverse, and researchers need to acknowledge this in their interpretations of their results.

There is a need for triangulation of research methods, including experimental, introspective, and descriptive approaches. Furthermore, we need to examine different CF types qualitatively to uncover their many variations, and the contextual constraints which give rise to these variations (Ellis & Sheen, 2006).

This study addressed some of the recurrent methodological issues from existing CF research, such as being situated in a classroom and not a laboratory, using a medium-sized length CF intervention, and including an open-ended spontaneous speaking task as an outcome measure (Ellis et al., 2006; Lyster & Saito, 2010; Spada, & Tomita, 2010).

An argument has been made in favour of classroom studies of CF effectiveness, such as this study, at the expense of laboratory studies. Studies done in classrooms systematically differ

from those done in laboratories. For example, in classroom studies prompts are shown to be more effective than recasts. In laboratory studies, however, there appears to be no differences in effectiveness between these CF types (Mackey & Goo, 2007). The reason for this is that “laboratory settings allow feedback to be delivered intensively in consistent ways on specific linguistic targets,” (Ding, 2012, p. 90) whereas an actual classroom environment makes it difficult for teachers to provide consistent feedback on specific target features (Han, 2002; Li, 2010; Sheen, 2011). Most of the studies on the acquisitional value of recasts are laboratory based, and evidence for effectiveness of recasts in classroom settings is much weaker, because laboratory settings may have inflated noticing, and thus, effectiveness of recasts (Ellis & Sheen, 2006; Mackey & Goo, 2007; Trofimovich et al., 2007). In a classroom context it is difficult for students to identify recasts' corrective force and recognize them as feedback on form (Ellis & Sheen, 2006; Nassaji, 2016).

Furthermore, laboratory studies often do not compare different types of feedback, but instead compare one type to no CF, which may skew the results in favour of effectiveness (Lyster & Izquierdo, 2009). Accordingly, instead of extrapolating from laboratory studies, actual classroom research is needed to better understand if and how various CF types can be made more effective in an actual classroom. Finally, despite some limitations of classroom research (see Loewen & Gass, 2021), using intact classrooms may enhance face validity of research and be more ecologically valid than pure experimental research (Gass & Mackey, 2017). Although it is less controlled than the laboratory-based research, “the dynamic classroom environment enriches research and encourages deeper inquiry” (Valeo, 2021, p. 159).

Lyster et al. (2013) suggest that “classroom research is likely to yield more productive outcomes by moving away from dichotomous comparisons of CF strategies that isolate CF from

other relevant instructional variables and towards an examination of combinations of CF types that more closely resemble teachers' practices in classroom settings" (p. 30). They also call for research on individual differences and how they constrain the effectiveness of different CF types. The aim of this study was to follow both these suggestions.

Another limitation that this study is addressing is using an open-ended spontaneous speaking task as an outcome measure. Those studies that do not include tests that adequately measure implicit knowledge, are thus biased in favour of explicit CF (Ellis et al., 2006; Sheen, 2011; Spada & Tomita, 2010). Recasts appear to be most effective on implicit knowledge outcome measures, and research that does not use such measures in their studies is possibly minimizing recasts' (and other implicit feedback types') effectiveness (Sheen, 2008). Sheen (2011) concluded that studies that reported CF's facilitative effects mostly used measures of explicit knowledge, not implicit knowledge. Meta-analyses of CF studies provide conflicting results about the influence of outcome measures on L2 performance. Russell and Spada's (2006) meta-analysis of 15 studies reported that smaller effect sizes were observed for both free response and grammaticality judgment outcome measures. In contrast, Lyster and Saito's (2010) meta-analysis of 15 studies found a large effect size for free constructed-response measures and medium-to-large effect sizes for constrained constructed response measures.

While outcome measures probably do not account for the overall difference observed, since most studies use more than one outcome measure, it is still very important for researchers to use more implicit knowledge outcome measures to see if the advantage of explicit over implicit feedback holds (Nassaji, 2009). In their meta-analysis of 30 studies, Spada and Tomita (2010) found that 50% of the studies examined utilized free outcome measures. Of these outcomes measured, the most frequently used were metalinguistic judgments (33.3%) and free

constructed tasks (33.3%), followed by constrained constructed responses (23.2%) and selected responses (10.1%). However, Spada and Tomita (2010) caution that they “cannot be certain that the oral production tasks used in the primary studies for this meta-analysis are indeed measures of implicit knowledge” (p. 287). They add that not only do more studies need to investigate the contributions of instruction to the different types of L2 knowledge but “perhaps more importantly is the need for validation studies of measures of implicit (and explicit) knowledge” (Spada & Tomita, 2010, p. 287).

Personality

The American Psychological Association (2020) defines personality as “individual differences in characteristic patterns of thinking, feeling and behaving” (para. 1). McCrae and John (1992) conceptualize personality as individual differences in “enduring emotional, interpersonal, experiential, attitudinal, and motivational styles” (p.175). Dörnyei (2006) names personality as one of the five most important domains of individual differences, the others being aptitude, motivation, learning styles and learning strategies. Moreover, even within these other domains (motivation, learning strategies and learning styles) personality plays an important role. For example, motivation is seen as having both trait-like and state-like elements (Dörnyei & Skehan, 2003). Learning styles, like personality traits, seem to be more physiological and stable (as opposed to strategies, which are learned and developed), and styles can range from a moderate preference to a strong need (Dörnyei, 2006). In fact, there is controversy regarding the relationship between learning styles and personality, with the two domains often used interchangeably: the personality-based learning styles are seen as personality dimensions with

cognitive style correlates (Dörnyei & Skehan, 2003). Moreover, there is now evidence that successful language learners choose strategies that suit their personalities (Fazeli, 2011a).

Personality accounts for many differences in human behaviour and constitutes a crucial aspect of student psychology. Personality modulates our emotions, which are extremely important to the process of learning. Personality factors can facilitate or inhibit second language acquisition and it has even been argued that their impact on the development of linguistic abilities may be a two-way process, with each modifying the other (Fazeli, 2012b). Furthermore, the impact of personality on learning seems to increase over the lifespan of an individual, such that personality may have a stronger predictive power with age. Psychometric testing indicates that general intelligence loses its predictive power of learning in adults, and Sharp (2008) suggests that it is possible that, with age, personality takes its place. In other words, the decrease in predictive power of intellectual ability is due to the increasing predictive power of personality. Thus, Sharp (2008) argues that a greater emphasis be given to the role of personality in learning over general intelligence, since “general intelligence may be able to predict what a person can do whereas personality type may predict what a person is likely to do” (p. 18). Therefore, it is very important to examine the role of personality in SLA in order to find answers for language learning problems (Dewaele, 2005; Dörnyei, 2006; Robinson et al., 1994). Despite this, there has been little research on personality's impact on language learning, and the research that does exist has been inconsistent in both methodology and systematic pattern of results, and this has resulted in little progress in understanding the impact of students' dispositions (defined as internal or psychological tendencies specific to the person concerned, synonymous with personality traits) on language learning (Dörnyei & Skehan, 2003).

There are several personality theories that provide a framework of assumptions, concepts, and ideas to explain the construct of personality and support the development of tools used to investigate personality. Since a comprehensive discussion of personality theory is beyond the scope of this dissertation, I will provide an overview of the frameworks underpinning two of the most commonly used tools in the existing literature: the Myers-Briggs Type Indicator (MBTI) and the Five Factor Model (FFM). I will briefly describe the ways in which each of these draws on different conceptualizations of personality and how this informs their development, with a more in-depth discussion of the FFM, the tool used in this study.

MBTI and its Theoretical Underpinnings

In the field of language learning and personality, personality has been widely operationalized using the Myers-Briggs Type Indicator (MBTI). MBTI is a self-report questionnaire designed to measure non-psychopathological personality types based on Myers' interpretation of Jung's psychodynamic type theory (Boyle, 1995; McCrae & John, 1992; Pittinger, 2005). It was created by two American women, Katherine Cook Briggs, and her daughter, Isabel Briggs Myers. The original version was published in 1944, and underwent a name change in 1956. The second and third editions were published in 1985 and 1998. MBTI is a type theory, that emphasizes the 16 unique categories of personality created by the four type pairs (Extroversion-Introversion [EI], Sensing-Intuition [SN], Thinking-Feeling [TF], and Judging-Perceiving [JP]). The EI, SN, and TF dimensions come from Jung's theory of personality, while the JP scale was added by Myers and Briggs based on their interpretation of the theory (Pittinger, 2005). The MBTI measures about 30-35% of the normal personality trait variation, and it emphasizes cognitive styles much more so than other personality instruments (Boyle, 1995).

Jung's theory and the MBTI are typologies that treat personality types as distinctive groups. This perspective suggests that there are fundamentally different populations of people who express different personality characteristics (Boyle, 1995; Pittinger, 2005). This is in contrast to the FFM instruments that treat these constructs as opposing poles along a continuous scale, and are normally distributed (Boyle, 1995; Pittinger, 2005). Scores derived from trait measures of personality reflect the degree or magnitude of the personality construct.

The Five Factor Model

FFM is based on the trait/dispositional theory of personality, which conceptualizes personality as a collection of internal traits that influence behaviour, which differ among individuals in degree, and there is significant longitudinal evidence that these traits are stable over time (Coon et al., 2014; McCrae & John, 1992; Myers & Dewall, 2019). This inventory measures five core personality dimensions of neuroticism, extroversion, openness to experience, agreeableness, and conscientiousness (Costa & McCrae, 1992). Each of the global dimensions is comprised of six subscales of primary traits. Table 1 outlines the traits associated with the global personality dimensions of the FFM.

Table 1*The Big Five Personality Dimensions*

Trait	Characteristics
Extroversion	Sociable, assertive, cheerful, active, upbeat, with positive emotionality, talkative, energetic
Neuroticism	Poor emotional adjustment and stability, pessimistic, anxious, moody, tense, nervous, sad
Conscientiousness	Organized, responsible, persistent, motivated in goal-directed behaviour
Agreeableness	Trusting, compliant, compassionate, caring, gentle, empathetic, cooperative, altruistic, tender-minded, modest, with a pro-social orientation towards others with no antagonism
Openness to experience	Proactively seeking and appreciating experiences for their own sake, tolerant of the unfamiliar, exploring the unfamiliar, original, curious

The trait approach is focused on classifying, analyzing, and interrelating traits to understand personality (Coon et al., 2014). Personality trait is a stable, enduring quality that a person shows in most situations. Traits are labels we use to describe a person's personality. Labels such as these allow us to predict the way that a person is likely to respond. Trait theories are focused on *describing* personality in terms of identifiable, fundamental traits, not explaining them. The trait theory has been the dominant paradigm in European personality psychology and a major element of American psychology at least since the 1930s (McCrae & John, 1992).

The FFM is a trait theory, a perspective that assumes that the core of human nature can be found in individual differences (McCrae & John, 1992). It emerged through efforts of multiple researchers, working using the lexical and the theoretical questionnaire traditions, whose work eventually ended up with the same common dimensions of personality. FFM originated in studies of natural language trait terms when Allport and Odbert condensed 4,500 trait terms

from an English dictionary. Cattell formed them into synonym clusters and then created rating scales based on contrasting groups of adjectives. Tupes and Christal obtained observer ratings on these 35 scales, factored them, and found five recurrent factors in analyses of personality ratings in eight different samples (McCrae & John, 1992). Eysenck identified extroversion (E) and neuroticism (N) as important components of psychological tests, and years of research convinced many psychologists that these two factors were crucial dimensions of personality, which are measured by a wide variety of personality instruments. However, it was also clear that these two dimensions did not encompass the full range of human personality characteristics. Costa and McCrae added the openness to experience (O) dimension, and later created scales to measure agreeableness (A) and conscientiousness (C). Goldberg came up with description of the FFM as the Big Five (McCrae & John, 1992).

According to the lexical hypothesis, all important individual differences are observed by those who speak a language, and through the process of linguistic evolution are eventually encoded as trait terms. By decoding these linguistic trait terms, researchers can uncover the basic dimensions of personality (McCrae & John, 1992). Lexical approach is based on the idea that since psychologists often rely on self-reports and peer ratings to gather their data, “they must speak the language of their informants” (McCrae & John, 1992, p. 184) and the terms that people use to understand themselves and others. Lexical studies were very well suited for the exploration of personality structure; the model they led to could then be confirmed, expanded, or qualified by studies of theoretically based questionnaires (McCrae & John, 1992). However, the lexical approach is not without its limitations. By focusing on traits encoded in ordinary language, it may overlook characteristics that are theoretically intriguing. The only way to resolve this question was by comparing instruments specifically designed to measure the

psychological constructs of personality with measures of the five lexical factors (McCrae & John, 1992), which is where the contribution of theoretically based questionnaires to the development of the FFM was made.

The FFM's atheoretical nature has been criticized by personality psychologists as mindless empiricism, but McCrae and John (1992) argue that while the model is an empirical generalization, this feature can also be a strength, because the model is transtheoretical, and it provides a replicable phenomenon for personality theorists to explain: common dimensions of individual differences and a universality of personality processes. The history of research on personality highlights that a number of different approaches lead to the same common dimensions described by the FFM. It is therefore unlikely that any single theory will be sufficient to account for the model; instead, different, complementary theories can usefully address different aspects of the model at different levels of explanation (McCrae & John, 1992).

There are several instruments based on this model, such as a NEO-PI-R and an International Personality Item Pool (IPIP). These instruments vary in length (number of items), and whether they use descriptive sentences or one-word adjectives. NEO Personality Inventory, and its numerous revisions, in 1978, 1985, 1992, and 2005, are an attempt to assess the five global traits in the five-factor model of personality and their subtraits. Its 240 items were chosen on the basis of their correlation with other measures of the factor being studied (criterion validity), as well as their adherence to standards of plausibility and reasonableness (content validity) (Myers & Dewall, 2019). Goldberg's Big Five-Factor inventory is considered a comparable, shorter alternative to the Costa and McCrae's NEO Personality Inventory (Goldberg, 1992). Research indicates that shortened tests of about 60 items retain the reliability and validity at both global trait and subtrait level; reducing the item size to 30 and 15 allows the

tests to retain their reliability and validity at the global trait level. At the sub-trait level, the 30-item test can be used in large samples whereas the 15-item test should not be used (Soto & John, 2017).

Although FFM was originally developed in the United States, using samples of Americans, and was based on English-language trait terms, extensive validation studies appear to indicate that this model describes personality structure in a wide variety of cultures, suggesting that personality trait structure is universal, at least to some extent (McCrae, 2002). Instruments based on this model have been translated into more than 40 languages or dialects; studies of its factor structure have been conducted in more than 30 cultures (McCrae & Allik, 2002); and results have been corroborated by observer ratings of personality (observer ratings involve asking close, well-acquainted people who know the test-taker very well to evaluate an individual's personality) in an attempt to overcome limitations of self-report measures (see Oh, Wang & Mount, 2011). A more recent study by Schmitt et al. (2007) has found further support for FFM's cross-cultural validity in 28 languages and 56 nations. FFM and its inventories are replicable not only in different languages (Denissen et al., 2020; Schmitt et al., 2007), but also in languages from different families (McCrae et al., 1998), supporting its use as a universal structure of personality in cross-cultural research.

There are important caveats, however. While the FFM of personality shows strong cross-cultural validity, this does not mean that it offers optimal representation in all cultures (Rolland, 2002). Validation studies show that generalizability of the openness to experience dimension is much lower than the other traits (Rolland, 2002). Of particular relevance for the present study, Schmitt et al. (2007) found that East Asians scored much lower in openness to experience than people in other parts of the world. Because of the collectivist nature of Asian cultures, the

authors speculated that in these cultures, openness to experience may take on a different form or function. This may reflect either actual personality differences or culturally conditioned styles of responding to personality questionnaires (Schmitt et al., 2007).

Moreover, findings that these five personality factors are universal does not exclude the possibility of additional personality factors specific to individual cultures. Also, even if all factors emerge, they may not all be equally important in every culture (McCrae, 2002). Overall, despite the limitations above, “the five-factor model of personality has proven its cross-cultural generalizability” (Rolland, 2002, p. 21).

The FFM of personality has become the standard to which other personality constructs are compared in measures of construct validity. Funder (2001) hailed the usage of the FFM of personality as “a common currency for personality psychology” (p. 200) that helps put an end to a problem plaguing the field: the “chaotic plethora of personality constructs that sometimes differ in label while measuring nearly the same thing, and sometimes have the same label while measuring very different things” (p. 200). Today, the FFM as a conceptualization of personality and the test itself is widely used and considered robust (Chamorro-Premuzic et al., 2007; Denissen et al., 2020; Diseth, 2003; Dörnyei, 2006; Funder, 2001; MacIntyre & Charos, 1996; Sharp 2008). As such, while it is not without limitations, FFM is considered the best approximation of personality we currently have at our disposal (Myers & Dewall, 2019).

There are a number of features that separate MBTI from FFM. Both Jung’s theory and supporters of the MBTI treat personality as set at birth and mitigated by experience. Thus, normally functioning adults have well-established, unambiguous, and stable personality preferences (Pittinger, 2005). Meanwhile, FFM approach treats traits as general predispositions whose expression and manifestation are impacted by the mediating power of social, physical and

situational factors (McCrae & John, 1992). Unlike, FFM, the MBTI types are not verified factor analytically, so predictions based on these trait types are less powerful and fairly speculative (Boyle, 1995).

Moreover, Jung's construct of extroversion comes from a slightly different conceptual framework than either Cattellian or Eysenckian interpretations (Boyle, 1995). Instead of measuring how reserved or outgoing someone is, it focuses on whether an individual's general attitude towards the world is actively oriented outward to other people and objects, or whether it is internally oriented.

Empirical Studies Investigating Personality and Language Learning

Most existing research exploring the relationship between personality and language learning consists of correlational studies between 1) personality traits, learning styles, or approaches to learning, and 2) learning and language learning strategies, or an examination of the relationship between personality and achievement.

In this section, findings from both studies that operationalized personality using the FFM, as well as other tools are discussed. Findings using other operationalizations are included for two reasons: the first is to create an overview of the existing research, and second, because even if they are operationalized differently, the findings about various dispositions and traits, although labeled and categorized differently, are still valuable for our understanding of personality's relationship with language learning. The studies reported in this section are organized chronologically as well as by the focus of investigation: first, more comprehensive studies on personality and language learning will be discussed, then, studies focused solely on strategy use, and finally, studies examining personality, approaches to learning and achievement.

Ehrman and Oxford (1990) set out to identify individual difference variables related to language learning, by investigating the relationship between language learning, strategy use, and personality. Strategy use was operationalized using the SILL (Strategy Inventory for Language Learning questionnaire), a self-report questionnaire of strategy use that classifies language learning strategies into categories: memory, cognitive, compensation, metacognitive, affective, and social. Personality was operationalized by students' scores on the MBTI.

Ehrman and Oxford (1990) concluded that psychological type had a strong influence on the way students used strategies and how they progressed in their language learning program. It was noted that there was a language learning advantage for four types of students: *introverts*, *intuitives*, *feelers* and *perceivers*. Ehrman and Oxford (1990) defined *introverts* as those who are energized by solitary activities and oriented primarily towards internal concepts and ideas and personality. *An intuitive* is someone who is aware of relationships, possibilities and meanings, and is drawn to the innovative and theoretical. *Feelers* are those who base their decisions on social or personal values, interpersonal relationships, and their own or others' feelings. *Perceivers* value spontaneity, flexibility, freedom, and autonomy.

Ehrman and Oxford (1990) uncovered some general trends in their findings, including that classroom speaking anxiety combined with high self-confidence was associated with language learning success, and defiant students were slightly ahead of their compliant counterparts in both speaking and reading. *Sensing types*, those who see the world in a practical and factual way, were consistently disadvantaged, while *intuitives* did better on measures of learning success and they were shown to favour deep-processing strategies. The researchers also concluded that *extroverts* needed a variety of social stimulation in and out of the classroom, preferred indirect strategies, and while they most often used social strategies, they did not reject

any of the other strategies. In contrast, *introverts* were characterized by planning, avoidance of surprises and risks. They preferred metacognitive strategies, while rejecting affective and social strategies, and favoured small group work, individual activities and homework. The authors also noted that despite these general tendencies, there was a great deal of variation within the different personality categories, which indicated that the relationship between personality and language learning is complex. However, these results should be interpreted with caution, given the small, homogeneous sample of 20 participants, which may have led to skewed results.

In later work, as a follow-up to their 1990 study, Ehrman and Oxford (1995) conducted a questionnaire study with a sample of 855 participants to examine individual difference variables that may correlate with language learning success. The findings of that study pointed to the importance of affective, motivational, and personality (measured by MBTI) individual difference variables on learning. Study results revealed personality to be the third level of individual difference variables that affected language learning, behind cognitive variables (the primary level) and motivation, self-confidence, and affective arousal (the secondary level). Data analysis showed that there were low positive correlations (.20s and .30s) between personality variables and language learning, and that personality had a stronger impact on learning than gender. In terms of what traits contributed to success in learning, except for an unsurprising slight advantage for visual (in *introverts*) over auditory (in *extroverts*) strategies for reading, the study found that *extroversion-introversion* appeared to have almost no relationship to learning.

In this study, Ehrman and Oxford (1995) concluded that language learning success had the strongest correlation with the following personality characteristics: a conceptual and random approach (intuition), defiance in thinking, and flexibility (thin ego boundaries, especially external ones). It appears that those students who can tolerate moderate levels of ambiguity are

more likely to persist in language learning than those who cannot, because they are more likely to take risks, and risks are essential for language learning progress. Students who do not require a very orderly world and who prefer not to draw sharp lines between ideas or images tend to welcome new information and new ways of looking at the world. They can, therefore, tolerate the necessary temporary lack of clarity when learning semantic and grammatical categories (Ehrman & Oxford, 1995). Those who are at a disadvantage for learning success showed traits of cognitive inflexibility, certain kinds of anxiety, thick ego boundaries, and compliance.

An important caveat in interpreting these findings is that some of the correlations may have been attenuated because of a sampling limitation: participants in this study were a self-selected group, with relatively low variation, so some personality types may have been over or under-represented. Moreover, less variation in a sample normally results in a reduction of correlation strength (Dörnyei, 2006; Gass & Mackey, 2017). Also, personality types may have interfered with each other. Finally, as with other correlational studies, no definitive claims can be made because while correlations indicate a relationship, the directionality of these relationships remains under question.

Robinson et al. (1994) conducted another correlational study in which they presented strong evidence that personality differences play an important role in second language acquisition, as measured by both oral and written tests. Individuals with high neuroticism and high extroversion scores did better on the oral test than on the written test, when compared with individuals with high neuroticism and low extroversion scores, who did better on the written test than on the oral test. The authors concluded that the impact of personality on second language learning was evident since “findings also indicate that any attempt to understand language

learning in terms of narrow situation-specific variables is just not viable” (Robinson et al., 1994, p. 155). Personality, therefore, must also play a role.

Carrell et al. (1996) investigated the impact of MBTI personality types on second language learning in an EFL context. They found that language learning success partially depended on personality. One significant finding was that performance on a grammar test positively correlated with *perceiving* scales, and negatively correlated with *judging* scales. Perceiving students tended to favour less structured learning situations, were more curious, open-minded, and adaptable to changing situations. Judging students worked best in structured, formalized settings, and had a drive towards closure and getting things settled (Carrell et al., 1996). They also found that the greater a student's inclination for introversion, the better they performed on vocabulary tests, and the greater a student's inclination for extroversion, the worse their vocabulary test performance was. This finding again underscored the advantage of introversion in academic activities, as evidenced by the fact that with increasing educational level, there are more and more introverts, even though extroverts and introverts are evenly distributed in the general population (Carrell et al., 1996). Further significance of this finding was the implication that introversion is an advantage for performance on some language tasks, such as vocabulary tests. Overall, the authors did not find many direct, simple relationships between learning styles and language performance measures. This may be due to an interaction effect between the variables, or the fact that the sample of participants varied very little in personality types: less variation leads to low correlations.

MacIntyre and Charos (1996) used path analysis (a technique that attempts to estimate the magnitude and significance of hypothesized causal relationships between variables) to predict frequency of second language use in daily interactions by combining research findings on

willingness to communicate, language learning, and global personality traits (using Goldberg's inventory based on the FFM of personality). Findings showed social, personality and affective influences on second language communication. MacIntyre and Charos found a significant connection between emotional stability (trait anxiety) and integrative motivation, but no path was found from agreeableness to integrativeness, which they had predicted. They also found that conscientious and well-organized students showed a more positive attitude towards learning and that extroversion had a negative impact on anxiety. They posited that it was the social and communicative demands of second language interaction, and not a general predisposition to nervousness, that drove language anxiety. They concluded that there was an indirect yet evident contribution of global personality traits to frequency of second language communication. Global personality traits also had an indirect impact on language learning success, an effect that was mediated by language-related attitudes, willingness to communicate, language anxiety, perceptions of competence, and motivation. The authors suggested that existing research on the impact of global personality traits on willingness to communicate and language learning showed mixed, inconsistent results because the different factors (examined in their study) are often isolated from each other. Thus, synthesizing them together, using path analysis to investigate the influence of personality on frequency of second language communication, as these researchers have done, shows the potentially powerful models that can emerge from converging findings and knowledge from various domains. The next step would be to investigate this question empirically, and within an authentic classroom setting.

Wakamoto (2000) investigated the learning strategies used by introverted and extroverted language-learners to identify the most typical strategies used by each group. He operationalized introversion and extroversion in terms of scores on MBTI, and learning strategies were

operationalized by the SILL. He found that while extroversion correlated with functional and social-affective strategies, introversion did not show any significant correlations, and thus, no preferred language learning strategies.

Sharp (2008) conducted another correlational study to investigate the relationship between personality differences (as measured by MBTI), learning strategy use (as measured by the SILL), and language proficiency. He found introversion negatively correlated with the SILL social strategies, and positively correlated with meta-cognitive strategy use. There was no statistically significant relationship between personality and proficiency scores. Thus, no direct relationship between personality and learning strategies was found.

Fazeli (2011a, 2011b, 2012a, 2012b) published a series of articles on the correlations and relationships between four of the FFM global traits (neuroticism, conscientiousness, extroversion and agreeableness) and the use of language learning strategies. He surveyed intact classes of female university students of intermediate language proficiency and found significant correlation between successful language learning and conscientiousness. Fazeli (2011b) found a significant positive relationship between conscientiousness and each of the SILL strategies, but these correlations were low for most categories of strategies, except for memory and metacognitive strategies, for which these correlations were medium in strength. Fazeli (2011a) found that more neurotic students used memory, cognitive, metacognitive, and social strategies less often. No reduction in affective and compensation strategies was found. Fazeli (2012b) found that agreeableness and compensation strategy use was positively correlated, and those who scored high in agreeableness engaged in more guessing, paraphrasing and reading without looking up every word. Fazeli (2012a) found that more extroverted students used more memory,

metacognitive and social strategies. No significant relationship between extroversion and affective and cognitive strategies was found.

In his study on the impact of personality and approaches to learning on achievement, Diseth (2003) found that personality (as measured by the FFM) had an indirect effect on achievement: Neuroticism and openness were positively related to achievement, whereas agreeableness related negatively to achievement. Personality also accounted for 10-15% of variance in approaches to learning. Three types of approaches were examined. A deep approach involves promotion of understanding instead of rote, shallow learning (Diseth, 2003). The strategic approach is motivated by achievement of the best results possible through management of time and organization of the learning environment. A surface approach involves reproduction of the material by means of a rote learning strategy, motivated by fear of failure (Diseth, 2003). Each approach to learning was not predicted by a single trait, but by a mixture of personality factors. Diseth found a significant positive relationship between the deep approach and openness, strategic approach and conscientiousness, and surface approach and neuroticism.

Diseth (2003) found that mediators may also explain the results. He found limited support that approaches to learning may be mediators between personality and achievement and suggested that the deep approach may be a mediator between openness and achievement. Motivation may be another mediating factor. Furthermore, Diseth cautioned that the relationship between approaches to learning and academic success can change based on context and situational demands, maturity, as well as methods of assessment.

Another correlational study set out to examine how students' personality traits and learning approaches could explain their preferences for teaching methods (Chamorro-Premuzic et al., 2007). A sample of 221 British medical students completed the NEO-FFI personality

inventory, an abbreviated version of Biggs' approaches to learning scale, and a questionnaire of teaching method preferences. Correlations between personality traits and approaches to learning were found, in particular, that the deep approach to learning was associated with emotional stability (low neuroticism), openness to experience, conscientiousness and agreeableness, and the latter two were also found to be associated with achieving learning approaches. In contrast, a surface learning approach was associated with high neuroticism, low agreeableness, and low conscientiousness, whereas extroversion's only significant relationship was to deep strategy and achieving motive. The authors suggested that it should not be unexpected that those with high openness to experience used deep learning approaches, and avoided surface ones, because those high in openness to experience are characterized by higher intellectual curiosity, creativity and imagination, so it is logical that they also approach learning deeply and not superficially.

In another large correlational study, the authors investigated how intelligence and personality related to academic achievement (Liadra et al., 2007). This study assessed a large sample of 3618 Estonian school children, representing a broad range of ages, from 7 to 19. The researchers used the Estonian Big Five Questionnaire for Children in Grades 2 to 4 and the NEO Five Factor Inventory in Grades 6 to 12 to assess personality while intelligence, was measured by the Raven's Standard Progressive Matrices (a non-verbal test that measures general intelligence and abstract reasoning). Researchers found that openness to experience, agreeableness, and conscientiousness correlated positively, and neuroticism correlated negatively, with GPA in almost every grade (Liadra et al., 2007). Intelligence was the strongest predictor of GPA, followed by agreeableness in Grades 2 to 4 and conscientiousness in Grades 6 to 12. Liadra et al. (2007) also found that while openness to experience and conscientiousness traits exhibited significant positive correlations, and neuroticism had negative correlations, with

GPA throughout all grades, correlations with agreeableness got weaker from Grade 6 onward. This may explain the mixed findings on the impact of agreeableness on achievement and learning because age may be a mediating variable. As both Liadra et al. (2007) and Chamorro-Premuzic et al. (2007) studies illustrate, the correlational approach suggests possible relationships, but cannot rule out the impact of possible mediating variables.

Summary of Empirical Findings for the FFM Traits

In this section, the most relevant findings for the current study are summarized, such as those findings that are related to five global personality traits of the FFM: extroversion, neuroticism, agreeableness, conscientiousness and openness to experience.

Extroversion is the most studied global trait in SLA due to its clear link to language learning. However, the research findings on extroversion are mixed and complex (Dewaele, 2005; Dörnyei, 2006; Ehrman & Oxford, 1990), partly due to the fact that the impact of extroversion on oral and written criteria are not adequately distinguished: it appears that extroversion plays a positive role for oral language learning, but not written language learning (Dewaele, 2005; Dörnyei, 2006; Robinson et al., 1994). Thus, while introversion appears to be a more desirable trait for high academic achievement and learning in general, as evidenced by the fact that extroversion correlates negatively with success in higher education and with performance on nearly all subject knowledge scales (Ackerman, 1999; Diseth, 2003; Liadra et al., 2007), as well as language learning (Carrell et al., 1996; Dewaele, 2005), extroversion is also widely considered to play a positive role in language learning (Ehrman & Oxford, 1990; Fazeli, 2012a). One possible explanation for this relationship between successful language learning and extroversion, is that extroverted students enjoy interacting with others, do it eagerly, and

therefore they learn an L2 more successfully; meanwhile, introversion is associated with an unwillingness to communicate (MacIntyre & Charos, 1996).

Extroverts also tend to be more fluent than introverts in their first and additional languages (Dörnyei, 2006), particularly during complex verbal tasks in interpersonally stressful situations. This may be due to extroverts' superior short term memory capacity, which allows them to maintain automatic speech production in stressful situations, and gives them the ability to engage in multitasking and nonverbal decoding (Dewaele, 2005). Moreover, extroverts also use more colloquial words while introverts tend to avoid them (Dewaele, 2004). Also, while extroversion has been found to serve as a good predictor of fluency in oral L2 production, no differences in accuracy have been found between extroversion and introversion (Dewaele, 2005). In contrast to the research supporting the advantages of extroversion in language learning, other studies show a positive relationship between introversion and L2 learning (as synthesized in Fazeli, 2012a). This positive relationship between introversion and L2 learning (Carrell et al., 1996), and the finding that extroverts and introverts use different learning strategies (Ehrman & Oxford, 1990), both seem to suggest that depending on the context and method of instruction (e.g., formal vs. communicative), extroversion and introversion are both desirable for language learning.

In their research synthesis of existing literature on the impact of extroversion and introversion on language learning, Cheraghi Shehni and Khezarb (2020) suggested that introverted student need time to process instruction because they find it difficult when the instructor speaks too quickly and there is not enough time to process the incoming information. Moreover, whereas an extrovert prefers variety in the material presented in a language learning classroom, an introvert prefers a more in-depth look at fewer topics. If these conclusions reflect a

fundamental difference in introvert/extrovert language learning preferences, then this may have implications on language instruction techniques such as provision of corrective feedback.

There are also mixed findings on the impact of neuroticism on learning. Some studies indicate that neuroticism negatively correlates with general language learning aptitude, because stress negatively affects learning (Robinson et al., 1994), and reduces strategy use (Fazeli, 2011a). Furthermore, neuroticism correlated negatively with grade point average (Liadra et al., 2007), and has been found to associate with surface, superficial learning (Chamorro-Premuzic et al., 2007). However, the relationship between neuroticism and achievement is inconclusive, and it has been suggested that neuroticism may have both a positive and a negative impact on academic achievement (Diseth, 2003), citing evidence that stable extroverts have the highest failure rate on examinations, whereas neurotic introverts have the lowest failure rate.

Findings on the trait of agreeableness are quite limited and thus, even more inconclusive. Agreeableness has been shown to correlate positively with an academic achievement measure like grade point average (Liadra et al., 2007), although this study found that this relationship weakened after Grade 6. Agreeableness was also found to be positively associated with a deep learning approach (Chamorro-Premuzic et al., 2007). The deep learning approach is described as a desire “to understand the material,” (Diseth, 2003, p. 145) motivated by interest in ideas, “intrinsic motivation, engagement with the subject matter, and the desire to know everything about a given topic” and involves a tendency to include relating of ideas and use of evidence in furthering understanding (Chamorro-Premuzic et al., 2007, p. 242). However, there is also research that contradicts the above findings, by documenting a negative correlation between agreeableness and achievement (as measured by examination scores) and finding no significant relationship between agreeableness and the deep learning approach (Diseth, 2003).

The research on the other global personality traits, such as openness to experience and conscientiousness, is also limited as these traits have not been studied as widely as extroversion and neuroticism, so even tentative claims of general tendencies cannot yet be made.

Conscientiousness has been positively correlated with achievement (Costa & McCrae, 1992), grade point average (Liadra et al., 2007) and successful language learning (Fazeli, 2011b).

Moreover, a significant positive relationship was found between conscientiousness and each of the SILL language learning strategy categories (memory, cognitive, compensation, metacognitive, affective, and social), and particularly so for memory and metacognitive strategies (Fazeli, 2011b).

Meanwhile, openness to experience has been correlated with grade point average (Liadra et al., 2007), a larger vocabulary, and wider learning strategies (Ackerman, 1999). Sharp (2008) posited that openness to experience is related to curiosity, imagination, creativity, intuition and achievement motivation, which can drive people “to invest in the development of skills and knowledge... in improved reasoning, problem solving skills, skills in comprehending complex ideas etc.” (p. 19). Support for this idea has been evidenced by more open students tending to use deep learning motives and strategies (Chamorro-Premuzic et al., 2007).

Personality and Language Learning Research Limitations

As illustrated in this review, the existing findings are a patchwork of somewhat inconsistent, or inconclusive findings (Dewaele, 2005; Dörnyei, 2006; Dörnyei & Skehan, 2003; Sharp, 2008). Research on personality and second language learning is minimal compared to other individual difference variables, and it is plagued by problems related to choice of tools to measure personality and study design. One of the reasons for findings’ inconsistency is due to the field’s various methodological conceptualizations which limit cross-study comparison and

interpretation. Sheen (2008) argues that “the mixed results obtained by these studies reflect differences in the design of the studies” (p. 836), and this problem is exacerbated by the relatively small number of studies, so the impact of these limitations is felt more strongly. Thus, research on the impact of personality on language learning can benefit from a careful examination of methodological issues currently plaguing the field, and such an endeavour may help understand some of the inconclusive results.

The outcome of any research depends on the population studied, yet the current research base on personality and language learning relies heavily on small, self-selected, and non-representative samples (Carrell et al., 1996; Diseth, 2003; Fazeli, 2011a; 2011b; 2012a, 2012b; MacIntyre & Charos, 1996), such as using surveys of female university students of middle-class socioeconomic background and intermediate proficiency. This limits the ability of researchers to generalize their findings beyond this very specific population and formulate any significant conclusions. Moreover, the convenience samples that most existing studies rely on also have restricted variance, which reduces the ability of correlations to reach significance (Dörnyei, 2006). Sharp (2008) calls for the need to examine the effect of personality on language learning with larger samples, and Dewaele (2005) calls for the use of more varied samples, to better represent other populations of ethnic or linguistic background, age, gender, and ability.

Another characteristic study design limitation of the existing studies on personality in SLA, is that the bulk of this type of research is correlational. The biggest flaw of correlational research is that it is reductionist, which means that complex concepts are reduced to a number, or a set of numbers. Thus, the value of a correlational study depends heavily on how the theoretical concepts are defined and measured (Johnson, 1994). Moreover, correlational research does not provide any rich insight into individual students. This does not negate the usefulness of

correlational research, but there is a need to supplement the existing methodological approaches with more qualitative methods, such as classroom observations, and semi-structured interviews.

In addition to knowledge gaps and study design limitations, there is also a recurrent reliance on limited and deficient measurement of key variables. Problems arise due to deficient, outdated and limited measures of personality. Most existing language learning and personality studies use the Myers-Briggs Type Indicator to measure personality, which has questionable validity (Boyle, 1995; Pittenger, 2005; Thyer & Pignotti, 2015), and most psychologists consider the Five Factor Model of personality to be a much better personality measure (Diseth, 2003; Funder, 2001; MacIntyre & Charos, 1996; Sharp, 2008). This limitation of the existing research, together with a lack of consensus among researchers on which personality dimensions they should investigate, makes findings difficult to interpret. Compounding the validity of the measurement problems, Diseth (2003), Fazeli (2011a, 2011b, 2012a, 2012b) and Wakamoto (2000) studies used translations of personality tests, and not the validated originals. Fazeli (2011a) warns of the dangers of potential cross-cultural problems that may arise when using a Western instrument such as MBTI, or even FFM. Sharp (2008) also advocates for more comprehensive measures of personality in order to be able to draw conclusions, and suggests using more than one test when assessing personality. There is a growing consensus among scholars that it may not be isolated traits, but rather a combination of traits that have a more substantial impact on learning outcomes, and thus, they would have a stronger predictive power (Dörnyei, 2006). Finally, Dörnyei (2006) points out that many research and teaching tasks themselves impose a personality bias (that is, certain tasks are more suitable to different personalities, someone who is more extroverted or conscientious, etc.) so researchers studying personality have to be particularly careful when choosing their instruments.

In addition, exclusive reliance on self-report is also problematic. People vary in self-awareness and in their ability to introspect. Thus, their responses to a personality test or questionnaire reflect only what they are aware of, and what they are willing to admit to. Dishonest or socially desirable responses to questions about their behaviour or personality may compromise the validity of personality test results. In order to overcome the limitation of self-report, observations and ratings from others on participants' personalities and behaviours would need to be triangulated with self-report measures (Oh et al., 2011), and participants would need to be guaranteed complete anonymity to reduce socially desirable responses.

Furthermore, research findings are difficult to interpret and generalize because researchers are using inconsistent and limited criteria to measure the outcome variable of academic success. Dörnyei (2006) argues for a need to use more elaborate language proficiency assessments rather than just global proficiency measures, in order to distinguish the impact of various traits on different competences (e.g., strategic, pragmatic, organizational) to find stronger and more useful relationships.

Personality and CF

There is currently a dearth of research on the topic of personality and CF, with few studies exploring this topic in depth or even touching upon it tangentially.

In their study of 207 German English students of various ages and proficiency levels on the factors that optimized the effectiveness of oral CF, Havranek and Cesnik (2001) argued, “good language proficiency and verbal intelligence ... and high motivation is the best prerequisite for intake of corrective feedback” (p. 119). Havranek and Cesnik (2001) also found that when students were irritated by CF, or considered it unimportant, they learned significantly less from corrections than those students who had a positive or neutral attitude towards CF.

However, not having very positive feelings about CF may not always be detrimental to its effectiveness. In fact, Havranek and Cesnik (2001) also discovered that a moderately positive attitude towards CF resulted in better learning than a very positive or a very negative attitude. While being irritated by correction, on its own, was not conducive to learning, this changed in combination with other characteristics: Combining good linguistic competence and irritation at correction was particularly helpful. Thus, it appears that in order for CF to be beneficial and effective, student attitude towards it does not necessarily need to be positive. In fact, based on their findings, Havranek and Cesnik (2001) characterized ideal learners as students who were “slightly irritated but not really embarrassed by correction” (p. 119). These characteristics allowed them to also benefit most from the corrections of their peers.

Abdi and Mohammadi Darabad (2012) investigated if the personality trait of introversion/extroversion, as measured by Eysenck Personality Questionnaire, mediated CF effectiveness for beginner EFL young adult learners. Their study found evidence of prompts’ superiority to recasts regardless of learner’s personality. No significant differences were seen in superiority of extroverts over introverts in both recast and prompt groups.

Sun (2017) found that extroverted and introverted Chinese language students preferred different types of CF, with introverted students showing preference for direct correction and metalinguistic feedback. However, this relationship may have also been impacted by language proficiency.

Ha et al. (2021) found that Vietnamese EFL female students’ self-rated extroversion had an impact on their beliefs about input-providing CF: Extroversion-identifying females were more positive about input-providing CF (operationalized as full recasts, isolated recasts, and explicit correction), than introverted females.

There was a pretest/posttest study conducted to investigate the influence of explicit and implicit written CF on extrovert and introvert language learners (Banaruee et al., 2017). In this study, the participants were 60 Iranian L2 students of intermediate language proficiency taking a writing course. There were two groups, one of implicit and one of explicit feedback, and then these groups were each divided into introverts and extroverts using the Myers-Briggs personality questionnaire. The results showed that in this writing course, explicit corrective feedback was more effective for extroverts, and indirect implicit feedback produced better results for introverts.

While these studies were an important step in exploration of this important topic, to my knowledge, there are no other studies that have examined the influence of personality on the effectiveness of oral CF, and this topic remains relatively unexplored. Thus, one significant limitation of the existing research on individual differences in SLA is the gap in our knowledge about the influence of personality on the effectiveness of CF. Another gap in our knowledge is that most existing research is limited to investigations of how personality traits correlated with learning strategies (Sharp, 2008). These studies attempted to correlate MBTI or NEO-FFI, language learning strategies (measured by SILL) and language proficiency, and while some significant correlations have been found, these findings cannot be considered conclusive, and they are difficult to interpret and apply. For instance, Ehrman and Oxford (1990) found that psychological type was a strong predictor of students' use of strategies, but there is a great deal of variation within the different personality categories. Wakamoto (2000), Sharp (2008) and Fazeli (2011a, 2011b, 2012a, 2012b) found similar connections but also a lot of overlap between various traits and preference of strategy use. Beyond raising awareness and encouraging students to explore strategies that they are not predisposed to, there is limited application for these

findings as of yet. Moreover, there is conceptual ambiguity about learning strategies, and they often lack a precise definition (Dörnyei & Skehan, 2003), making them difficult to interpret.

Conclusions

While there are challenges in studying the impact of personality on language learning and language instruction efficacy, it is nonetheless important that this research continues, as it is a pedagogically and theoretically valuable endeavour. It appears that a great deal of the variation in language learning outcomes is attributable, either directly or indirectly, to various learner characteristics (Dörnyei, 2006). The relationship between personality and efficacy of CF is one avenue of research that can have a valuable contribution to our knowledge on this topic because researchers have increasingly become aware of various factors that have an impact on the effect and effectiveness of CF, suggesting that not all students benefit equally from CF. Based on the existing research findings, it is clear that personality shapes students' responses to learning situations and how they react to successes and challenges. As this literature review illustrates, there is an evident impact of personality on second language acquisition (Robinson et al., 1994), and on the frequency of second language communication (MacIntyre & Charos, 1996), and it may also account for 10-15% of variance in approaches to learning (Diseth, 2003). Personality also has a major, likely unconscious, effect on students' use of learning strategies (Ehrman & Oxford, 1990; 1995; Fazeli, 2011a, 2011b, 2012a, 2012b).

However, how different personality categories impact language learning is much more inconclusive. There has been a great deal of variation in findings within the different personality categories, which may indicate that the relationship between personality and language learning is complex (Ehrman & Oxford, 1990), so this may explain why authors such as Carrell et al. (1996), as discussed in the literature review, did not find many direct, simple relationships

between learning styles and language performance measures. Furthermore, MacIntyre and Charos (1996) advocated that the impact of personality needed empirical investigation in a classroom setting.

In this study, I addressed some of the limitations in the existing literature. In order to quantify personality traits, the Five-Factor Model of personality (FFM), a contemporary and robust personality measure, was used. This model is widely supported and accepted by psychologists and researchers (Chamorro-Premuzic et al., 2007; Diseth, 2003; Dörnyei, 2006; MacIntyre & Charos, 1996; Sharp 2008). While some may challenge personality measures as restricted, for privileging the dispositional attributions of human behaviour at the expense of the situational explanations, this model is not restricted in this regard. The analysis of the inventory's findings allows for the conceptualization of personality that assumes that individual people possess certain general predispositions which are associated with the five global personality traits, and then the social and the physical environmental influences determine in which forms, and as which traits, these dispositions will be expressed (McCrae & John, 1992). Using this conceptualization allows for the acknowledgment of the mediating role that social, physical, and situational factors play on the manifestation of personality traits. MacIntyre and Charos (1996) highlight the importance of both dispositional and situational influences on expression of various personality traits in the context of L2 communication. They acknowledge that language learning ability is not a characteristic of a person, but rather a complex reflection of the whole learning situation, and the contribution of both personality and social context is pivotal (MacIntyre & Charos, 1996).

Second, in this study I diverged from the fact that a significant portion of the existing research is limited to investigations of how personality traits correlated with learning strategies

(Sharp, 2008). Instead, I examined if and how global personality traits may influence actual language acquisition of a target feature in a classroom setting.

Finally, this study used a mixed-methods approach to understand the relationship between personality traits on the effectiveness of CF, by combining correlational and quantitative findings with more qualitative methodology, such as classroom observations, semi-structured interviews, and stimulated recall, in order to make conclusions more meaningful and triangulate data. A mixed-methods approach allowed me to combine breadth of knowledge with depth of knowledge “to obtain a more complete, holistic picture of the phenomenon under study” (Johnson, 1994, p. 207).

In addition to addressing the CF literature limitations outlined in another section of this chapter, this study also addressed some limitations from individual differences in SLA literature, by utilizing a contemporary and robust personality measure, conducting this research in an actual classroom, and using a mixed-methods research approach, combining correlational and quantitative findings with more qualitative methodology. In order to ascertain how different personalities respond to CF, I chose to investigate three types of CF, both on the implicit and the explicit ends and a midpoint of the CF continuum, to gain a better understanding of students’ reactions to CF. They were chosen because they are the top three most popular types of CF and because their particular properties make them representative of a range of various CF types.

This study was guided by the following research questions exploring the relationship between personality traits and the impact of CF:

Q1: *What is the relationship between student personality traits and the effectiveness of oral corrective feedback in the classroom?*

Q2: *How do students with different personality traits respond to and experience oral corrective feedback in the classroom?*

Chapter 3: Methodology

Research Design

This study used a mixed-methods approach to explore the relationship between student personality and the effectiveness of corrective feedback (CF), and how personality traits influence students' experience of CF provided as part of L2 instruction in an intact English for Academic Purposes (EAP) classroom. A number of tools were used for data collection: a personality test, biographical information survey, class observations, spontaneous oral production activities, interviews and stimulated recall. These are explained in detail later in the chapter.

Personality was investigated quantitatively through a standardized personality test; the use of and effectiveness of CF was measured quantitatively through a pretest and a posttest measure of the accurate use of the target grammatical feature, as captured in the audio/video recordings of classroom activities. In order to investigate the relationship between personality traits and the impact of CF on learning in greater depth, qualitative data were collected through semi-structured interviews and stimulated recall (SR) activities.

Study Overview

Nine participants in an EAP classroom completed a personality test (Appendix A) and a biographical survey (Appendix B), which produced scores on each of the five dimensions of personality examined in this study. During the next four weeks of the in-class portion of the study, the participants took part in a total of 10 teacher-led speaking activities where they were asked to respond to a question posed to the entire class one by one. The first two of these speaking activities, completed in the first week, served as pretests. During the next six speaking activities, the teacher provided three different types of CF on the use of the past tense by the participants. The final two speaking activities, completed in week four, served as the posttests.

Subsequently, outside of class, the researcher conducted individual semi-structured interviews and SR sessions with participating students, approximately one-hour in length, to shed further light on the quantitative results.

Context

The study took place in a diverse metropolitan English-speaking city in Canada, in an EAP class offered as part of a non-credit university preparation program. Students who completed the program were considered able to meet the language requirements for university entry (e.g., a score of iBT 83-100, or IELTS 6.5-7.5, depending on the program), and were exempted from taking an IELTS or TOEFL exam for admission.

The program had nine levels, and students needed to achieve 65% or higher in each skill to be able to move to the next level. This program used a communicative and integrative skills approach, and the curriculum provided weekly objectives and suggested activities for each week, but teachers had flexibility to use their own materials and activities as long as they met the objectives for that level. The textbooks for reading and listening skills were provided.

One class in the program was chosen because the teacher responded to a call for participants email sent by the administrator on behalf of the researcher. This class was at the eighth level, an advanced level class; it was eight weeks in duration, with 20 hours of instruction per week. Classroom observations revealed that typical tasks in this class were listening and reading comprehension exercises, grammar instruction, group work and individual work, presentations, class discussions, research skills development, essay writing, and seminars. Students also completed assignments and tests to evaluate their performance.

During an introductory pre-study discussion with the teacher, she revealed that the program encouraged teachers to provide written CF and left oral CF to the teachers' discretion.

At higher proficiency levels there was more focus on fluency and thus, less oral CF, and accordingly, grammar was not taught as overtly as at lower levels, because it was assumed that students had already learned this grammar at the lower levels. Moreover, at higher levels in this program revision and editing skills were also taught, promoting self- and peer correction.

The teacher was an experienced instructor with ten years of teaching experience and two Master degrees, including a Master of Applied Linguistics. Her CF approach was that she provided extensive written corrective feedback with a focus on grammar, and regarding oral CF, she provided pronunciation feedback when giving students feedback on their presentations, or other speaking assignments such as group discussions, student-led discussions, and debates. Informal observation before the start of the first pretest showed that the teacher did not provide oral CF on grammar. During the introductory pre-study discussion, she indicated that she was very familiar with the different types of feedback to be used in the study, and was highly knowledgeable in grammar, and therefore, she regularly provided written grammar CF. However, she explained that she was hesitant to provide oral CF because 1) she did not want to upset, “intimidate” and “frustrate” her students, potentially causing them to stop coming to her class and 2) in her TESOL certification program she was encouraged to focus on fluency in oral speech and not accuracy.

Participants

The participants were all adult international students from China and Saudi Arabia, with linguistic backgrounds in Mandarin (some also spoke Cantonese) and Arabic. A total of nine students (six females and three males) participated in the different phases of the study; all nine completed the personality test; eight completed both the pretests and posttests for the quantitative phase of the study. One participant did not complete the posttest because she did not attend class

on those days, and as such, for this participant, the study drew only on qualitative data. Another participant did not want to participate in the interview and stimulated recall, with no explanation given. Only the data for the quantitative portion of the study was included for this student.

Table 2 identifies the student participants by their chosen pseudonyms and summarizes their biographical and demographic information. The participating students ranged in age: six were in their late teens (18-20), two were in the early twenties (21-25), and one student was in her early forties (41-45). They had between seven to fifteen years of English instruction and had started learning English between the ages of five and twelve years old. They all arrived in Canada for the purpose of studying, ranging from eleven to two months before data collection.

Table 2

Student Participants' Biographical and Demographic Information

Name	Gender	Age range	Years of instructed English	Age when began learning English	Months since arrival in Canada
Hope	F	21-25	15	6	10
John	M	18-20	10	8	9
Lance	M	18-20	10	5	4
Lucy	F	18-20	7	6	9
Nora	F	18-20	10+	7	11
Rana	F	18-20	7	12	9
Rose	F	41-45	10	11	7
Sarah	F	21-25	10+	10	2
Tim	M	18-20	8	10	4

Data Collection and Procedure

Instruments

Goldberg's Big Five-Factor Inventory. To measure personality, an existing and validated instrument, Goldberg's Big Five-Factor inventory, was used. This inventory (see Appendix A) measures the five major personality dimensions: 1) neuroticism, 2) extroversion, 3) openness to experience, 4) agreeableness, and 5) conscientiousness (Costa & McCrae, 1992) and produces results as scores for each trait and then a percentile based on established population norms. The participants were presented with a total of 50 items (such as "*I get stressed out easily*" for neuroticism, "*I am always prepared*" for conscientiousness, and "*I take time out for others*" for agreeableness, "*I have a vivid imagination*" for openness to experience, and "*I am the life of a party*" for extroversion) and were asked to indicate the extent to which they agreed or disagreed with each statement on a five-point Likert scale (1- *strongly disagree*, 5 - *strongly agree*).

Biographical Information Survey. A biographical information survey, administered on the first day of data collection, was created to gather profile information about the participants. This included demographic information about participants' age, gender, country of birth and first language, as well as their English-learning history, any other language learning they were completing in addition to the class that was observed, and the date and reason for their arrival in Canada (see Appendix B). This information was used to construct an in-depth picture of the participants, build individual case profiles, and inform further analysis of individual data.

Video and Audio Data. A total of 10 hours and 50 minutes of in-class instruction over a four-week period (10 different classes) was captured using a video recorder that was able to record whole-class activity. The video recorder was in the classroom whenever the researcher

was present, even when it was not recording, to allow participants to become habituated to its presence (to reduce the Hawthorne and halo effects), and it was placed inconspicuously on one of the bookshelves in the corner of the class, in an attempt to reduce distraction to the participants. This was important because it was vital for the accuracy and authenticity of this study that participants did not adjust their behaviour and language production because they knew they were being observed, and that they did not behave in a manner that would create the most positive impression of them. Instead, it was imperative that they behaved as normally and authentically in the classroom as possible.

There is evidence to suggest that habituation to the research procedure and the recording devices had occurred. With audio recorders, this was revealed because students would flick them around without much care and forget to move them. With the video recorder, when the teacher asked the class on the last day of in-class data collection *“Was participating in this research study a positive or a negative experience for you?”* One student asked, “Which research?” And Rose simultaneously asked, “what kind of research?” while the teacher and other students laughed. As the class discussed research participation and the researcher mentioned the camera, the teacher said, “I completely forgot about that camera!”

When non-participating students were asked by the teacher about their experiences of having research conducted in their classroom, one said it was a positive experience because it allowed for interaction with an additional teacher, while two others said that “I didn’t feel any difference” and “Everything is still normal.” However, one non-participating student, the one that sat right in front of the researcher, and the camera was right above his head (although it did not record him or what he was doing), revealed that he felt the presence of the camera. He said that he sometimes realized that “there was a camera right there” and that he “couldn’t stop

looking at the camera and try to avoid it.” He said it was “a little bit weird” because he was using his phone in class or biting his fingernails and he worried that all of this would be on camera.

To collect audio data two audio recorders were used; one was placed near the teacher and the other was placed on the table in front of the participants so to clearly record their speech. Both were sensitive enough to pick up whole-class activity and during transcription I was able to triangulate data from the three sources (video, and two sources of audio). Furthermore, audio and video data were used to verify teacher adherence to the experimental procedure and identify specific instances of CF provided to the participants.

Spontaneous Oral Production Tasks. The spontaneous oral production tasks elicited both open-ended and unconstrained responses, intended to tap into the participant’s spontaneous, implicit knowledge of the language (Ellis et al., 2006; Lyster & Saito, 2010; Spada, & Tomita, 2010). The tasks required them to produce an unplanned informal narrative for the whole class, answering others’ questions if those come up. The same type of tasks were used for both the pretest and the posttest in an attempt to ensure that the task measured the use of the target feature under similar conditions.

During the spontaneous oral production tasks each participant was called on by the teacher and had approximately 2-3 minutes to speak. These tasks were treated like common full-class speaking activities where students were presented with a topic question and right away, one after another, the students were called upon by the teacher to speak to the entire class about this topic spontaneously.

For the pretests and posttests, the order in which students were called upon was counterbalanced to attempt to reduce the impact of differences in preparation students had available to them while waiting their turn. Two separate days were used for the pretests and two

separate days for the posttests. The data from the two-day pretests and posttests were combined to obtain a larger sample of participants' speech to reduce the potential effects of situational factors (such as a participant having a bad day) by using two samples of their past tense use during the pretest and posttest. This was implemented to allow for a more accurate assessment of participants' abilities.

Several possible spontaneous oral production tasks (Appendix C) were considered and discussed with the teacher and the final tasks were a result of researcher and teacher collaboration. The intent was to keep the tasks as organic and integrated into the teacher's typical class activities as possible. They were developed through daily consultations with the teacher, drawing on her experience and classroom materials, as well as researcher observations of student behaviour and linguistic performance. The study procedure was designed to be minimally intrusive for the students because it was integrated into regular classroom activities, and the spontaneous oral production tasks were an opportunity to practice L2 speaking, which was the purpose of the class.

Before every class, the teacher and the researcher met to discuss the next class's spontaneous oral production tasks. The spontaneous oral production activities were procured using ESL book series such as *Canadian Concepts*, *Interchange*, and *Impact*, an online ESL conversational questions database, and materials that the teacher was already using to create specific questions that would elicit the past tense target language feature. Another consideration was to make these activities engaging enough that the students could discuss and debate them at length, and to ensure the desired length of the instructional treatment during the six experimental classes. The researcher made suggestions and provided options that the teacher could choose from, and then through discussion and negotiation, arrived at the final version of the tasks. These

included tasks such as describing a past situation when they made an irrational purchase, describing their experience with culture shock after arriving in Canada, or describing a positive and a negative past experience with technology (Appendix D).

In addition to these discussions the teacher occasionally spontaneously shared her thoughts about the tasks or how the implementation of CF was going. The researcher kept notes of these interactions to supplement classroom observations.

Semi-structured Interviews and Stimulated Recall. The interviews took place over a two-week period, after the in-class four-week intervention phase of the study ended. The interviews were conducted by the researcher, one-on-one, in a private, booked room in a university library, within walking distance from the class location, and lasted about one hour. During the semi-structured interview (Appendix E), participants were asked general questions about their personalities (such as “How would you describe your personality?”; “What personality traits in your opinion help you learn?”; “Which traits in your opinion make it difficult for you to learn or are troublesome to your learning?”) and how they experienced and responded to error correction (such as “How do you feel when your teacher corrects you?”). The interview was immediately followed by stimulated recall (SR), which was related to the specific class, and the different types of CF which were used in the study. The SR activity consisted of playback of video segments where a student participant was provided with CF, and the participant was asked to comment on their thoughts and emotions in that moment. The procedure was explained to the participants without reference to extraneous or unnecessary information that might lead their response, and the procedure was modelled for them (Egi, 2004; Gass & Mackey, 2017). After listening to video excerpts, the participant was asked to report what they were thinking during those instances, and to explain their thought processes and reactions to the class interaction

and/or CF. The participant was prompted with questions such as: "Can you tell me what was going through your mind here?"; "What is going on here?"; "What happened here?"; "What did you feel when the teacher did this?" The interview and the SR were audio recorded. The number of instances played for each participant were generally the same (with one exception) and this data is presented in the Table 3.

Table 3

Number of Stimulated Recall (SR) Instances Played for Each Participant

Name	SR instances played
Rose	22
Sarah	16
Tim	13
Nora	13
Rana	12
Hope	10
Lucy	10
Lance	N/A
John	N/A

Target Feature

The decision was made to focus on one grammatical structure because of the encouraging findings in SLA research that intensive oral CF is more effective when it targets a single linguistic category (Lyster & Saito, 2010; Nassaji, 2016; Nassaji & Swain, 2000). The target language feature was decided in collaboration with the teacher. The teacher was given a choice of which grammatical feature she needed the study to focus on, and what activities she wanted to implement as part of the study (based on a discussion with the researcher, student needs, and the

syllabus). This was motivated by ecological validity considerations as well as ethical considerations, to make certain the implementation of the research procedure aligned with the realities of the teacher's classroom, and satisfied her teaching needs as well, and not just the needs of the researcher.

At the initial meeting with the teacher to discuss the study, the teacher was presented with possible target feature options. The list was compiled based on how appropriate it was for the students' developmental level and how frequently these grammatical features were used in class conversations. In addition, the grammatical feature selected had to be one that the students were familiar with but had not yet mastered. One possibility was to use the past tense -ed, since it has been shown previously to be amendable to CF (Abdi & Mahammadi Darabad, 2012; Ellis, 2007; Ellis et al., 2006; Kartchava & Ammar, 2016; Mackey, 2006; Yang & Lyster, 2010) and it was appropriate to the students' proficiency level. Other possibilities included the comparative -er (see Ellis, 2007), or question formation (see Egi, 2007; Mackey, 2006). Articles have also been frequently chosen as the target grammatical structure (Ellis et al., 2008; Sheen, 2007, 2008, 2010).

Having seen the list of options the teacher then went back to the class for the next three days and considered the various options. She informed the researcher that past tense would work best for her class because this was a grammatical feature used often in class conversations (such as discussing past activities) and her students frequently made mistakes in past tense when speaking, yet were considered high enough level to have mastered this language feature.

Thus, past tense was selected as a target feature for this study. The past tense was a grammatical point that the students had been taught previously, and at this level they would be reviewing it. Both the predictable and rule-based past tense -ed and the more memorization-

reliant irregular forms (Yang & Lyster, 2010) were used in this study. This added ecological validity because at this level of language proficiency, the students would have used both and would require CF on both types. Distinguishing between the possible different impact of prompts and recasts on the different types of past tense, was not one of the aims of this study.

Instructional Treatment

For the purpose of this study CF was operationalized as a teacher's (or peer's) move that alerts the student to the grammatical accuracy of their statement and focuses exclusively on grammatical form.

CF was operationalized as explicit recasts, implicit prompts, and explicit correction. A recast is defined as a teacher's reformulation of all or part of a student's utterance, minus the error (Lyster & Ranta, 1997) and partial recasts, as used in this study, are teacher's reformulation of the incorrect segment (e.g., phrase, word) that does not repeat the whole utterance. An example of an explicit, partial recast is as follows:

Student: He goed home yesterday

Teacher: *Went* home.

The implicit prompts in this study were defined as a move when a teacher directly elicits the correct form from the student, either by eliciting completion of their own utterance and pausing strategically, by using questions to elicit correct form, or by asking the student to reformulate their utterance (Lyster & Ranta, 1997). For example:

Student: He goed home yesterday

Teacher: He what? He...

Explicit correction refers to an explicit provision of the correct form and a clear indication that what the student had said was incorrect by using a phrase such as “You mean,” “Use this word,” and “You should say” (Lyster & Ranta, 1997, p. 46). For example:

Student: He goed home yesterday

Teacher: You should say *went*, went home.

Peer feedback was not expected to happen frequently due to the nature of the whole-class speaking activity. However, research indicates that use of CF by the teacher can lead to peer correction, particularly in contexts with peer interaction (Lyster et al., 2013; Panova & Lyster, 2002), such as when Doughty and Varela (1998) observed that a few students corrected each other in the same manner as the teacher corrected them.

In the introductory pre-study discussion, the purpose of the study was explained to the teacher and a handout with definitions of the three types of CF to be used in the study, and examples of their use, was used to orient her. The teacher and the researcher examined each type and discussed specific examples to illustrate what was required and expected of the teacher. She reported that she was familiar with the different types of CF in terms of both use and terminology.

As part of the instructional treatment, the teacher provided CF as a restatement of the student's erroneous utterances (in the instances of explicit correction or explicit recasts) or alerted them to a possibility of error (in the case of prompts) in the target structure during classroom speaking activities. This restatement was supposed to be such that it did not change the meaning of the student's original utterance and she used explicit correction, implicit prompts, or partial recasts of the student's utterance. The teacher was asked to use only these three types of CF when correcting students' utterances of the target linguistic form. To support the authenticity

of the classroom discourse and the ecological validity of the study as classroom-based research, the decision of how frequently to use each of the three types, and when, was left up to the teacher. This choice was also motivated by the desire to reduce the degree to which the flow of the conversation would be disrupted by the intervention.

During instructional treatment, the teacher was asked to focus her CF on the past tense grammatical form alone and avoid correcting other grammar. This was done because there is research that indicates that specific CF is more effective than generalized CF (Ellis et al., 2008; Lyster & Saito, 2010; Nassaji & Swain, 2000; van Beuningen, 2021). Another reason focused/specific feedback was chosen was because the teacher had not been providing oral CF at all as part of her regular practice, and asking her to correct all grammatical errors may have overwhelmed both her and her students. Observations and video recordings of the lessons allowed for the evaluation of implementation fidelity, that is, the teacher's compliance with this request, and she did adhere to the study guidelines.

Over the course of the four-week in-class portion of the study, participants received explicit recasts, implicit prompts and explicit error correction, interchangeably, on past tense errors during the spontaneous speaking activities. The CF was distributed over six days, 25 to 40 minutes at a time, for a total of three hours. There was no grammatical oral CF provided outside of these three hours.

Study Procedure

Consent was obtained from the school administrator to invite a teacher and her class of students to participate in this research study. Once a teacher volunteered to participate, the teacher and I (the researcher), had an informal meeting where I explained what participation in the study entailed, and asked for her input in choosing the target feature. Once I obtained her

consent to participate, we scheduled a time for me to visit the class and recruit students for the study. Students were asked to participate in both phases of the study, the in-class portion, and the out-of-class portion that consisted of an interview and stimulated recall session, but had an option to drop out any time they wished. The entire class was invited to participate in the study and a total of nine out of 13 students in the class agreed to participate in one or more phases of the study.

The first phase of the study had a quasi-experimental design, and the second phase featured a series of seven individual cases which utilized qualitative interviews and stimulated recall as data sources. Figure 1 illustrates the timeline and activities of the two phases (indicated in light and dark grey shading) of the study.

Figure 1

The Timeline and Activities for the Two Phases of the Study

Timeline	Activities			
	Introductory informal meeting and discussion with the participating teacher			
Week 1	Monday	Participants recruited and consent forms completed		
	Tuesday	Biographical form and Personality test Completed		
	Wednesday	Pretest day 1	Classroom Observations	
	Friday	Pretest day 2		
Week 2	Tuesday	Instructional Treatment: Three types of CF were provided interchangeably during spontaneous oral production activities		
	Wednesday			
Week 3	Monday			
	Tuesday			
	Friday			
Week 4	Monday			
	Thursday	Posttest day 1		
	Friday	Posttest day 2		
Week 5	Interviews and Stimulated Recall			
Week 6				

The first phase of the study (indicated in light grey) took place over a four-week period of in-class instruction, during which participants received CF on their unplanned oral speech production. Quantitative data were derived from questionnaires and pretest/posttest oral production tasks to examine the relationship between personality traits and the impact of CF on L2 learning. In order to investigate this relationship in greater depth and build on the findings from the quantitative phase of the study, qualitative data were collected during the second phase

of the study (indicated in dark grey) through semi-structured interviews and stimulated recall activities (see Appendix E). The qualitative interviews and stimulated recall activities took place over the span of two weeks. This portion of the study enhanced the first phase in three regards: 1) it enriched and developed the correlational findings from the quantitative portion of the study, 2) improved understanding of students' response to CF and allowed access to their perspective on its effectiveness, and 3) supplemented the quantitative measures of personality and CF effectiveness with a more nuanced understanding of these variables.

On the second day, a personality test and a biographical information survey (see Instruments for descriptions, and Appendix A and B for the tools themselves) were completed by the participating students, while the four non-participating students were provided with an alternative activity. The students were provided with a vocabulary and expressions handout to help them with the words and expressions if they had any difficulty understanding the questions (see Appendix F). The teacher and the researcher were also there to offer assistance and answer any questions.

The teacher was asked to conduct the first spontaneous oral production task on the Wednesday of Week 1, which served as the first pretest. The teacher agreed to integrate spontaneous oral production tasks into the class time that was reserved for speaking skills and devoted to practicing conversational and oral production skills. The spontaneous oral production tasks were a series of activities during which students were asked to speak in front of the class about a specific topic spontaneously and without preparation. For example, the students were asked to recall a specific event or an incident that happened to them in the past. This activity was carried out two or three times a week over a four-week period. The students and the teacher gave

consent for the researcher to observe and video record classroom activities for the in-class duration of the experiment.

During the second and third weeks (and one day of the fourth week to accommodate a participating student who was away), the students participated in the instructional treatment described above. In the fourth week of classes (Thursday of Week 4), the posttest data were collected. As with the pretest, the students' performance on the spontaneous oral production tasks for two days that week served as a posttest assessment.

In the qualitative portion of the study, one-hour semi-structured interviews and stimulated recall activities were conducted with the student participants. These interviews began during the fifth week of the study and took two weeks to complete.

Study Pilot

Both the personality test and the biographical information survey were piloted to ensure that they were appropriate to the students' proficiency level and to determine how long it would take to complete the tasks. The pilot was carried out with 30 first year undergraduate international students at a Canadian university, similar to the intended demographic of the study participants. After providing consent, the pilot participants completed the personality test and the biographical information survey. They were asked to circle or mark any unfamiliar words or expressions, and then to try to guess the meaning of these words and write their guesses in the margins. Most students spent 15 to 20 minutes completing both the test and the survey. Based on these results, the personality test was expected to take from 15 to a maximum of 30 minutes, and the teacher allocated 30 minutes at the end of one class for students to complete the test at their own pace and ask any questions they may have had.

Students across all three pilot classes indicated similar words and expressions as unfamiliar and therefore problematic, and these are shown in Tables 4 and 5. A list of vocabulary words and expressions that these international L2 students found difficult in answering the questions was compiled, a handout was created with all the problematic vocabulary words and expressions (see Appendix F). This handout was distributed to students for them to consult as they filled out the personality test and the biographical information survey to support their understanding of the challenging vocabulary highlighted by the pilot.

Table 4*Words Identified as Unfamiliar on Personality Test*

Words	Class 1	Class 2	Class 3	Total	Percentage
Chores	9	5	4	18	60
Irritated	9	4	4	17	57
Insult	4	3	3	10	33
Vivid	7	3	0	10	33
Seldom	4	1	1	6	20
Shirk	7	3	3	13	43
Feel blue	2	0	1	3	10
Life of a party	3	0	1	4	13
At ease	2	0	0	2	7
Draw attention	1	0	0	1	3
Keep in the background	1	1	1	3	10
Take time out for others	1	0	0	1	3
Exacting	1	0	0	1	3
Like order	1	0	0	1	3
Mood swings	1	0	1	2	7
Sympathize	0	1	2	3	10
Abstract ideas	0	1	2	3	10
Stressed	0	0	1	1	3
Mess	0	0	1	1	3

Table 5*Words Identified as Unfamiliar on Biographical Information Survey*

Words	Class 1	Class 2	Class 3	Total	Percentage
Brackets	7	1	0	8	27
Not just visited on a holiday	2	0	0	2	7
Why come to Canada?	1	0	0	1	3
“Mother language?”	0	2	0	2	7
Other language	0	1	0	1	3
List all countries	0	1	0	1	3
List of other classes (for uni)	0	1	0	1	3
How long did you study	0	1	1	2	7

Ethical Considerations

The study was submitted to the York University Ethics Review Board and was given approval. The data collected was treated with complete confidentiality, and no identifying features of the students or the institution were used. All the participants were asked to provide a pseudonym, and their personality scores and data were classified under that name only. Those students who chose not to participate were not penalized in any way, and were positioned in the classroom in such a manner that they were not captured by the video camera and their minimal audio data was not used. By virtue of how the chairs and tables were arranged in the classroom, this approach worked well, as the students tended to sit in the same places every day, and there was no need to move anyone and disrupt regular classroom activities.

It was my responsibility as a researcher to ensure that research participation did not have a negative impact on the teacher’s view and engagement with research, did not reduce her motivation to participate in future research, and that the teacher was empowered by the process,

thus fostering a positive relationship between teacher, researcher, and research. Moreover, in response to Rounds' (1996) call for the empowerment of research participants, the target language feature choice and the creation of the questions for spontaneous oral production tasks were done in collaboration with the teacher, in an attempt to make sure this process served her needs as well as the researcher's.

Preparation for Analysis

Quantitative

Data preparation involved each participating student being given a pseudonym, and any information that may be used to identify the students, the teacher, or the institution was removed.

The personality tests were scored to determine a trait profile for each participant. Their responses on the personality test were computed as a total score and assigned a percentile rank by comparing it against a standardization sample available on the Big-Five Factor Markers from the International Personality Item Pool developed by Goldberg (1992).

The recordings of the pretest and posttest oral production tasks were transcribed verbatim, and all CF provided by the instructor and past tense use by the participants during these tasks were identified. The number and type of CF was calculated. All instances of past tense use during the spontaneous oral production tasks were coded to determine accuracy of use before and after the CF treatment. First, the initial pretest accuracy of past tense use was assessed, and then it was compared to the accuracy of use on the posttest. This was carried out by counting all the instances of both correct and incorrect usage, and then creating a ratio of correct use over total use. The scores for the pretest were combined from the two pretests, and the same was done for the posttest. To establish change in accuracy of past tense use, pretest scores were

subtracted from posttest scores and score difference (and percent difference) were calculated, with a positive difference between posttest and pretest indicating improvement, and a negative difference indicating a regression. These scores were then subjected to both parametric and non-parametric tests to establish statistical significance of the results. Next, the correlations between the five global personality traits and the outcomes were calculated to determine if there were any patterns or statistically significant correlations.

Because of the small sample size, the data was tested for normality using Shapiro-Wilk test statistic and a Q-Q plot. These tests indicated that the data appeared to be normally distributed: pretest ($W = 0.905, p = .321$), posttest ($W = 0.928, p = .499$), pretest to posttest difference ($W = 0.954, p = .754$), extroversion ($W = 0.906, p = .288$), neuroticism ($W = 0.916, p = .360$), conscientiousness ($W = 0.892, p = .207$), agreeableness ($W = 0.957, p = .764$), openness to experience ($W = 0.940, p = .585$). Because the normality measures and the Q-Q plot suggested that the data met the assumptions for parametric analysis, parametric testing was conducted on the data. Non-parametric analyses were conducted as well. While both parametric and non-parametric analyses were flawed and had limitations for use on this data set, because the small sample size reduces power of normality testing (though not the visual plot), it was decided to report only non-parametric analyses. It is important to note that the parametric and non-parametric results did not differ in any meaningful way.

Coding of Accuracy. The following section on coding of the accuracy measure provides a more detailed description of data preparation for quantitative analysis. Both the pretest and the posttest were coded to determine participants' accuracy of past tense use before CF and after CF treatment. Coding was carried out using a content analysis approach, with a focus on form and meaning embedded in discourse. Discourse was analysed to determine obligatory contexts (OC)

(see Gass, 2013; Pica, 1983; Valeo, 2010) reflecting a nuanced meaning-based interpretation of OC that was meaning and not form based. This distinction between form and meaning was used in determining if an error had been made. When students attempted to communicate the past without using the past tense form, discourse analysis was used to establish if the OC required past tense. Analysis considered how the target feature was embedded in language used in context. Students may not have attempted to use the past tense but still successfully communicated about the past. If participants were able to describe an event meaningfully without using the past tense, it was not considered an OC that required the past tense. If the OC required past tense, then the speaker was expected to indicate meaning of the past tense.

This approach to analysis allowed for narrative of a past event to be in the present. Research indicates that narrative description is not always situated in past tense (for example, history classes are not done in past tense), and thus, narrating an experience in the past in the present tense is acceptable in oral storytelling (Fludernik, 1991; Pillemer et al., 1998). If the sentence was not embedded in immediate discourse that made this consideration possible, then it was considered incorrect.

The spontaneous oral production tasks were designed to prompt students to move to the obligatory context, but how successful the obligatory context was at eliciting past tense differed from student to student. Thus, occasionally, the teacher would attempt to prompt the student to use past tense as they spoke. Nonetheless, some spontaneous oral production task questions were not strong enough to elicit consistent past tense use for the students, and students chose to respond in a narrative manner using present tense. Regardless, because the pretest and posttest were carried out over two days, for most students enough data were obtained to make an estimate

of their past tense use accuracy. The students for whom this was not possible were the ones that missed one or two classes.

When coding, utterances were rated on a scale from 0 to 2 (see Table 6), with 0 indicating failure to communicate past tense. This occurred when participants did not attempt to use the past tense when OC required them to do so. An utterance such as “it’s horrible day for me” was considered incorrect, by omission, if they were expected to use past tense, but also if the past tense was used when it should not have been such as “it’s better for them to see the whole the outside world and ... to knew more things.” This included missing verbs, counted as incorrect when the OC required a verb and the participant did not provide it; for example, “We said, we don't know. If I have chance, I really like to ask question why you yelling at me.” A score of 1 was assigned when the participant recognized that past tense was necessary for meaning and made an attempt to use it, but did so incorrectly. A score of 2 indicated the correct use of past tense, both in meaning and form.

When making calculations, the obligatory context (OC) was doubled as a score (because the maximum score was ‘2’) and the final score was calculated as a decimal fraction. For example, if on one student’s first posttest, there were twenty OCs identified, one was coded as incorrect, one was coded as attempted but not correct, and eighteen were coded as correct. Thus, this person would then be scored as $0 (0 \times 1) + 1 (1 \times 1) + (2 \times 18) = 37 / 40$ (20 OC x 2), and 0.925 was this individual’s score for that posttest.

Table 6*Spontaneous Oral Production Tasks Coding Examples*

Categorization	Rating	Example
Failure to communicate past tense when OC required it	0	a) [When I first came to Canada] “I really want to buy something [others laugh], I don't know the reason. And I <i>went</i> to the Yorkdale and Eaton Center” b) “One time I <i>failed</i> to submit my assignment because my computer become the blue screen. So I don't know what to do...” c) “Two days ago when I <i>went</i> to my visa, I use the Google Map to direct me and, yeah, I go there less-in less time”
<u>Made an attempt, but did so incorrectly</u>	1	a) “So I <i>called</i> Uber and they <i>taked</i> to the another hospital and I <i>was</i> late maybe for 10 minute.” b) “After the first month my mom <i>give-</i> , my mom <i>gived</i> me, <i>gi-give</i> me about one hundred thousand...”
<i>Correct use of past tense, both in meaning and form</i>	2	a) “I <i>had</i> an appointment for the orthodontist, and I <i>arrived</i> to Sheppard Station” b) “When I was in grade 11, I still remember we <i>had</i> to finish our final exam in the computer. And I <i>calculated</i> that if I <i>finished</i> my exam on time”

Errors that were not related to the use of past tense, such as errors in word choice (for example, “In the first month I *went* to Canada um I really...” instead of *came*; “don't know why I *took* this decision, yeah,” instead of *made*; “But the power was off, that *kept* 30 minutes,” instead of *stayed*) and subject-verb agreement (“I used to live with my parents so-, me , like they are the one that *gives* me money”), or if there was possibility that the error was due to a pronunciation problem, were discounted. If the participant self-corrected, this was counted as correct. Consecutive repeats or stuttering were ignored, whether correct or incorrect, they were counted as one use.

To assess inter-rater reliability, 36% of the data were coded by a colleague who was provided with a written description of the coding approach. Initial inter-rater reliability was 89%. The sources of disagreement were cases where raters could not agree whether or not a particular OC was indicated by a narrative and, thus, allowed for switching to present tense when discussing the past as in, “T: How big is it? L: Maybe this big. T: Okay. L: But for me it's too heavy. T: Okay. L: After I, ah, after I *go* with this bag, I have a hea-, a backache. So I don't use it anymore”; and contextual issues, such as whether the action the participant is discussing is in the past or present, such as, “N: -because I use like, I was a student and the-, I used to live with my parents so-, me, like they are the one that *gives* me money. So-.” Here one rater interpreted the statement as the student talking about the student’s parents giving her money in the past, whereas the other rater interpreted it as her parents still giving her money, and thus, the verb should have been in the present. Another similar case was a disagreement over whether the student was talking about past or future, because the colleague rater was not provided with the preceding discussion and could not contextualize that the student was talking about the past “I saw a movie. I think- I don’t think it *will* better when we had capital punishment.” After discussing and resolving these cases, coding agreement reached 95.6%.

Qualitative

Interview and stimulated recall data were partially transcribed for relevant content, and then coded for emergent themes. A constant comparison method was used to allow themes and categories to evolve from the data (instead of being pre-set), and involved emergent themes, findings, and their interpretations being regularly compared to previous ones. The observation notes were analysed by looking for any additional themes as well as documentation of participant behaviour that the video observations may have missed or were unable to capture. They were

used to supplement and contextualize data from interviews and stimulated recall, and any emergent thematic findings.

Data from the quantitative measures was then combined with the qualitative findings and individual case profiles were created for each participant, thus enriching the small sample size with intricate detail of the student response and experiences of CF, and creating a nuanced picture of each participant's personality and its relationship to their experience of CF.

Measures

In this study, personality was measured as percentile scores on the five dimensions of the Five-Factor Model of personality. This study did not rely on the results of the personality test as a complete measure of the participants' personality. The test scores were supplemented by the behaviour, descriptive examples, and by participants' self-report descriptions elicited from the student participants during the interviews and stimulated recall procedure. When participants were shown their personality test results at the end of their interviews, participants were asked to report if their personality test scores reflected their self-perceived personality. This allowed for a fuller and more nuanced assessment of the participants' personalities and allowed me to examine the individual richness that the test was not able to capture on its own.

During quantitative analysis, CF effectiveness was assessed as the pretest/posttest learning outcomes of past tense usage in response to CF. During the qualitative analysis of the data, students' response and experience of CF was assessed as participants' reactions and responses to CF. Noticing, emotional reactions, clarity of CF from the student perspective, and attitudes towards CF, which have all been shown to impact language learning in the literature, were the qualitative reactions and responses that were deemed influential on the students' learning process. Accordingly, they were scrutinized during qualitative analysis as suggestions

that CF may have been effective. These measures of student response and experience of CF encompassed a deeper and broader operationalization of student response to CF than the pretest/posttest measure alone.

Variables and Assumptions

The goal of this research was not to distinguish how each type of CF impacted students' acquisition of the target language structure, but to 1) uncover the relationship between different personality traits and accuracy of the target language structure after administration of CF in general and 2) examine in-depth students' response to and experience of CF in instruction and 3) investigate how participants' responses to CF might be linked to its effectiveness for individual learners.

In the quantitative phase of the study, the predictive variable was personality, operationalized as the scores on the five dimensions of Goldberg's Big Five-Factor inventory. The dependent variable was effectiveness of CF, operationalized as a difference in accuracy of target language use between pretest and posttest. Typical of the quantitative methodology approach, I attempted to control possible intervening variables by attempting to create as similar conditions for all students as possible, specifically by asking all the students in the class to complete the same tasks with the same data collection procedures and the same syllabus.

Accordingly, the quantitative part of the study reflected a positivist research paradigm that assumes that there is concrete, objective reality to be discovered, namely a set of personality traits which are generalizable across settings. I hypothesized that students with certain personality traits would act in a particular manner, and they would be predisposed to respond to error correction in a certain way. Personality traits were conceptualized as internal and stable (Coon et al., 2014; McCrae & John, 1992; Myers & Dewall, 2019), and hence, I tried to establish

how these traits influenced students' learning of the past tense. Using Goldberg's Big Five-Factor inventory, a numerical score was assigned to concepts such as extroversion, conscientiousness, agreeableness, openness to experience and neuroticism, and quantitative methods of interpretation were used to analyse this data. Since this phase of the study represented objectivist research, and the goal was to investigate a relationship between two constructs, correlational research methodology was a logical choice.

In the qualitative phase of the study, qualitative data collection methodology was implemented. Qualitative methodology is rooted in a naturalistic paradigm, and contrasts with the positivist outlook of the quantitative portion of the study. Instead of generalizing across individuals, this approach privileges participants' subjective and personal perspectives on their learning. Unlike the quantitative approach, the goal was not to discover statistically significant relationships, but to make sense of, and understand the situation. Using an individual case approach, and employing tools such as classroom observations, participant interviews and stimulated recall allowed for an exploration of other factors that could have contributed to the correlations. Following Goldstein's example (in Johnson, 1994), in this study qualitative methodology was used to provide a richer, more in-depth exploration of the topic. The biggest flaw of correlational research is that it is reductionist, and that it does not provide any rich insight into individual learners. Johnson (1994) suggested that if a researcher wants to explore the processes under study in more depth, qualitative methodology may be more effective. That does not negate the usefulness of the correlational approach, however, supplementing the correlational findings with interview and stimulated recall data aided in making them more meaningful.

First, by accessing participants' perspectives on oral CF and its effectiveness, in the qualitative phase of the study, student response was operationalized as students' reactions and

response to CF, and these findings were examined alongside the outcomes and correlations from the quantitative portion of the study, in an attempt to link participant responses to CF and CF effectiveness for individual learners.

Second, the interviews and stimulated recall with individual students allowed the researcher to tap into the rarely used (but crucial) participants' views on the subject. Describing participants' perspectives on their learning processes is essential because the participants' viewpoint is the “final arbiter of ... effectiveness” as they are the most important stakeholders in the learning process; they are the clients who the entire process is centered around (Sharpley, 1997, p. 244). Moreover, “there are clear data that indicate that other persons are not reliably able to tap that viewpoint” (Sharpley, 1997, p. 244), as evidenced by the disconnect between the teacher and student perspectives on CF (Hyland & Hyland, 2006; Schulz, 1996).

Chapter 4: Results

In the following chapter I outline the results of the study in two sections. The first section of the chapter attempts to answer the first research question: *What is the relationship between student personality traits and the effectiveness of oral corrective feedback in the classroom?* In order to respond to this question, it is important to describe what feedback the students received and how the students received it. Thus, I begin by outlining two features of the treatment: 1) how and how much CF the teacher provided during treatment, and 2) the student response to the oral production activities in terms of turn taking length. Then, the results of the personality test are discussed, followed by the results of statistical analyses of the study's quantitative outcomes related to the first research question.

In the second section of this chapter, the individual cases and more general emergent themes from the data are presented as I attempt to answer the second research question: *How do students with different personality traits respond to and experience oral corrective feedback in the classroom.* First, I describe each participants' response to, and experience of, oral CF and the possible influence this had on the effectiveness of CF as individual cases. Individual differences emerged in preferences for different techniques used to deliver CF, and different students had different responses to the three types of oral feedback explored in this study. Then, emergent themes data from interviews and stimulated recall sessions are presented, which involve students demonstrating an overwhelming desire for oral CF in general, and themes related to their response and experience of CF are discussed.

Research Question 1: The Relationship Between Personality and CF Effectiveness

Before I can begin to answer the first research question, it is important to explain what

feedback the students received and how the students received it.

Classroom Observations

Observations and video footage of the lessons revealed sufficient treatment fidelity, in that the teacher adhered to the instructional requirements set out for her. Analysis of the recorded classroom instruction showed that, in line with the researcher's request, the instructor provided CF on target grammar only during the spontaneous speaking activities, and that a total of 86 recasts (66.15%), 31 prompts (23.85%), and 13 explicit corrections (10%) were provided. This distribution reflects other research findings on use of CF in the classroom (Dilans, 2016; Lyster & Mori, 2006).

Here are a few examples of the teacher providing explicit recasts CF:

John: If I am living a life 50 years ago-
 Teacher: lived
 John: huh?
 Teacher: I lived
 John: I lived 50 years ago or even more than 50 years...

Rose: I didn't understand what's going on
 Teacher: what *was* going on
 Rose: [Cringes and laughs.] What was going on.

John: We run out of elections-
 Teacher: ran out
 John: ran- ran out of elections and we find a way to -
 Teacher: you found
 John: we found a way to show our...

Here is an example of the teacher varying her use of different types of CF, using a recast, and then a prompt:

Tim: Chinese government spend money on the military
 Teacher: spent
 Tim: Spent. And everyone need to donate money for that war
 Teacher: everyone?
 Tim: [stumped]
 Teacher: need to?
 Tim: [stumped]

Teacher: needed.

Tim: needed

These are examples of her using a prompt as CF:

Rose: When I was a child, little girl, life is so easy-

Teacher: Life?

Rose: Life was so easy. Because my parents took good care of me.

Lucy: In the past, I think it's-it's cheaper than now

Teacher: In the past it's---? It's---?

Lucy: It was cheaper [smiles]

The data also showed that the teacher used explicit CF less frequently than the other two types (86 recasts and 31 prompts versus 13 explicit corrections), and in the instances when she did, analysis of the video and audio data revealed that she started with implicit CF, and if the student could not self-correct, moved on to a more explicit correction. Here are two examples of such instances:

Sarah: When I grew up I need to-

Teacher: When you grew up, you--?

Sarah: [stumbles]

Teacher: When you grew up, you--?

Sarah: [stumbles] I need to experiment [looks to another students for help]

Teacher: You needed to-

Sarah: Past tense?

Teacher: -because you are saying when you grew up.

Rose: I always confused by the-

Teacher: I always--?

Rose: I always confused. [hesitates] Society, by the-

Teacher: I always *was* confused. Back to the [she refers back to a previous discussion of the past tense use]

Rose: I always was confused.

The number of instances of CF feedback each participating student received during intervention is listed in Table 7:

Table 7*Number of CF Instances Provided for Each Participant*

Name	CF instances provided
John	14
Lance	21
Lucy	7
Nora	6
Rana	13
Rose	23
Sara	22
Tim	12

Analysis of video recordings revealed that during spontaneous oral production tasks some students took more speaking time than others (see Table 8).

Table 8*Participants' Speaking Turn Length during Pretest and Posttest (in seconds)*

Name	Pretest average (s)	Posttest average (s)
Rana	79.5	165.0
Tim	91.0	144.0
Hope	102.5	N/A
Sarah	104.0	188.5
Nora	126.5	218.5
John	156.0	190.5
Rose	173.0	247.5
Lucy	181.0	174.5
Lance	251.0	268.5

The teacher encouraged those who spoke less (Rana and Tim) to use more of the speaking time allotted by asking them elaboration questions, but would then move on if the student did not want to say anything more. Because the pretests and posttests were conducted over two days, for students who attended all classes sufficient data (as evidenced by speaking turn length and number of OCs produced) were obtained to make an estimate of their past tense use accuracy. The students for whom this was not possible were the ones that missed one or two classes, including Hope who missed both posttest classes and Rana who missed one of them. There appeared to be no apparent relationship between length of speaking turn and the outcome measure; however, there did appear to be an influence of personality on the length of speaking turn: the most introverted students in the class had the shortest average speaking turns.

Personality Test Results

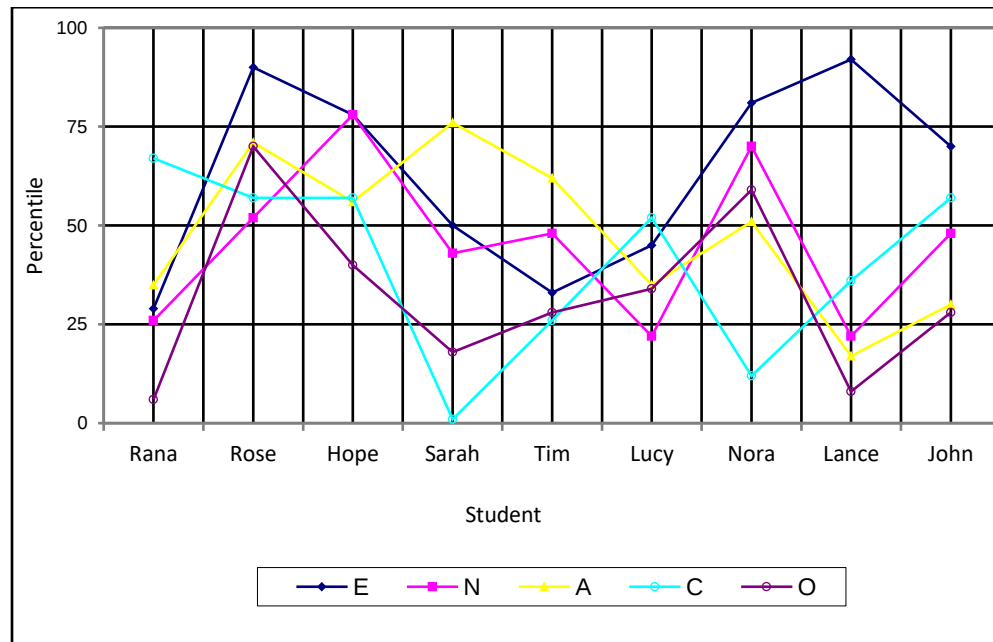
In order to establish general trends within the data and explore the possible influence of the Big Five personality traits on the effectiveness of oral CF, descriptive statistics were calculated from the personality test scores for all the students. Table 9 shows all participants' percentile scores on the five global personality traits: extroversion, neuroticism, agreeableness, conscientiousness, and openness to experience. Following the table, the data is represented visually in Figure 2.

Table 9*Participant's Percentile Rank Scores (1st to 99th) on the Big Five Traits*

Name	Extroversion	Neuroticism	Conscientiousness	Agreeableness	Openness to Experience
Rana	29	26	67	35	6
Rose	90	52	57	71	70
Hope	78	78	57	56	40
Sarah	50	43	1	76	18
Tim	33	48	26	62	28
Lucy	45	22	52	35	34
Nora	81	70	12	51	59
Lance	92	22	36	17	8
John	70	48	57	30	28

Figure 2

Percentile Scores on the Big Five Personality Traits for All Participants



Visual representation allowed for a better illustration of the diversity of scores on the five personality traits. In order to examine this diversity in more depth, and disentangle the possible influence of individual traits, it was necessary to examine how the participants compared to each other on the Big Five traits, from the highest scores on each trait, to the lowest scorers on each trait. Thus, when results of phase one quantitative analysis suggested that a particular trait was of interest (for example neuroticism), it was easy to establish which participants to focus on in greater detail for this particular trait, which participants scored very low or very high on this trait, and how all participants related to each other on this trait. Below, I discuss the general trends in the personality test results by trait.

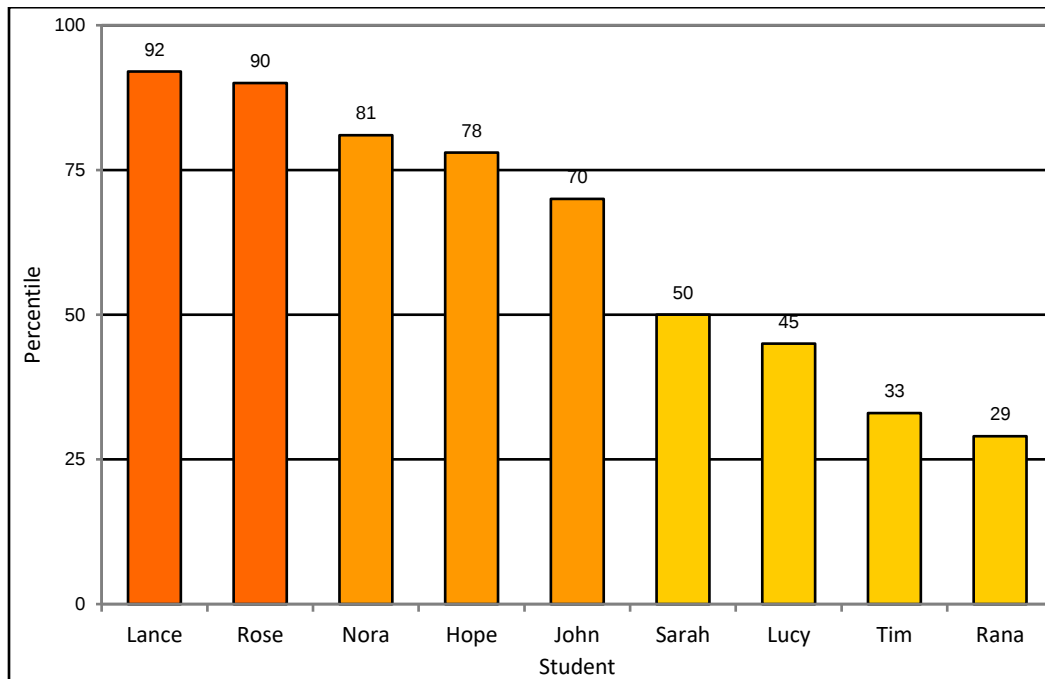
Figure 3*Participants' Extroversion Percentile Scores*

Figure 3 shows the participants' extroversion scores, measuring how sociable, assertive, cheerful, active, upbeat, talkative, and energetic someone is. The students in this class had relatively high extroversion scores, with an average score of 63.11. Lance and Rose (scoring in the 92nd and 90th percentiles, respectively) had by far the highest extroversion scores, significantly above the average, whereas Rana and Tim scored the lowest on extroversion, in 29th and 33rd percentiles respectively, well below average.

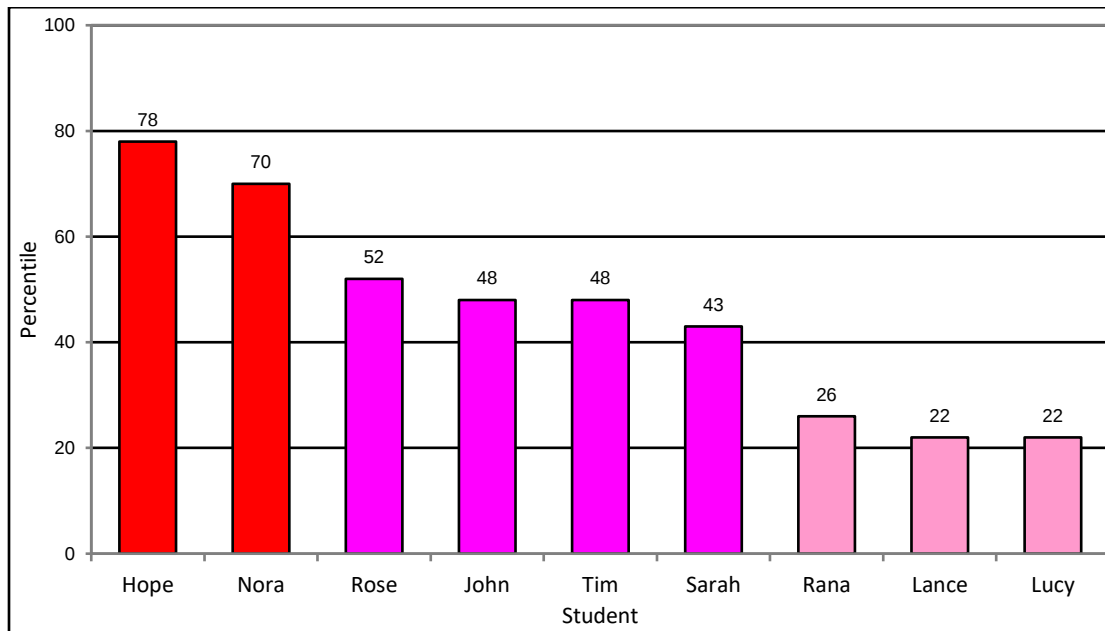
Figure 4*Participants' Neuroticism Percentile Scores*

Figure 4 shows the participants' neuroticism scores, measuring emotional instability, pessimism, how anxious, moody, tense, nervous, and sad someone is. The students in this class had relatively low neuroticism scores, with an average score of 45.44. That means that, as a group, they scored slightly lower than average on this personality trait. Hope and Nora (scoring in the 78th and 70th percentiles, respectively) had by far the highest neuroticism scores, above the average, whereas Lance, Lucy and Rana scored the lowest on neuroticism, in 22nd, 22nd, and 26th percentiles respectively, and significantly below average.

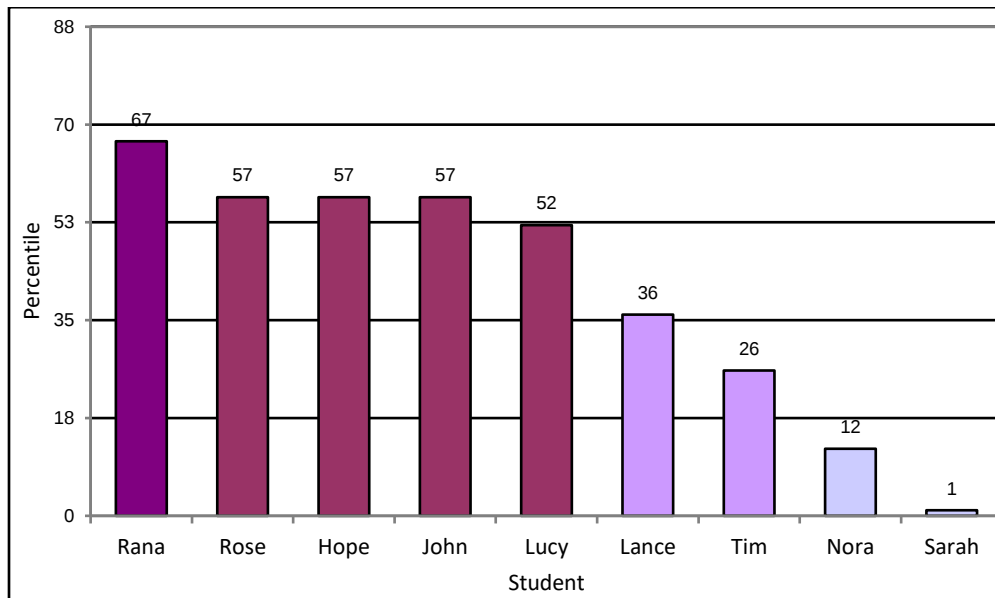
Figure 5*Participants' Conscientiousness Percentile Scores*

Figure 5 shows the participants' conscientiousness scores, measuring how organized, responsible, persistent, and motivated in goal-directed behaviour someone is. The students in this class had relatively low conscientiousness scores, with an average score of 40.56. That means that, as a group, they scored ten percentiles lower than average on this personality trait. Rana, Rose, Hope and John (scoring in the 67th, 57th, 57th, and 57th percentiles, respectively) had the highest conscientiousness scores, above the average, whereas Sarah and Nora scored the lowest on conscientiousness, in 1st and 12th percentiles respectively, significantly below average.

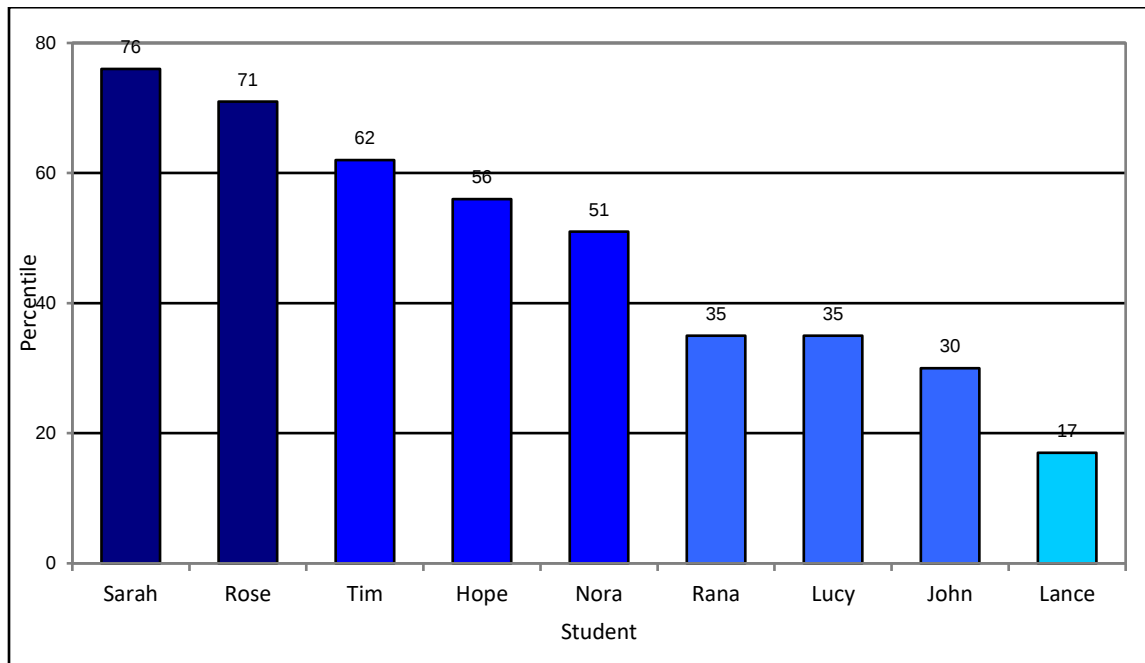
Figure 6*Participants' Agreeableness Percentile Scores*

Figure 6 shows the participants' agreeableness scores, measuring how trusting, compliant, compassionate, caring, gentle, empathetic, cooperative, altruistic, modest, and pro-socially orientated someone is. The students in this class had relatively average agreeableness scores, with an average score of 48.11. That means that, as a group, they scored slightly lower than average on this personality trait. Sarah and Rose (scoring in the 76th and 71st percentiles, respectively) had the highest agreeableness scores, above the average, whereas Lance, John, Lucy and Rana scored the lowest on agreeableness, in 17th, 30th, 35th and 35th percentiles, respectively, below the average.

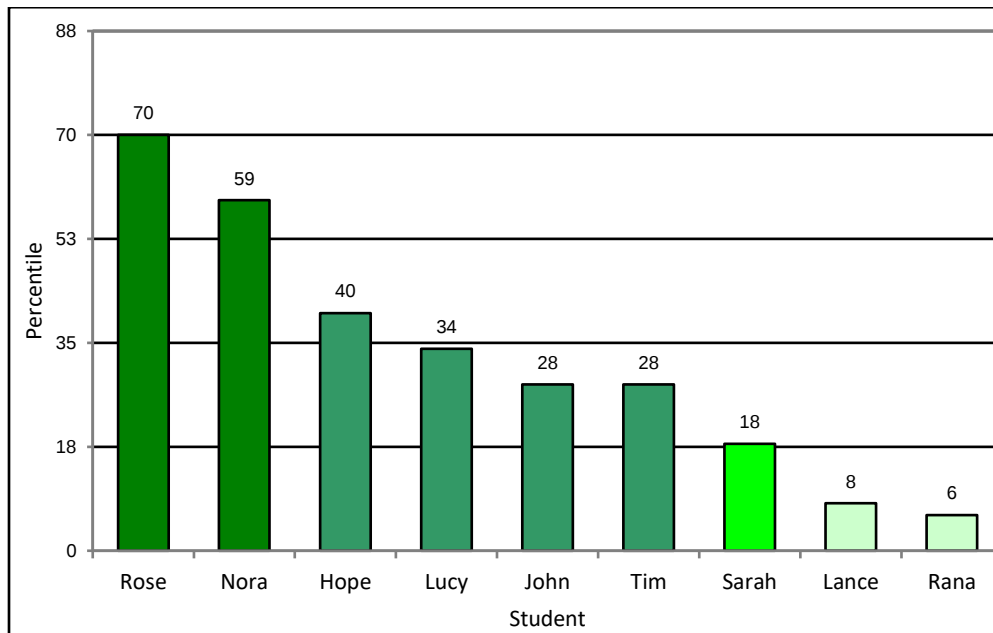
Figure 7*Participants' Openness to Experience Percentile Scores*

Figure 7 shows the participants' openness to experience scores, measuring how much someone seeks and appreciates experiences for their own sake, how tolerant of the unfamiliar, original, curious, and willing to explore the unfamiliar someone is. The students in this class had very low openness to experience scores, with an average score of 32.33. That means that, as a group, they scored almost 20 percentiles lower than average on this personality trait. Rose and Nora (scoring in the 70th and 59th percentiles, respectively) were the only ones to score above average on openness to experience in the group, whereas Rana, Lance and Sarah scored the lowest on openness to experience, in 6th, 8th, and 18th percentiles, respectively, significantly below average.

Next, in order to examine the possible relationship between personality traits and effectiveness of CF, the data from the personality test and pre/posttest oral production tasks, designed to measure outcomes in accurate use of the past tense (and the assumed impact of the

CF provided during instructional treatment) were analyzed to examine any possible relationship between these two variables.

Oral CF Outcomes

The participants' pretest and posttest past tense accuracy scores (measured as ratios out of 1) are displayed in Table 10 below. There are only two total posttest scores that are lower than total pretest scores: Rana's and Lance's. Hope's scores were not included in the analysis because she did not attend any posttest assessment classes.

Table 10

Participants' Accuracy of Past Tense Use Scores (S) using Obligatory Context (OC) Analysis

	Hope		John		Lance		Lucy		Nora		Rana		Rose		Sarah		Tim	
	OC	S	OC	S	OC	S	OC	S	OC	S	OC	S	OC	S	OC	S	OC	S
Pretest	30	.78	2	.25	14	.57	26	.54	47	.77	21	.79	28	.50	5	.60	14	.57
Posttest	N/A		19	.53	22	.48	24	.88	50	.91	10	.60	21	.62	38	.66	15	.80

Table 11 shows the participants' pretest and posttest accuracy of past tense use scores. The third column indicates the difference between the pretest and the posttest past tense use accuracy scores. Negative difference between pretest and posttest indicates regression, while a positive difference indicates improvement. The final column indicates the difference as a percent of the pretest score. Only those participants with a complete data set, i.e., those who had completed the personality test, pretest, and the posttest (during week 4, n=8), were included in this analysis.

Table 11

Comparison of the Participants' Pretest and Posttest Scores (maximum score: 1.0)

Student	Pretest	Posttest	Score Difference	Difference as %
John	.250	.526	.276	110
Lance	.571	.477	- .094	-16
Lucy	.538	.875	.337	63
Nora	.766	.910	.144	19
Rana	.786	.600	- .186	-24
Rose	.500	.619	.119	24
Sarah	.600	.658	.058	10
Tim	.571	.800	.229	40

The results in the two tables above show that most students improved their use of past tense from the pretest to the posttest, with two exceptions. Only two students had a negative difference, indicating a regression of accuracy. The greatest improvement as a percent of pretest performance was John, with Lucy and Tim in second and third, respectively (Table 11). The greatest regression was Rana, with Lance in second.

I want to make a note about these results based on the examination of the two tables together and draw attention to the fact that other variables had an impact on these results. It is possible to see that John's improvement of 110% is not as robust as it may appear due to the fact that the pretest was based on only two OC instances. Also, Rana's regression of 24% may not be as grim as it appears: she was absent due to illness for one of the posttests and thus, her posttest score was only based on one day's performance.

In addition to seeing who improved or regressed from pretest to posttest, other interesting findings emerged from the analyses of the spontaneous oral production tasks. For example, Sarah, while showing a very modest improvement of only 10% had actually stopped avoiding using past tense, as suggested by a much greater number of OC instances in the posttest, and then confirmed through her own admission of this in her interview. Thus, while her accuracy may not have yet improved at the time of the posttest, the much more frequent use of the past tense was a suggestion of learning and progress. Likewise, Lance, who showed a regression of 16%, started to use past tense much more; thus, while his accuracy suffered, that did not mean that over time, he would not have shown improvement, since learning is not a linear process (Hyland & Hyland, 2006). Other students such as Nora, Lucy, Tim and Rose showed relatively consistent OC occurrence between the pretest and posttest as shown in Table 10.

Table 12

SPSS and Paired T-test Results

Mean	SD	Variance	T	df	Two-tailed <i>p</i> value
0.110375	0.179	0.032	1.736	7	.126

Inferential statistical analysis was conducted using SPSS (see Table 12). Analysis indicated that, overall, the students improved from pretest to posttest in their past tense use, as indicated by the mean pretest to posttest score difference being a positive value of 0.11038, with a standard deviation of 0.179 and a variance of 0.32. A paired t-test was also conducted (because both pretests and posttests came from the same group of participants) to determine if this difference of means was statistically significant. While the result was not statistically significant at the .05 level, with $p = .126$, this was expected due to a very small sample size.

A two-tailed Wilcoxon Signed-Rank Test at significance set at $p < .05$ was conducted as a complement to the t-test. The results showed that the value of W was 7. The critical value for W when the sample size was 8 ($p < .05$) is 3, therefore, the result was not significant at $p < .05$.

Next, in order to find out if there was a relationship between personality and the effectiveness of CF provided, each of the global personality traits was correlated with the pretest to posttest score differences. Table 13 shows the non-parametric correlations between global personality traits and the CF effectiveness outcome measure, with two-tailed p values included.

Table 13

Global Personality Traits to CF Effectiveness Outcome Measure Correlations

Personality Trait	Spearman Correlation	Two-tailed p value
Extroversion	- .095	.823
Neuroticism	.181	.668
Conscientiousness	- .084	.844
Agreeableness	- .036	.993
Openness to experience	.611	.108

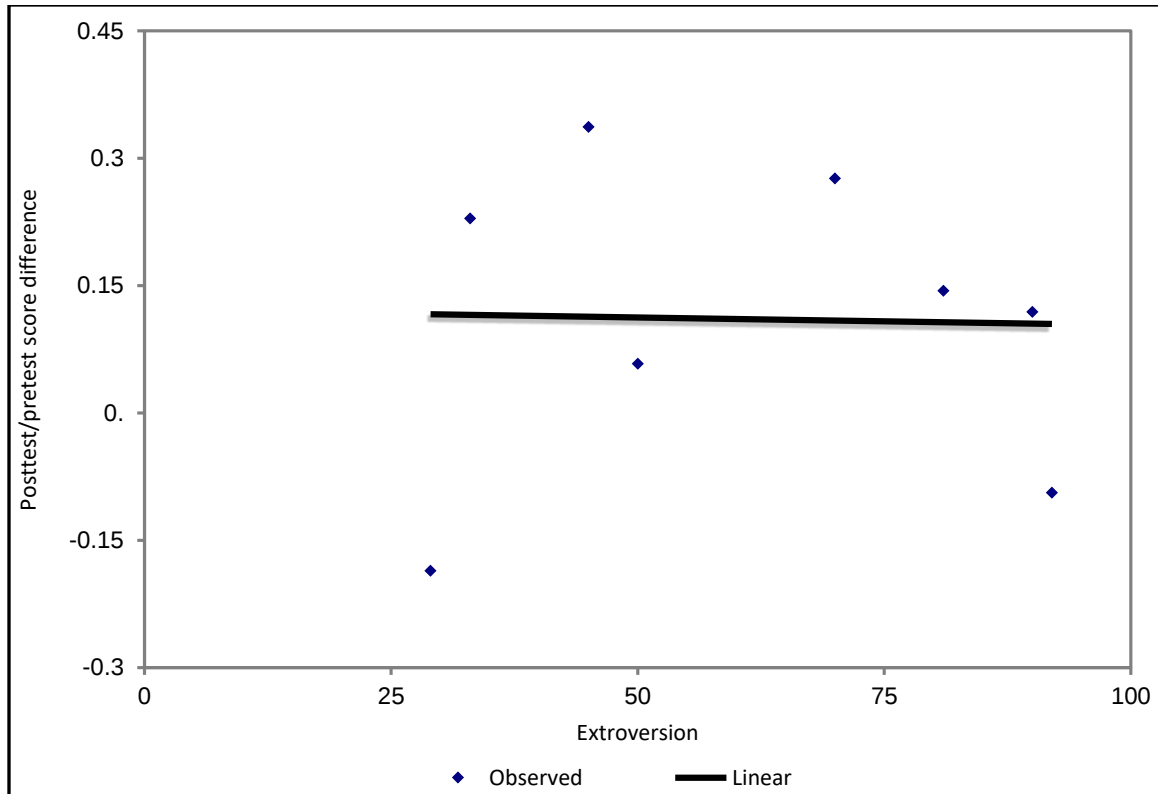
Table 13 indicates that no correlations reached statistical significance; this was not unexpected and possibly related to the low sample size. Despite this, the coefficients of the Spearman correlation of two traits and their relationship to the outcome measure scores stood out: neuroticism and openness to experience. Thus, these two traits, and how they interacted with CF effectiveness, were examined further during qualitative data analysis.

Simply looking at these correlations, it is difficult to discern a pattern or a suggestion in which direction the relationship may be headed. In these kinds of situations, it is important to visualize the data, to look for patterns that may not be evident from correlations. Thus, scatter

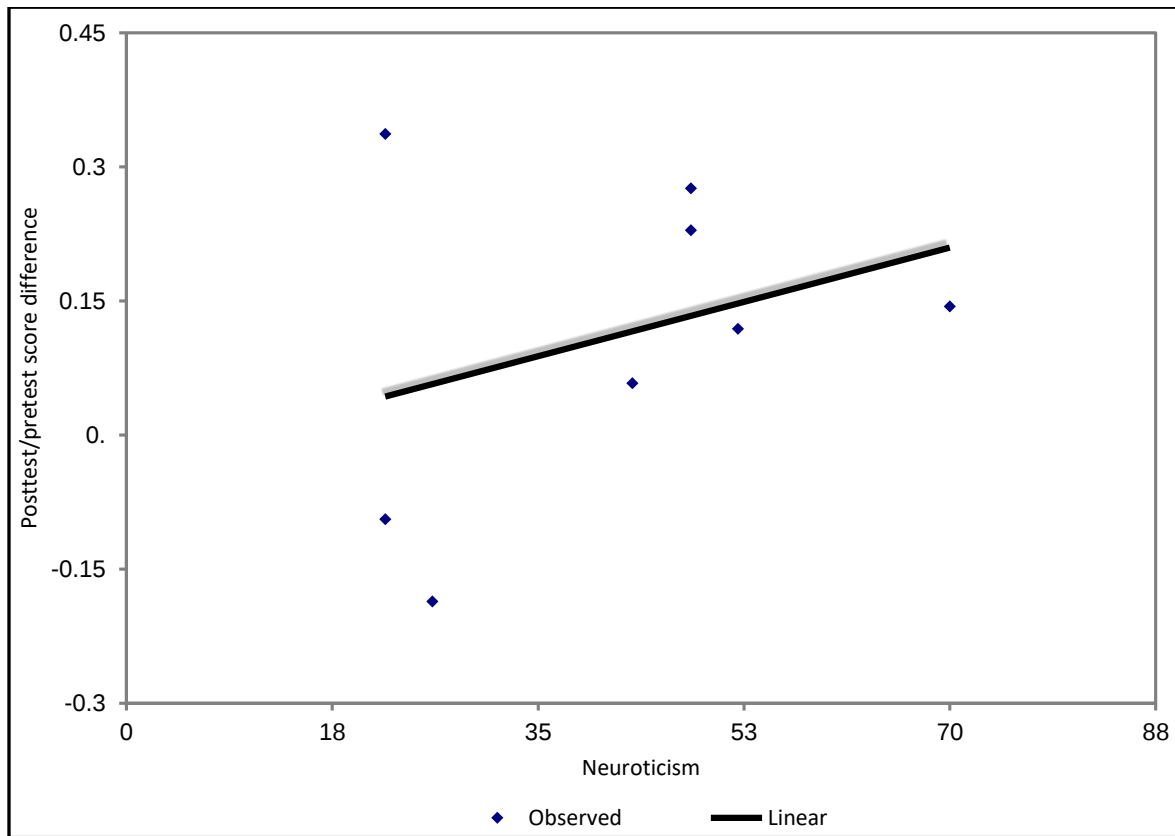
plots of the global personality traits and the pretest to posttest score differences were plotted for a visual representation of the relationships, and a trendline was plotted to estimate the pattern of the relationship.

Figure 8

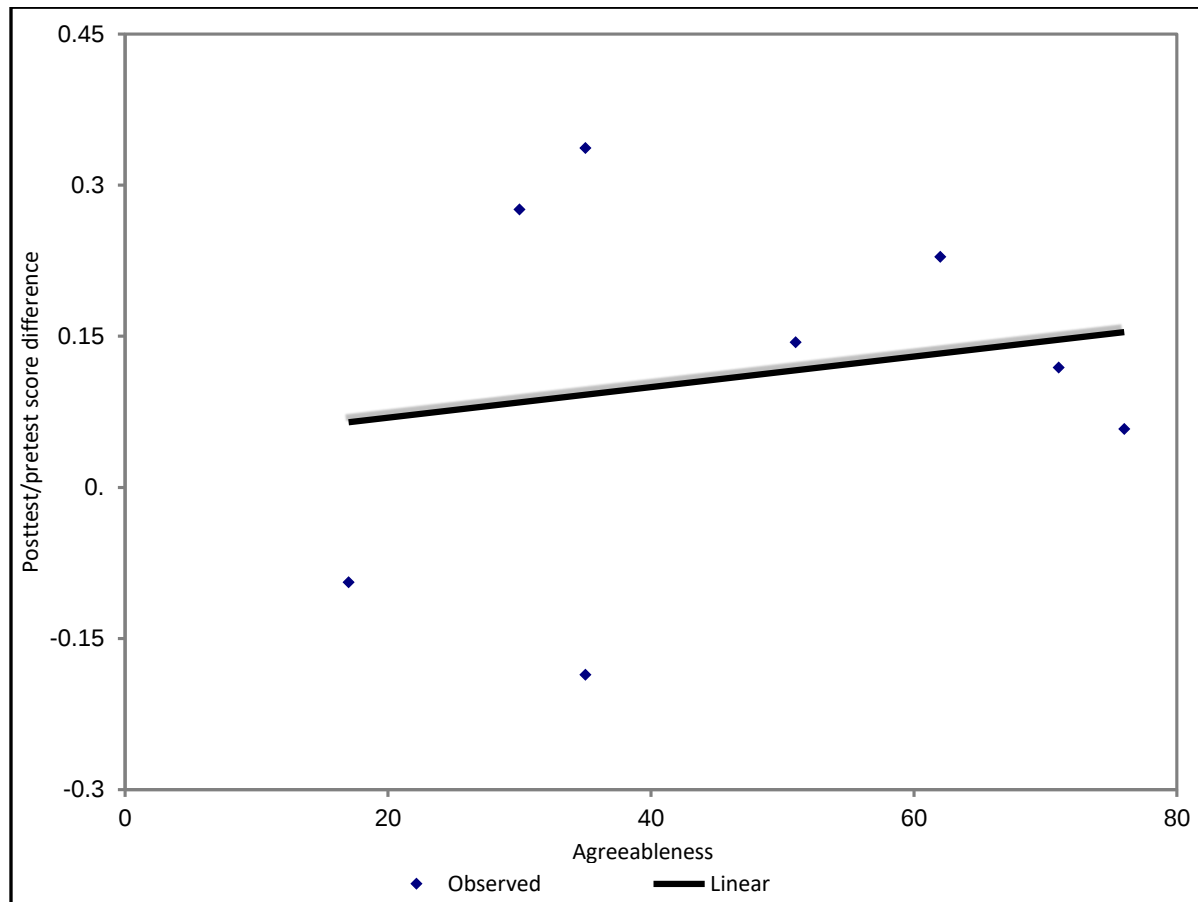
Extroversion Scatter Plot



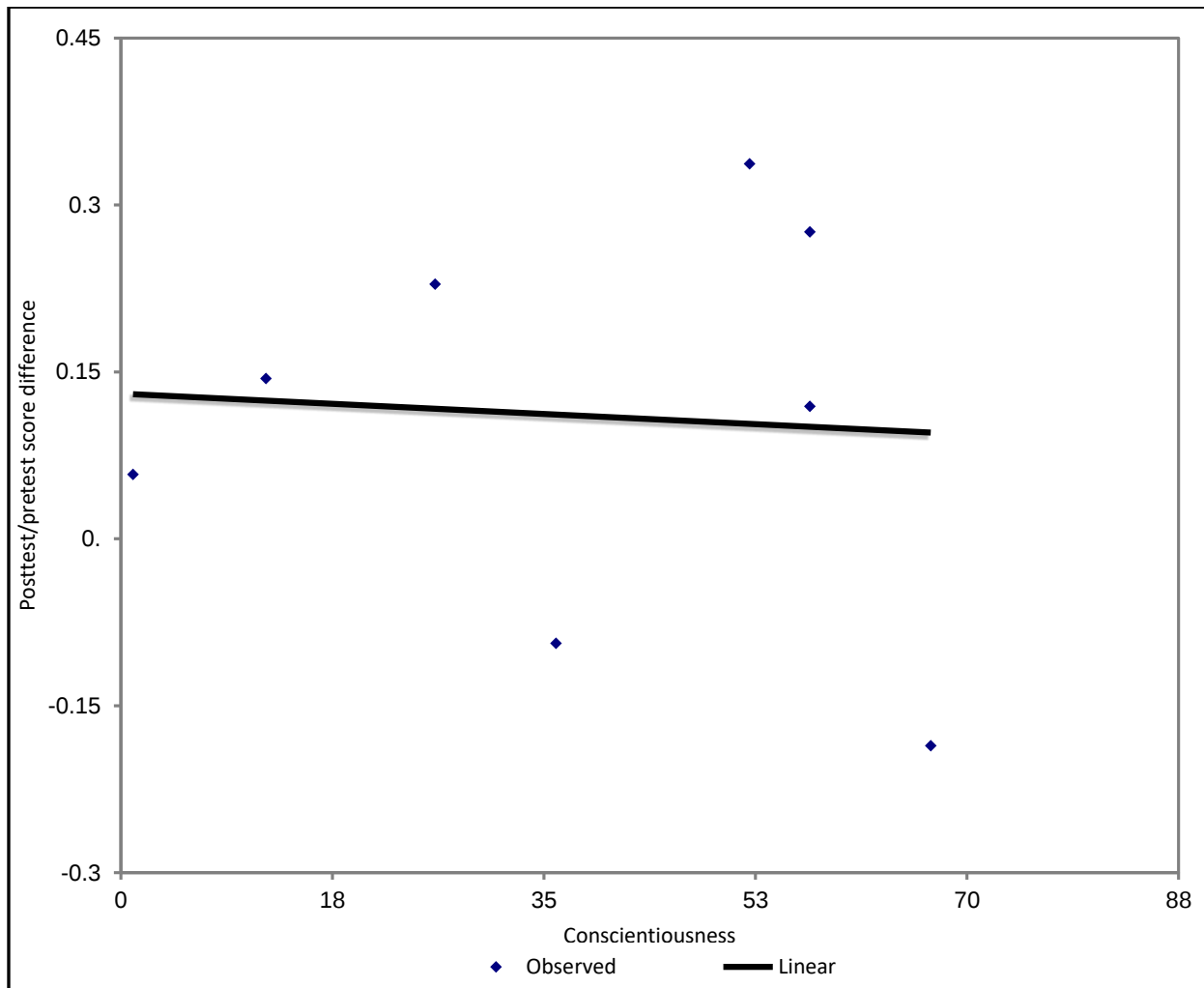
The trendline on the scatter plot in Figure 8 appeared to be horizontal, and combined with the value of the correlation coefficient, this suggested that extroversion did not have a relationship with gains in accuracy of student participants' past tense use.

Figure 9*Neuroticism Scatter Plot*

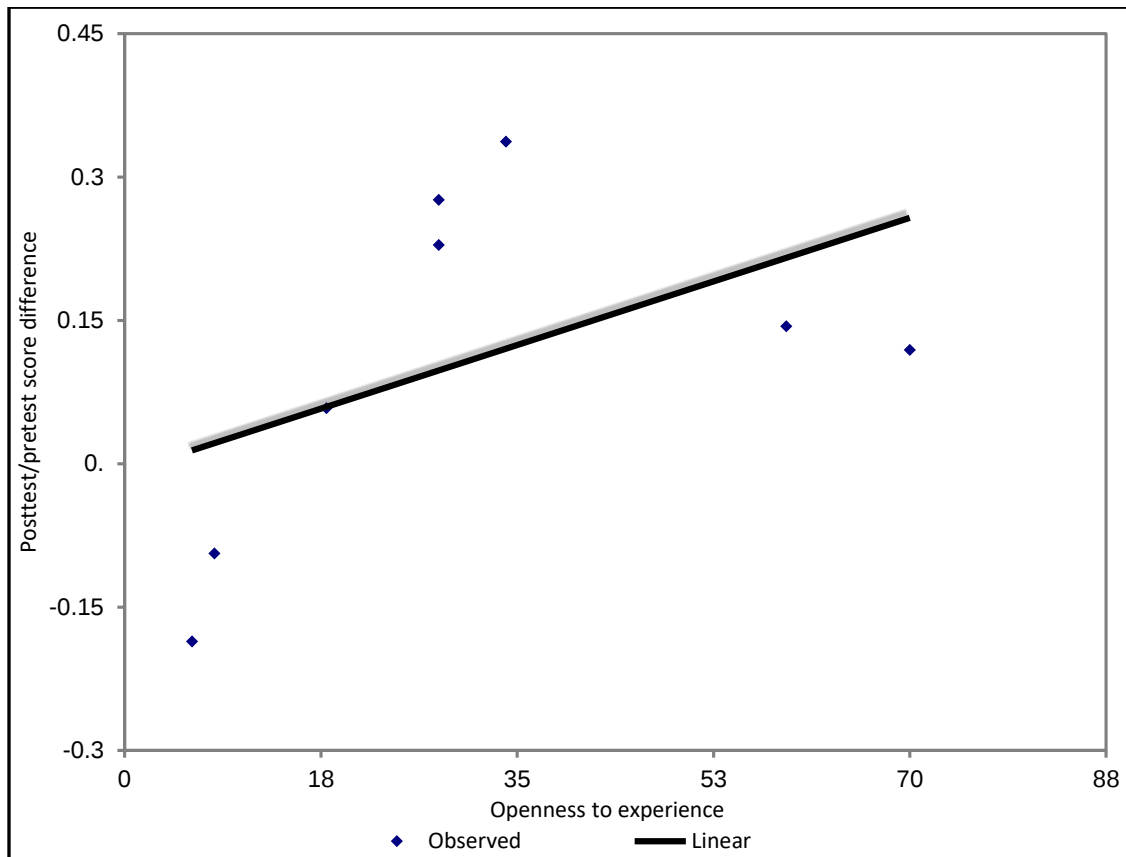
The trendline on the scatter plot in Figure 9 appeared to show that as neuroticism increased, the pretest to post score difference increased as well, meaning the accuracy of past tense use increased, and combined with the value of the correlation coefficient, this suggested that neuroticism may have had a positive relationship with gains in accuracy of past tense use.

Figure 10*Agreeableness Scatter Plot*

The trendline on the scatter plot in Figure 10 appeared to indicate that as agreeableness increased, the pretest to posttest score difference increased as well, meaning the accuracy of past tense use increased. While there is a slight slope to the line, the value of the correlation coefficient suggested that agreeableness did not have a relationship with the difference in pretest to posttest scores of this study's participants.

Figure 11*Conscientiousness Scatter Plot*

The trendline on the scatter plot in Figure 11 appeared to be horizontal, and combined with the value of the correlation coefficient, just as with extroversion, this suggested that conscientiousness did not have a relationship with the difference in pretest to posttest scores of this study's participants.

Figure 12*Openness to Experience Scatter Plot*

The trendline on the scatter plot in Figure 12 appeared to indicate that as openness to experience increased, the pretest to posttest score difference increased as well, meaning the accuracy of past tense use increased. This, combined with the value of the correlation coefficient, may suggest that openness to experience was positively associated with gains in past tense accuracy. Also, it is important to note that the coefficient for openness to experience showed the largest effect of all five traits, and the lowest p value, suggesting openness to experience may have had the strongest relationship between personality trait and past tense use accuracy gains.

Another important consideration was if the students with different personality traits started off with different levels of accuracy. Spearman correlations between personality traits and accuracy scores on the pretest were calculated and Table 14 shows the results.

Table 14

Correlations of Pretest Accuracy Scores and Students' FFM Trait Scores

Personality Trait	Spearman Correlation	Two-tailed <i>p</i> value
Extroversion	- .259	.500
Neuroticism	.160	.680
Conscientiousness	- .009	.983
Agreeableness	.134	.730
Openness to experience	- .273	.477

It appears that students with different personality traits did not start off with different levels of accuracy.

Overall, the above analyses indicate that the amount of CF is not related to personality in the same manner that personality is related to accuracy gains, so it adds support that it was the CF that led to these gains.

Influence of Other Variables

In this section, analyses of a number of variables that may have influenced the outcome measure findings is reported.

Length of Speaking Turn. Statistical analysis indicated that, overall, speaking turn length of student participants did not have an impact on their accuracy gains. When outcomes and pretest length of speaking turn were correlated, the result indicated a non-significant, low

positive correlation (Spearman $\rho = .262$, $p = .531$), with the trendline being virtually horizontal. When outcomes and posttest length of speaking turn were correlated, the result was also not statistically significant, but the correlation (Spearman $\rho = -.214$, $p = .610$) indicated a negative relationship with a relatively steep trendline: the longer the speaking turns, the poorer the posttest outcomes.

Different personality traits did have a relationship with speaking turn length. There was a significant correlation between extroversion and speaking turn length. Extroversion correlated to pretest turn length (Spearman $\rho = .667$, $p < .050$) and to posttest turn length (Spearman $\rho = .976$, $p < .001$.) This indicated that the higher the extroversion the longer the speaking turn length.

There were also two interesting correlations, approaching significance, between neuroticism and pretest speaking turn length (Spearman $\rho = -.345$, $p = .364$), and agreeableness and pretest speaking turn length (Spearman $\rho = -.393$, $p = .295$). Both correlations suggested that the higher neuroticism and agreeableness scores were, the shorter the pretest speaking turn length was.

Number of Obligatory Contexts. Another important consideration was how the numbers of OCs in each student's speech were related to accuracy scores. Table 15 shows the number of OCs for each student.

Table 15*Number of OCs for Each Student Participant*

Student	Total OCs	Pretest OCs	Posttest OCs
Hope	30	30	Not Available
John	21	2	19
Lance	36	14	22
Lucy	50	26	24
Nora	97	47	50
Rana	31	21	10
Rose	49	28	21
Sara	43	5	38
Tim	29	14	15

The pretest number of OCs was correlated with pretest accuracy scores (Spearman $\rho = .395$, $p = .293$). The posttest number of OCs was correlated with posttest accuracy scores (Spearman $\rho = .500$, $p = .207$). The result showed some indication that more OCs were associated with more accuracy on both pretest and posttest, but these relationships did not reach significance. Total number of OCs were correlated with pretest to posttest change in accuracy (Spearman $\rho = .071$, $p = .867$), indicating that there was no relationship between total number OCs and accuracy gains.

Also, student speaking turn length and the number of OCs were correlated for both the pretest and the posttest to see if there was a relationship between these variables. The pretest correlation (Spearman $\rho = -.025$, $p = .949$) indicated no relationship between speaking turn length and number of the OCs on the pretest. On the posttest (Spearman $\rho = .452$, $p = .260$.)

there was a suggestion that the longer the speaking turn length the more OCs were present, but this relationship did not reach significance.

Amount of CF Provided. It was hypothesized that the number of instances of CF provided to each participant may have had an impact on their accuracy scores. In order to examine whether the amount of CF made a difference, correlational analysis was conducted to examine the relationship between the number of instances of CF provided and the pretest/posttest change in accuracy (Spearman $\rho = -.452, p = .260$). The result suggested that getting more instances of feedback was associated with less improvement from pretest to posttest, but the relationship did not reach significance. To understand why this was the case, the number of instances of CF provided were correlated with students' pretest accuracy scores (Spearman: $\rho = -.323, p = .435$), which indicated that more instances of CF feedback were provided to those students who were already lower in CF accuracy on the pretest, but this relationship also did not reach significance.

It is possible that the number of instances of CF provided may explain the relationship found between FFM traits and accuracy gains in this study more than personality differences. To verify this, the number of CF instances provided to each student were correlated with their scores on the personality test. Table 16 shows the results.

Table 16*Correlations of CF Instances Provided and Students' FFM Trait Scores*

Personality Trait	Spearman Correlation	Two-tailed <i>p</i> value
Extroversion	.405	.320
Neuroticism	- .048	.910
Conscientiousness	.156	.713
Agreeableness	.240	.568
Openness to experience	- .464	.247

The results indicated that the number of instances of CF provided related to the FFM personality traits very differently than the change in accuracy findings.

SR Instances Played. The number of SR instances played for each participant were considered as a potential variable that may impact the study findings. The number of SR instances played were generally the same, with one exception. The exception was Rose, who was more mature than other participants, self-aware, and very interested in this study. The increased number of instances played for her was a function of two factors: her talkative nature in class and longer speaking turns that allowed for more data to be collected for her than others, and the fact that she was willing to keep talking during the individual interview and was not limited by time or patience because she was very interested and engaged in the subject matter. This possible limitation did not appear to have an impact on the study findings other than allowing for deeper and more intricate knowledge of Rose's case.

Overview of Findings for Research Question 1: Personality and CF Outcomes

Overall, quantitative data analyses revealed that the relationship between personality traits (as captured by the Goldberg's Big Five-Factor inventory), and the participants' ability to

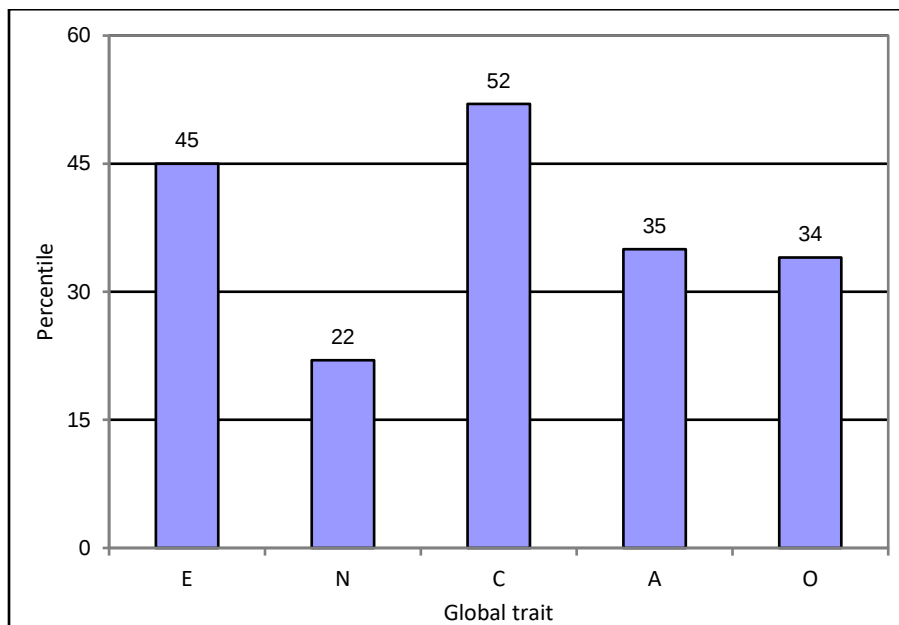
improve from CF (as measured by the change in accuracy from pretest to posttest in past tense verb use) was not statistically significant. However, the analyses of quantitative data were handicapped by a very small sample size that made obtaining any statistically significant results unlikely. Nonetheless, the scatter plots suggested that some personality traits may have had a relationship with accuracy gains. Whereas extroversion, conscientiousness and agreeableness did not appear to have any relationship with accuracy gains, the trendlines on the scatter plots suggested that openness to experience and neuroticism were traits of interest and merited further attention during qualitative analysis. Those who scored higher on openness to experience and neuroticism showed more improvement in accuracy. Thus, these traits, and how they interacted with student response and experience of CF, were examined further during qualitative data analysis.

Research Question 2: Response to and Experience of CF - Individual Profiles and Emergent Themes

In responding to this question, the individual cases and then the more general emergent themes from the data are presented below. By creating individual profiles for each participant, I combine correlational and quantitative findings from the first portion of the chapter with qualitative methodology to build a more holistic picture of each participant and answer the second research question.

Lucy

Personality. Lucy was a Saudi woman in her late teens. She reported having 7 years of instructed English experience. Figure 13 shows her personality test scores.

Figure 13*Lucy's Personality Test Scores*

Lucy admitted to not being introspective and not having given any consideration to defining her personality traits, but upon further encouragement, she eventually described her personality as, “I’m grateful,” and “I love to be number one.” She also said that she was a visual learner, sociable, that she liked to try new things, that she loved “crazy things,” which she described as daredevil roller coasters, fast cars, and bungee jumping. Her competitive nature was a key part of her personality and a source of pride for her. She explained, “I don’t know, my mother taught me that from my childhood, that you are smart and you have to be number one.” As a result of this, since she was a little girl, she had “puts my efforts into being number one.” She said that she was very happy that her mother instilled this trait in her, and as a result of that, she was always “fighting the life to be number one.” She added that this attitude has had a positive impact on her life, because she said that she was “a go-getter”: If she set her mind on something, she would reach that goal.

These self-reported personality traits were reflected in her personality test scores. Observations of her classroom interactions with other students showed that she had a friendly demeanor, which balanced out her self-reported competitiveness, and resulted in a slightly lower than average agreeableness score. Her daredevil nature was reflected in her openness to experience score.

Lucy's extroversion score was not very high, slightly below average. This was supported by her description in the interview, that despite being sociable, she reported that she liked to interact with her family, but not with strangers: If she did not know someone, she would not talk to them freely.

Her neuroticism score was quite low, and she said that this was accurate because she was very emotionally stable. In fact, she said that she "doesn't get sad easily, ever." She revealed that even when feeling stressed or anxious, she tries to relax because she "doesn't like to sit alone and be sad," and that she was skilled at managing her emotions.

Her emotional stability was indirectly supported by her interview comment that she did not get discouraged by failure, saying that "for me, if I get low marks, this makes me work harder," which is indicative of resilience. Her low neuroticism was also supported by how she said she dealt with the discrimination she frequently faced as a Muslim. She described a number of instances when she had been discriminated against based on her religion, and one instance when she was physically assaulted. Her emotional stability was evident in her response to these traumatic events, because she chose to try and "be the best representative of her country and religion," and not hide or get discouraged in the face of such treatment. In fact, she said she felt "responsible to change these ideas... Even if you change just one person, that's good, because this person will talk to another person, will talk to another person."

Lucy's agreeableness score was lower than average. She said that she thought this score was "not fair" because she said, "I think I am kind, I am smiling all the time"; she said that even when she was sad or stressed "I don't show that to people because I think that negative energy can transfer to another person." She also shared that she had a very strong sense of collective responsibility. She said that she believed that "we are a mirror for our society," and she considered herself a mirror, a representative for Islam and for Saudi Arabia. She believed herself to be responsible for the impression others will have of her country and her religion based on their interactions with her. Therefore, she said she believed that it was her responsibility "to represent our country and our religion in a good way." All these qualities would score high on the trait of agreeableness.

When I explained that the reason for her lower agreeableness score was her competitive nature, she countered that by saying that one can be competitive "in a good way," and said life would be boring if we were not competitive with each other. In fact, she argued that if one were not competitive, they would not be motivated to do their best to reach their goals. She added that she did not show people that she was competitive or that she was competing with them, because "my competitiveness is not all with other people but with myself."

Her conscientiousness percentile was about average, and Lucy thought that it should be higher. Her openness to experience score, while lower than average based on established population norms, was one of the higher scores in the class. She believed it to be "too low," because it should have been higher to reflect that she "likes critical thinking, but not on all topics." She said that when she knew something about a topic she would "talk a lot about it and I would have a lot of critical thinking in that case." Thus, overall, while she said her scores on the

traits of extroversion and neuroticism were accurate, in her opinion, agreeableness, conscientiousness and openness to experience scores should have been higher.

Class Performance, Response to, and Experience of CF. Lucy's pretest accuracy of past tense use ratio score was .54. She took longer speaking turn lengths than other students. She received seven instances of CF (she missed two treatment days because of absences). Her posttest accuracy score was .88, which gave her a pretest to posttest past tense accuracy change improvement of 63%.

When it came to different types of oral CF, Lucy did not appear to notice most of her corrections. When she was corrected with a prompt, during stimulated recall she revealed that she did not notice it. In fact, when I asked her about the teacher using different types of CF techniques, after some consideration, Lucy said that the teacher "just repeats the same sentence," indicating she only remembered the explicit recast corrections. When I specifically asked her about prompts, she said that she did not notice the teacher using prompts at all.

Stimulated recall revealed that Lucy sometimes noticed explicit recasts, and sometimes she did not notice them either. At one point when corrected with a recast, she told me during stimulated recall that she thought the teacher was asking her to explain what she was saying and revealed that she did not notice that the teacher was trying to correct her grammar. The one recast that she noticed did not have the desired effect because she said she thought she had been correct and should not have been corrected. In another instance, she did not notice two recasts in a row. For both recasts, she reported during stimulated recall that she had not noticed the grammar correction at the time. Lucy explained that although she did not notice these corrections, she "have it in my mind that I made this [past tense] mistake before."

Lucy said that she did not feel embarrassed when she was corrected on her speaking. She was very emphatic about this, saying, “No, no, no, never! I want the teacher to correct me every time.” In fact, she said that she got excited when this happened. This may be related to her stated low neuroticism, and thus, high emotional stability, and her report that she did not get discouraged when she made errors. Moreover, she said that as she listened to others speak, if the teacher was not correcting them, she corrected others’ errors in her mind. When asked if the kind of CF the teacher provided in this class was effective, she gave an emphatic yes, and when asked what the teacher could do better, Lucy said that she would prefer it if the teacher corrected more: “I think she can do it more with the students. Because she corrects us but not always.” When asked directly which type of CF feedback she would prefer to maximize feedback effectiveness, she said that she believed both prompts and recasts could be effective, “Sometimes we already correct ourselves but sometimes we need someone to correct us.” However, she clearly expressed that she would not want to be corrected explicitly, by saying, “no, [the recast] is better than saying ‘no’ or ‘no, that’s wrong.’”

Despite the fact that she did not appear to notice the vast majority of CF on her speaking, it appeared that receiving CF had influence on her classroom behaviour. On the third day of treatment, she began making self-corrections on her past tense usage. In fact, she even noticed this herself during stimulated recall. When asked why she corrected herself, she said it was because she knew that she was speaking about the past, and if she ever noticed a mistake, she would correct herself. She explained that the teacher corrected her “many times,” and she “has this in my mind,” saying, “yeah, maybe because the teacher correct me.” There are two possibilities to explain Lucy’s case, where she did not notice most CF, yet it appeared that her behaviour was influenced by CF. Either she was influenced by CF subconsciously, regardless of

the fact that she did not notice the corrections, or she was influenced by the correction of others in the classroom, and the CF served as an awareness-raising experience for her.

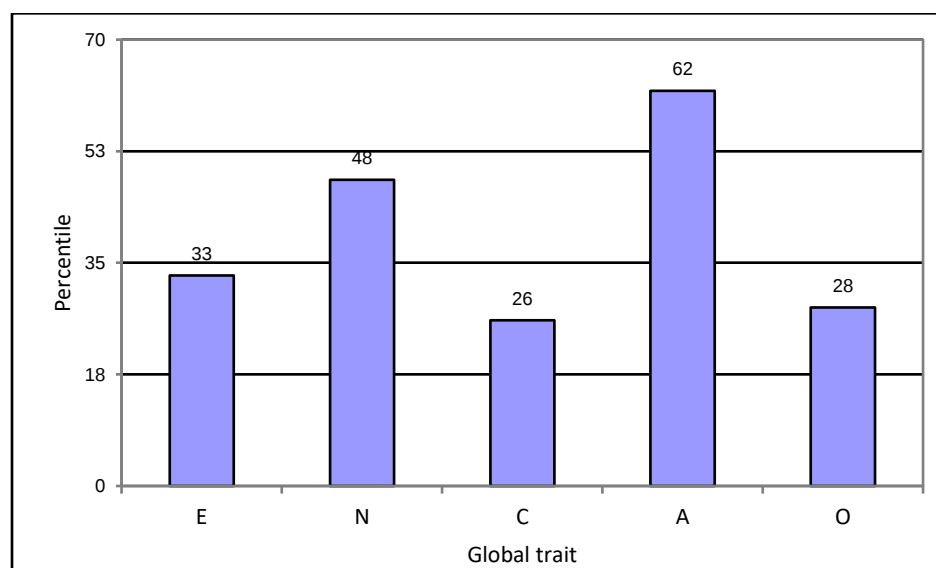
Overall, Lucy's case highlighted the awareness-raising function of CF, and the value of the correction of others. Her openness to experience and risk-taking personality may have had an association with her substantial improvement from pretest to posttest. Meanwhile, her competitiveness may have influenced her reaction to CF, making her unwilling or unable to notice her errors, and disagreeing with the teacher's corrections. Her low neuroticism may have influenced her lack of embarrassment and lack of discouragement when confronted with her errors.

Tim

Personality. Tim was in his late teens and from China. He reported having 8 years of instructed English experience. Figure 14 shows Tim's personality test scores.

Figure 14

Tim's Personality Test Scores



When asked to describe himself, Tim said that he was “shy,” “lazy,” and “I like to help others.” His test scores reflected all three of these self-reported personality traits, as illustrated by his low scores on extroversion and conscientiousness, and his high agreeableness score. He elaborated his description by saying, “I’m a shy boy” and revealed that he preferred to listen to others rather than share his thoughts. He said that he had a difficult time motivating himself on his own, that he could not make himself work, and instead, he played video games. He added that working with others was motivating for him. However, as evidenced by the fact that his conscientiousness percentile was not extremely low, he clarified, “I said I’m lazy but if some test or presentation is important, I will prepare it carefully.” Furthermore, he emphasized that social relationships were important to him (as supported by his agreeableness score), explaining, “If I don’t understand some question, I may ask my friends. But I don’t like to ask teacher.”

Tim said that his low score on extroversion was accurate because he was “quiet” and “I like to stay at dormitory.” He believed that this trait had a positive impact on his learning because, as a result of this predisposition he usually engaged in only two activities: either playing video games or studying. Thus, he explained that his introversion helped him with language-learning because when he was bored, he would study, because going out was not a desirable alternative for him.

His neuroticism score was slightly lower than average, and he said that this was accurate because he was not very anxious. However, he did indicate that he felt de-motivated and dejected by failure, when he admitted that after he failed a class, he did not want to study anymore. Moreover, he also revealed that he sometimes struggled with controlling his emotions, “I do not like to control my emotion, feelings or emotion are always written on my face.”

Tim's agreeableness percentile was relatively high, and he said, "This one is right." He said that he was "friendly", and this helped him in his studies because he was included in the WeChat group with other Chinese students and could ask them any questions he may have had for help with homework.

Tim's conscientiousness score was low, and he reported that this was also accurate because he was disorganized. He said, "My study ways are disorganized. I don't have plan for my study and just finish my homework depends on mood." He also admitted that he habitually procrastinated: "I like to finish homework right before the due deadline."

His openness to experience score was low, and again, he said that this was accurate because he liked to do everything the way he always did them: He explained that he always studied in his preferred way and did not like to change it. Overall, Tim's interview revealed that his personality test scores were reasonably accurate.

Class Performance, Response to, and Experience of CF. Tim's pretest accuracy of past tense use ratio score was .57. Overall, he took the shortest speaking turns compared to the other students. He received 12 instances of CF. His posttest score was .80, which gave him a pretest to posttest past tense accuracy change improvement of 40%.

Tim said that he was neither distressed, unsettled, nor embarrassed when his speaking was corrected in front of the whole class. He explained, "No [definitive]. No embarrassed. I think it's normal." Although, when he was corrected three times in a row he said that he was bothered "a little." This may be a reflection of his slightly below average neuroticism scores: largely unbothered by evidence of some errors, yet in the face of multiple errors, and being unable to take on the teacher's guidance immediately, his discouragement in the face of failure begins arises. Tim reported that his average emotional stability had an influence on his response

to correction: “When I made mistakes with easy questions, I may feel embarrassing and cannot answer my question correctly and cannot follow teacher’s correction. When I answer it correctly, I feel relaxed.”

He also said that “because of my personality,” likely referencing his high agreeableness and willingness to reach out to others for help, he was not bothered by being interrupted, either by the teacher or by other students. Tim also believed that his high agreeableness impacted his response to CF because he wanted to please the teacher: “When teacher correct my answers, I will try my best to get the right correction because I do not want my teacher disappointment.”

Tim also described how his introversion affected his response to oral CF by explaining that “because I am quiet when teacher correct my answer, I accept the correction, but usually I do not want to ask why.” Tim revealed that he was open, flexible, and adaptable to any type of CF, and not set in his own ways about oral CF. He said, “I am not a traditional one, so I do not mind what way the teacher uses to correct my speaking,” indicating that he believed he was open to different kinds of correction due to his openness to experience. Finally, Tim said that his conscientiousness pushed him to make sure he answered correctly once he realized that he had made a mistake: “When teacher points out my grammar mistakes, I will answer it again after I am sure it's the correct one, I will ask my friend for help. If I am not sure it is correct or not, I may say I do not know.” This quotation highlights his desire for accuracy and being open to correction, as well as his strong interpersonal relationships and willingness to ask others for help.

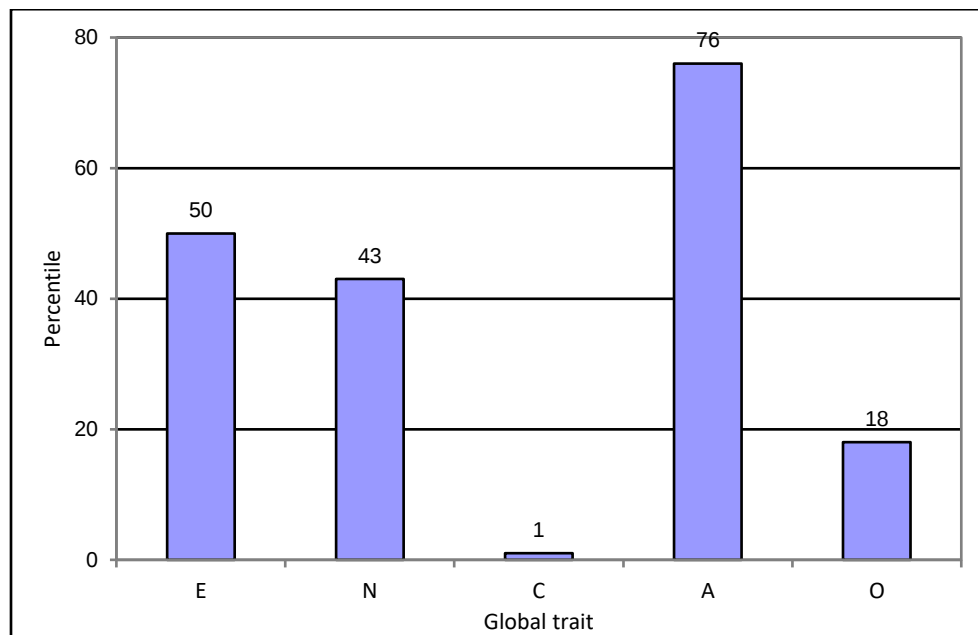
As is stated above, Tim said that he was “neutral” towards all types of error correction, and stimulated recall revealed that he noticed all three types: explicit correction, prompts, and explicit recasts. He reported that all three types of feedback helped him. However, over the course of the stimulated recall procedure it emerged that 1) he had a stated preference for

prompts, and 2) his actual experience of prompts was finding them more confusing than the other CF types. For example, on one occasion when being corrected using a prompt, he said that while he realized that the teacher was correcting his grammar, he did not know what she was actually saying, and which particular part of grammar she was correcting. Despite this, when asked whether he would prefer to have to produce the correction himself or have the teacher provide him with an answer, he said “She ask me,” because, as he explained, he wanted to correct his error by himself “in relation to earlier mistakes.”

Overall, Tim’s case highlighted, as in Lucy’s case, that low neuroticism may be behind his lack of distress and embarrassment when faced with oral CF, yet to a point, as he revealed that when corrected three times in a row, he began to feel discouraged. His case study also suggested that high agreeableness made him open to interruption and correction from both the teacher and other students. He also indicated that his openness to experience made him open and flexible to different types of CF, and his introversion, which is associated with more independence, may have been behind his preference for prompts.

Sarah

Personality. Sarah was a Chinese woman in her early twenties. She reported having over ten years of instructed English experience. Figure 15 shows Sarah’s personality test scores.

Figure 15*Sarah's Personality Test Scores*

Sarah scored in the 50th percentile on extroversion, and her description of her personality suggested that this score was accurate. She said that before she came to Canada she was quiet, and “not easy-going,” but now she was a little bit more talkative because, in Canada, she tries to talk to people in English, and ask questions or explain herself. She said her extroversion depended on who she was talking to: She preferred to stay in her room alone, but if she did go out, she preferred to be with her friends. She said, “I think I am the person who is between quiet and active.” This description is prototypical of people who score in the middle of the continuum on the trait of extroversion. Sarah also revealed that her level of extroversion played a role in her response to CF because “sometimes I would like to think by myself and ask why [I received that correction], but sometimes I would let it go.”

Sarah's neuroticism score was slightly lower than average. She said, “most of time I can control my emotions, but I still express on my face subconsciously.” This was supported by

evidence from observations and video recordings, of her smiling and laughing in response to correction, but when asked during stimulated recall about it, she revealed that she had not realized that she was doing it.

Sarah also revealed during the interview that she was easily offended, but once she had an opportunity to process it, she was able to let go of her offense quickly too. Thus, while she exhibited some neuroticism by getting offended quickly, her being able to regulate her emotions after some reflection supported her low neuroticism score. Sarah said that her neuroticism qualities had a negative influence when she was learning something new: she said that sometimes if she did not understand something she would fake along, and sometimes it distressed her when she did not understand, and because of her distress, she did not want to ask for clarification.

Sarah's conscientiousness score was extremely low, and she confirmed that this was accurate. She explained, "I don't like making things order or organizing well." She added that she frequently planned to do her homework in the evening, but then did not manage to find any time to do it. She exclaimed, "I think I'm lazy!" She said that she believed that her low conscientiousness affected her negatively "in a big way." She explained that she always experienced this problem when she had to submit online homework: She gave herself more time to do it, but always ended up doing it in a rush. She explained, "Because I think I don't have too much patience to do it anyway." She said that conscientiousness should be helpful to her when it comes to CF effectiveness because "I try to remember it [the correction], and not to do that again." However, because her conscientiousness was so low, it may explain why she forgot or missed corrections and lost focus easily.

Sarah's agreeableness percentile was quite high. She said that this was accurate, as she possessed all the traits that agreeableness encompasses. Moreover, she believed that her high agreeableness had a positive effect on her learning. She explained, "I prefer to cooperate it..., I can accept others' different opinions."

Finally, Sarah's openness to experience score was relatively low. She believed that this was an accurate description of her personality. She explained that she did not like to experiment, "It's right. If I like to eat food, I will continue to eat it." She explained that she eats the same food until she is sick of it, and then she chooses another one. She believed that openness to experience could have a positive impact on her learning because she liked to consider others' points of view and tried to keep an open mind, thinking "why can they think of that but I can't." Being exposed to new things allowed her to overcome her stereotypes, she believed. However, despite this, she described herself as "traditional," explaining, "I study in a same way along one section, and don't want to change it." She believed this trait influenced her response to correction by making her less open to change.

Class Performance, Response to, and Experience of CF. Sarah's pretest accuracy of past tense use ratio score was .60. Overall, she took shorter speaking turn lengths than other students. She received 22 instances of CF. Her posttest score was .66, which gave her a pretest to posttest past tense accuracy change improvement of 10%.

Sarah revealed herself to be a student who was embarrassed by correction but still receptive to it. She said that when a teacher corrected her, "At first I think maybe embarrassed but if they continue to do that, I think we can feel ease of that, be at ease with it...but I don't think it offends me."

The idea of being embarrassed by making an error, or by being corrected frequently, emerged during her stimulated recall responses. Firstly, Sarah admitted that she tried to avoid errors. In response to a recast (third one in a row) she explained her reaction:

Sarah: “Embarrassed, I think, because I always forgot past tense, and maybe I feel sorry.”

Interviewer: Sorry for yourself?

Sarah: “Yeah. The teacher and myself.”

Sarah said that CF in general was helpful for her because it served as a reminder to use the past tense. She explained, “We should use the past times although we always forgot them”. She elaborated that because the teacher “corrected me many times on the past tense,” she would now remember to pay attention to past tense. Furthermore, she revealed that as a result of the teacher’s focus on it, now she was more conscious of the past tense, and mentally asked herself if she needed to use the past tense more. Sarah confirmed in her interview that, in general, she had been trying to avoid the past tense. She said that she avoided using past tense even in ‘daily talking,’ and this statement was supported by a low number of obligatory context instances in her pretest. Now, however, due to CF treatment, she reported that “I pay attention to the past tense more.”

While Sarah noticed the teacher correcting students’ spoken grammar in the classroom, she said she did not notice any particular techniques that the teacher had used, and she only remembered that the teacher said “I think you mean...” and then provided the answer. Thus, it appears that Sarah did not notice any prompts. When asked if she thought the technique the teacher used was effective, she responded, “In short time, it doesn’t but long time, it does, because we pay attention to the grammar.”

There was further evidence that prompts may not have been helpful for Sarah. During stimulated recall, she reported that she felt much more confused by CF when a prompt was used: Part of the reason for this was that she did not recognize the prompt as a correction, saying that because the teacher “did not correct me at the time [when she used a prompt] and I confuse more because she explain me and I didn’t understand, I feel much more confused, yeah, at the time.” As a result, she said that she felt confused and a little bit embarrassed. In another SR instance when a prompt was used to correct her, she immediately said that she had been confused at this kind of correction. She said that she did not know why she could not use the present tense there, and could not understand, at the time, what the error was. Again, this suggested that prompts were an ineffective type of CF for her.

Meanwhile, in contrast to prompts, Sarah did notice explicit correction, and she revealed that it shocked and distressed her. She explained, that if teacher said “No. No. No this way you have to do something others. Completely no,” it would make her feel “nervous and unstable” because when people say no to her it initially shocks her. This may be related to her stated trait of being easily offended and embarrassed at making errors. Furthermore, she frequently reported during stimulated recall that when she was interrupted by a correction, she forgot what she was going to say, which suggests a connection to her low ability to focus due to her very low conscientiousness.

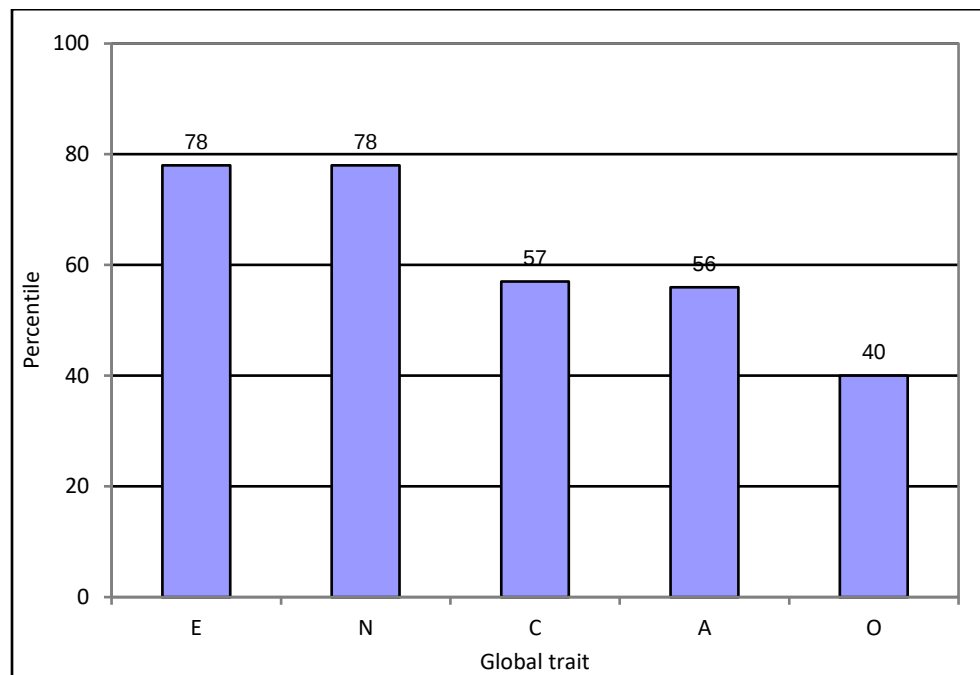
Sarah also noticed explicit recasts and said that she believed them to be an effective method of delivering CF to her. She said, unlike prompts, when she had to think of the correct form herself, she believed that recasts were more effective: “I think it’s correct me directly. I know why I do, why wrong.” Sarah reported that the CF techniques that required her to think of the correct form herself “some [techniques] may confuse [me], because I don’t know why.”

Thus, it appears that due to her low ability to focus because of her extremely low conscientiousness, prompts were ineffective for her, and due to her sensitivity to being bluntly corrected by explicit correction, explicit correction was not desirable, thus, explicit recasts would be the most helpful type of CF for Sarah.

Overall, Sarah's case highlighted the detriment of very low conscientiousness and low ability to focus because she forgot or missed corrections. Her low openness to experience and being less open to change may have been associated with her very modest pretest to posttest improvement. She also revealed herself to be someone who was embarrassed by correction but still receptive to it, possibly because her neuroticism was low enough for her to still be able to regulate her negative emotions quite effectively.

Hope

Personality. Hope was a Saudi woman in her early twenties. She reported having fifteen years of instructed English experience. Figure 16 shows Hope's personality test scores. When asked to describe her personality, Hope said, "I think I am sociable, I am sensitive sometimes, I am protective. Sometimes I am so energetic, so active. And sometimes I get so sleepy, so it depends on the situation. And I get motivated by other people easily."

Figure 16*Hope's Personality Test Scores*

Hope scored high on extroversion but revealed in her interview that she thought that her score should have been more in the middle range. She explained, “I am sociable, that’s correct, but I think sometimes I have private moments to solve some problems.” In fact, she said if she were always sociable, it would affect her negatively saying, “I lose energy, I lose myself, I lose my time. So I think balance, you have to balance.” Her belief that being sociable could negatively affect her work was not in conflict with her score on the test. Since personality traits are seen as a continuum, her dominant extroversion characteristics do not negate her desire to be alone sometimes. Losing energy in response to social interaction may indicate, however, that she was more introverted than the score initially suggests, since that is one of the key features of introversion.

Regardless, many of her described traits suggested high extroversion: she said that she spoke a lot with strangers, and observations showed that she was the first to speak and address the researcher observer when I came into the classroom as a stranger to recruit student participants. Another trait that suggested high extroversion was that she said she was frequently placed in leadership positions. However, she also suggested that she did not like to be in charge or be responsible for a group:

I don't love to be in charge...Even when I was in my own country, I don't like my teachers to put me in charge... Actually, I was in charge, I arranged a Ramadan event this weekend and I felt awful, completely awful.

Not wanting a leadership role may suggest low assertiveness (which is a low extroversion trait), and this would reduce her extroversion score. Nonetheless, this attitude speaks only to her preference, and not her actual behaviour. In fact, while she may have disliked it, she still had recently arranged an event for Ramadan, thus, Hope did exhibit assertiveness in her behaviour.

Hope's neuroticism score was high. She believed that it should have been lower, because she considered herself emotionally stable. She said, "I can control it, can control it easily," and if she ever thought that she was too sensitive, "it's easy for me to fix myself." However, in contradiction to these statements, she later acknowledged that she frequently felt sad, because she had lost family members, or because she did not have a particular major, and because she felt uncertain about her future. Nonetheless, she insisted that she could "control it" and when she is depressed and does not want to do anything, she "right away" goes to the gym, tries to be active. Thus, her statement showed that Hope had some coping strategies to deal with her emotions, but this did not dispute that she tended to experience these emotions strongly.

Hope also said that she believed that her neuroticism had a negative impact on, both, her learning, and her ability to benefit from CF. She explained, “If it [the score] was really, really low, I would learn [*snaps fingers*] faster. It would be even faster if I didn’t get disappointed sometimes, oh I failed, oh I don’t know.” She said that when she feels anxious, sad or disappointed, she loses motivation, “I stop progressing. I stop [trying] for a while, like two, one week, weeks and then I continue. I remember, I motivate myself.”

In her interview, she described several situations that highlighted her high neuroticism and poor emotional control. She described how her emotions frequently interfered with her school performance. She said that when she was writing a test and felt distracted by something, “I don’t try to answer the question, I feel really upset... and felt like I didn’t do anything right with the reading because of that.” She also described instances of high noise sensitivity and said she needed “a quiet place” to perform well. On another occasion, she said that she performed poorly on a speaking test because she was nervous, “I was nervous and I was making a lot of grammar mistakes.... It’s all about self-confidence, I believe.” Thus, Hope appeared to struggle with self-confidence and nervousness, in particular in high stakes situations that she “care about a lot.” Overall, the examples above demonstrate high sensitivity, low confidence and interfering emotions, all pointing to the accuracy of her high neuroticism score.

Hope’s agreeableness was average, and she believed that this was a fair score. She said that she trusted people, she was friendly, and she helped others. However, she said that every person had a negative personality inside them, “you’ve got evil and good inside you, but sometimes you remember yourself, you try to be a good one. You remember when you were a child you were better than now, and you try to make yourself better.” In addition, her

competitiveness, as will be discussed below, lowered her agreeableness score, so the average score she obtained on the personality test appears to be accurate.

Hope's conscientiousness score was average, but she said that it should have been higher because of her diligence. She believed that her conscientiousness score should be higher because she "really spends a lot of time" doing homework. However, spending more time does not necessarily mean higher diligence and better organization skills. Although she did describe that to complete her essay, she woke up in the morning for three days in a row, worked for three hours and then went out with her friends, which showed that she had organization and time-management capabilities, she also admitted that she was easily distracted and lost focus. In one example she described how she was easily influenced by the environment, saying:

Sometimes I feel too sleepy, like the weather affects me. Because if it's cold weather, I don't want to study, if it's too hot weather, I don't want to study, if I am fasting, I don't want to study. The atmosphere affects me.

Furthermore, she said that she struggled on her last IELTS test because of poor concentration, as she was easily distracted when the invigilators were speaking to each other. She said, even in the classroom at this school, during the first reading exam, there was a musical band upstairs, and she could not focus on the reading because of that. Again, these instances show that although she had organization and time management skills, she also lost focus and concentration easily, so her average conscientiousness score appears to be accurate.

Hope's openness to experience score was close to the middle, but one of the higher ones in the class. She revealed that she liked adventures, and she had a strong imagination. She explained:

Look, this is me, imaginary. This is like totally me, even before I sleep, I think a lot, when I go outside. I imagine a lot of things... all kinds of situations. I think I am risk taker. I've done a lot this year that I don't know how I did it. Even when I was living in Saudi Arabia, we have a lot of strict traditional things that I have to follow, and I have to follow it straight, but I went like this [gesture that she went around it].

Therefore, the reason Hope scored the highest of all the participants on openness to experience was because she was a non-conformist, liked adventure, and had a vivid imagination. Hope said that she believed that her relatively high openness to experience positively influenced her ability to benefit from CF, saying, "Yes, this has a big role. I think that because I am capable of trying new things that make me more convenient of any correction because I like to learn new things that did not know before." Thus, she believed that scoring well on openness to experience made her more open to CF.

Class Performance, Response to, and Experience of CF. Hope's pretest accuracy of past tense use ratio score was .78. Overall, she took shorter speaking turn lengths than other students. She received six instances of CF (she missed two treatment days because of absences). She stopped attending class and thus her posttest scores were unavailable. Thus, the impact of CF on her past tense accuracy can only be explored qualitatively.

Analysis for emergent themes from Hope's interview and stimulated recall data revealed that some of Hope's personality characteristics influenced her experience and response to CF. One of these characteristics was perfectionism. She demonstrated many perfectionist tendencies. Firstly, she revealed that she did not view learning as a continuous process, with regressions and plateaus, but as a linear process, where she had to "fix" mistakes as quickly as possible. Once something was fixed, she believed that it should stay that way. She explained:

Grammar, I memorize them. ... If my teacher told me like you have subject-verb agreement, I try to fix it in this like certain week and try to focus on this problem until I fix it... So now I fixed past and present problems for me, but now it gets worse. But I will fix it again and I think by days, it'll fix by itself.

In this quotation she explained that she viewed learning as a process of fixing problems, and once problems were fixed, they should stay fixed, otherwise, it was an indication that something was wrong. Furthermore, she saw her errors in past tense, the focus of the CF in this study, as “fixed.”

When asked if she considered herself to be a good learner, Hope responded with:

Well, I am in Canada, what do you think? It's not easy to get a scholarship from my country, so if I get one, that means I did a great job when I was in high school and we have standardized exams so if you best these two exams, you can get that scholarship. So I think, yeah.

This response revealed that her conceptualization of learning was not about the process of learning, but about what she had achieved and accomplished. She also based her self-confidence in her abilities on her past accomplishments.

An important aspect of Hope's personality that had an impact on her learning and response to CF was that she was very distressed when she made errors. Hope said that she believed that her high neuroticism “definitely” had a negative influence on CF effectiveness, saying, “when someone correct me, I will blame myself why I made a mistake.” When asked how she felt when she made grammatical errors, she responded, “I feel bad... Because I feel like I should have studied more. It's true. Because sometimes when I stop studying grammar I make many grammar mistakes.” This statement revealed that while she appeared to understand

cognitively that she needed CF to improve, her emotional response to CF was self-recrimination and sadness, due to her belief that she must be perfect. She explained, “I like to learn new things that is why when people correct me I do not feel upset; however, sometimes when a teacher correct me I feel sad because I would say to myself I could've done better.” In fact, Hope described how her perfectionism has been a problem for her because “even minor things, I really feel like I have to do the best that I can.” She explained that her perfectionism wasted her time, as it took her a long time just to do one homework assignment. Sometimes, her perfectionism led her to not complete the assignment at all. Hope explained:

I discovered that, actually, so I started to take break and try to finish faster, because I think I learned enough to be faster. So for example for the research paper, if I were like Hope of the past, I wouldn't have done it at all.

In this example, she indicated that her fear of making errors and not completing an assignment perfectly could be so debilitating that she would avoid doing it at all.

Another important characteristic that impacted Hope's ability to benefit from CF was her competitiveness. Her highly competitive personality, in particular with other students from Saudi Arabia, resulted in her feeling very upset about being corrected by others. She said she “for sure” felt badly when she made errors in front of her Saudi peers, saying:

If I went, for example, with people from the same country, we correct each other a lot, and sometimes we laugh at each other, and I think this is wrong, because in the end we end up like with no speaking in English with each other. You have your English, I have my English, I know you know English, so don't try to compete with me. If you are from the same country you try to beat each other... I don't feel embarrassed unless if I was with my Saudi friends. They go so far sometimes. Even though sometimes I am correct,

they will insist, no you are wrong. So sometimes they motivate you and they drop you.

They don't have balance. I don't know, I think it's some bullshit.

She explained this intra-cultural competitiveness did not necessarily work inter-culturally. She described:

H: "It's not like...not if she's foreign—

I: So if Sarah corrects you it's okay, and if Nora corrects you it's not.

H: Yeah, kind of, I don't know why. Yeah, it's weird. It's weird but I don't know why.

And it's not just me, I discussed that a lot with others. And it depends on the personality itself, if she's my close friend and she was speaking in English and she corrected me, it's fine for me. But in a respectful way."

She added that if she were corrected with a good attitude, saying it gently such as "Hope, you should..." then she would not be offended receiving CF from others, "otherwise it will be offensive."

Hope said that she believed that her agreeableness has an influence on CF effectiveness because "If someone correct me, I will have him as a friend for sure because when you do not like someone, logically you will not bother yourself." Thus, she, again, alluded to the idea that effective CF was something that happened between friends, and effective CF could only come from someone who was doing it in your best interest. This suggests that for her, a close relationship of trust was essential for CF effectiveness.

Furthermore, since the competitive characteristic reduces an agreeableness score, Hope's agreeableness may have had another influence on her response to CF, when in interaction with her high neuroticism. Hope's interview and stimulated recall revealed that because of her highly competitive personality, her conviction that she had mastered the past tense grammatical

structure, and her emotional investment in maintaining this belief due to her perfectionism, she missed almost all CF provided to her, which may have reduced its effectiveness.

Hope said that CF feedback should be done in “a respectable way”, saying: “So I think if she corrected it, it’s good, but in a respectable way.” This preoccupation with making CF respectful and thus, as gentle as possible, may be a reflection of her fear of errors and negative emotional response to making errors. Hope was convinced that the teacher never corrected her spoken grammar because there was nothing to correct. When asked if she noticed the teacher correcting her spoken grammar, she adamantly responded:

Hope: “Never. Never. She said I’m good in grammar... Even in writing it’s minor mistakes.

Interviewer: And spoken?

Hope: “Never, never.”

During stimulated recall, when it was revealed that she had been corrected, Hope continuously tried to explain away her errors or justify and excuse them. For example, in one instance she said that she was more focused on content than grammar and that was why she made an error. Despite being shown that she missed teacher’s corrections, and having been confronted by her errors during stimulated recall Hope insisted that “Usually when I did the grammar mistake I recognize them.”

Prompts did not appear to be a helpful CF technique for Hope because when she was corrected with prompts, she noticed them, but ignored them, treating them as suggestions. When asked about prompts during stimulated recall, she said that she had recognized that it was a “grammar mistake” the teacher was trying to correct, however, as the teacher prompted her again, she did not change her wording.

When asked what CF technique she would prefer Hope said, “Provide me the right answer and then she tell me why,” which indicated a preference for direct correction and a metalinguistic explanation. In fact, in her stimulated recall and interview she expressed a desire for explicit and metalinguistic explanation saying, “I think when she said ‘they...’ and I continued she should have explained why didn’t. Why did she said this?” In this quotation she indicated that for CF to be effective, she wanted an explanation for the teacher’s correction. In fact, she indicated that she found recasts without a metalinguistic explanation rude and disrespectful. She explained:

Okay, let’s say Hope, you made a mistake in this. Put it on the board because you did this and this wrong. She has to explain it, but don’t say it like I made a mistake between past and present and she dropped just the word. Like instead of saying I drove yesterday I said I drive and she will say ‘drove’...give more explanation because otherwise the student will be feel embarrassed. This way it’s hard [harsh]...In the other way he will feel like he’s learning. But the first way he will feel like no, I made a mistake. It’s awful.

Hope also repeatedly did not notice the corrective force of recasts. On several occasions, she thought the teacher was making a comment about her content and did not realize she was correcting her grammar. When shown instances of recasts during stimulated recall, she repeatedly said she did not realize that she was being provided a grammar correction. She replied, “No. I thought she was giving me another idea.” When asked if she found these recasts to be an effective CF technique, she said, “If I didn’t notice that means I didn’t thought about it,” clearly indicating that they were unlikely to be helpful for her.

Occasionally, however, she noticed a recast as a correction of past tense, and did not object to this CF technique, saying “This one? No, it’s not hard [harsh] it’s fine.”

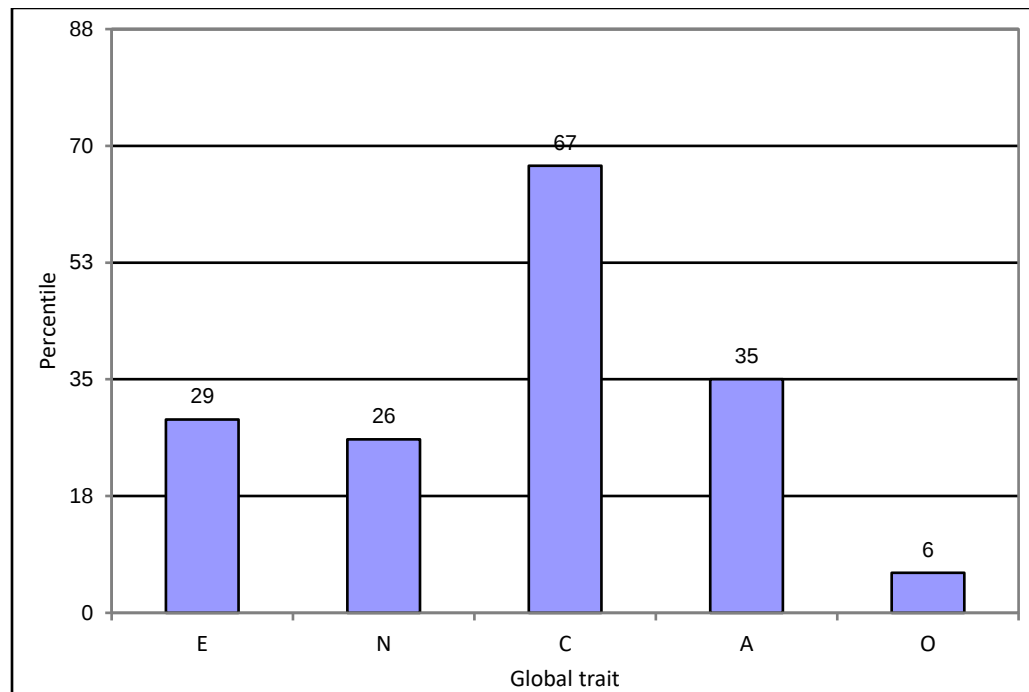
Overall, Hope's case highlighted the negative impact of being a perfectionist and responding with distress when confronted with errors; this may be a mechanism by which neuroticism may have a negative impact on student reaction to CF. Like Lucy, she was also highly competitive and did not notice her corrections. Moreover, like Tim, she believed that her openness to experience made her more open and receptive to CF.

Rana

Personality. Rana was a woman from Saudi Arabia and in her late teens. She reported having 7 years of instructed English experience. Figure 17 shows Rana's personality test scores.

Figure 17

Rana's Personality Test Scores



The results of the personality test showed that Rana's extroversion score was low, and Rana's interview supported the accuracy of this score. She described herself as someone who was between an extrovert and an introvert, by explaining that she loved being both social and

being alone. The fact that sometimes she also loved to be with people was not a contradiction to her low extroversion score. Since personality traits are conceptualized as a continuum, her dominant introversion characteristics did not negate at all her desire to be occasionally social, and her score in the 30th percentile allows for that as well.

In the interview, many of the behaviours Rana described supported her low extroversion score. Rana said that she loved walking alone because it allowed her an opportunity to think. This was a clear indication of an introspective and introverted personality. She also stated with absolute certainty that when she was studying at her university in Saudi Arabia, she had never asked a professor any questions. When I asked if that were due to academic norms of that context, she said no, others asked questions. She explained that she was not afraid to ask questions, but that she tried to resolve her questions on her own. She emphasized that when she is unsure about something, she tries to figure out what the problem is herself.

Adding further support to her low extroversion score, Rana said that back home, she had her own room and her family's home was very big, so she could close her door and separate herself from everyone else whenever she wanted. She explained that she worked best when afforded privacy and silent alone time, a reflection of introversion, and she said she struggled a little bit in Canada because she did not have similar accommodations.

Rana's neuroticism score was low, and she believed this to be accurate. She provided examples of her behaviour in the interview that further supported this test result. She told a story of working with a group of peers last session when one student did not do his work. She described that her response to this situation was that she did not feel responsible for his behaviour, so she did her task, and was not upset or stressed about him letting everyone down at

the last minute. This story illustrated her robust emotional stability when faced with a stressful situation that would cause other students dread and high stress.

Despite her strong emotional regulation and a healthy response to stressful situations, like Hope, she showed a tendency towards perfectionism, wanting to do things “perfectly” and a fear of making errors. When asked about her attitude towards group work, she said that she loved working in a group, but only if the other students were similar to her, that is, they could cooperate and work together “to do work perfectly.” When asked about making errors, she said that “I keep remind myself that I came to Canada to learn English and making mistake help me to learn.” Like a mantra, during stimulated recall, every time she was played a segment where she made an error, she kept repeating this idea, “all student make mistake and I am a student as well so it is ok to make mistake and learn from them,” which only served to suggest that making errors did bother her to some degree. Thus, while she evidently was not as much a perfectionist as Hope, and thus, a lot more open to CF, still, making mistakes was a fear that she was working to overcome.

Rana’s agreeableness score was relatively low. She acknowledged that this was fairly accurate. She did reveal attitudes during the interview that would give her a higher agreeableness score, yet it also depends on how these attitudes aligned with her behaviour. For example, trust towards others is a sign of agreeableness, and she said, “I think if you have trust for yourself and others it will help you. Any positive energy that will help you.” She also described her personality as “patient,” which was another agreeableness characteristic.

Rana’s conscientiousness score was high, and she believed this to be accurate. Her high conscientiousness was supported by the fact that she said that she liked to plan, and that she finished projects before the deadline. She said that when working in a group, she did all the

organizational work, and gave an example how she was the person everyone sent their contributions to, so she would put it all together. She described herself as “Hardworking... I love to do my work on time. I don’t like to do it today and have to submit it tomorrow. I love to have a plan for my homework.” In fact, she said that her strategy was to finish assignments the day before the due date so on the last day, if she had a question, she had time to ask the teacher. Furthermore, she said that when she is assigned homework, she tries to finish it immediately, so she has free time later. All these self-reported qualities reflected high conscientiousness.

Rana’s openness to experience score was quite low, and she said that she thought that it should be higher. She explained that she “love everything new,” loved adventure, and wanted to “try everything.” She described how much she enjoyed bungee jumping at Wonderland. She also argued that “I choose to be first in the presentation and that expose me to make mistakes that I can avoid if I was not the first one,” which indicated that she was willing to be brave and take risks. In addition, when asked to describe her personality she said, “I think I am smart, but I am not really, really hardworking. So if I do everything as I can, maybe I would be higher.” Thus, her self-report indicated that she believed that she had high intelligence, daredevil interests, and adventurousness, which may indicate she had relatively high openness to experience, which was not captured by the personality test.

Class Performance, Response to, and Experience of CF. Rana’s pretest accuracy of past tense use ratio score was .79. Overall, she took the shortest speaking turn lengths than all other students except for Tim. She received 13 instances of CF. Her posttest score was .60, which gave her pretest to posttest past tense accuracy change regression of 24%. However, it is important to note that because of frequent illness-related absences, her posttest score was only based on one day’s performance.

Rana noticed the CF provided to other students, as evidenced in the video recordings when she, more than once, looked up from what she was doing when a student was corrected. This observation was reinforced during stimulated recall, when she admitted that she and Lucy were writing notes to each other before another student was corrected, and she indicated that she looked up because when other students were corrected, that captured her attention.

She noticed recasts on her own speaking and reported that they were a helpful type of CF for her. Benefits of CF were also evident in that she self-corrected her own speech on past tense. When asked if she noticed the different types of techniques that the teacher used to correct, Rana responded, “Not really, she just said the correction,” which on the one hand suggested that she did not notice the different types of CF used, but analysis of all CF provided showed that her response was reasonable, because although she heard others being corrected using various CF techniques, she herself only received CF in the form of explicit recasts.

Rana revealed that her preferred mode of oral correction was delayed, written, and depersonalized. She said that she preferred that when there was a class discussion, the teacher would take notes of the errors, and then put all the incorrect sentences on the board, so they could be corrected together, as a class. In this manner, Rana believes, she would be clear on where she had made a mistake and how to correct it. Furthermore, this type of error correction would not interrupt students when they were speaking, Rana explained, “It’s hard to correct it while you’re speaking because that’s-, that’s stop you to speak. Interrupt you when you’re speaking.” In fact, she said that because teachers were not doing this in her classes, she had talked to the school’s administration, arguing for them to implement this approach. Thus, Rana expressed a desire for delayed, written and metalinguistic feedback over the immediate types of CF used in this study. Rana said she was a visual learner, so that may be the reason she preferred

her CF in written format. Another reason was that she wanted to avoid being put on the spot for making errors during interaction. She explained, “I think about the vocabulary and grammar before I answer but sometimes teacher ask me directly which makes me make a lot of mistakes.” Thus, her introversion, combined with her perfectionism, appeared to be behind her preference for delayed feedback, and more implicit type of immediate CF.

When asked how she felt when the teacher corrected her speech, in particular the immediate types of feedback used in this study Rana said, “It’s good. In this session she tried it out and it was good. Maybe at this advance level it’s not that problem. But at a lower level, it would disappoint me, and I wouldn’t talk anymore.” This quotation revealed that due to her high proficiency, in this class, she was not bothered by the explicit recasts that the teacher used on her, but she would have been bothered by CF when she was at the lower levels, and it would have caused her to speak less because of the feedback.

However, stimulated recall revealed that even in this class (at a higher level of proficiency), explicit recasts in succession appeared be disruptive and upsetting to Rana. She smiled after a second recast in a row, because, as she explained:

The first one was okay, and then right away there was another one, so maybe that’s the situation [why she smiled]. Maybe if there is a lot it will be, like, annoying. But if it’s one or two [it would be okay].

Later she added, in response to an explicit recast, “sometimes I confused and I feel nervous the teacher correct me a lot.”

Rana also expressed a clear preference for prompts, saying that, of the CF techniques I described, prompts were the most effective, in her view:

If she ask me what so I can, I can know my mistake by myself so I will not do it again.

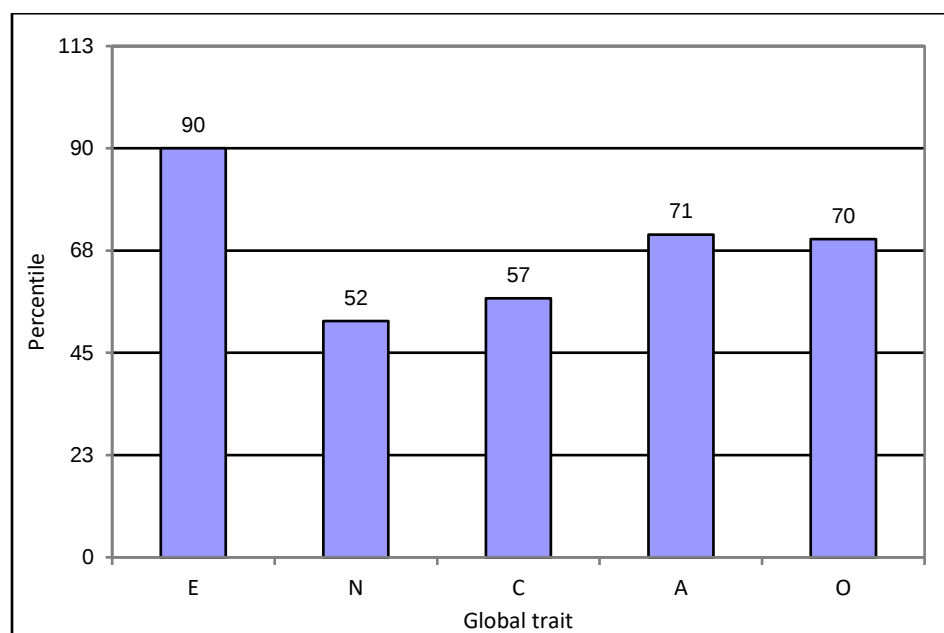
But if she give me the right answer, I will just repeat it now, and I forget about it.

In this quotation, Rana explained that she preferred to arrive at the answer herself, not simply be given the correct answer. This preference may be a result of her high introversion score: her reported high independence and introspection, and her desire to think about questions on her own and arrive at the correct answer in that manner. Finally, Rana spoke out against explicit correction because it would interfere with conversation, explaining, “I think it’s too long. It’s like a conversation or that’s discussion but if you interrupt me, I ask. I think ‘what?’... it’s [prompts] enough.” Thus, Rana indicated that prompts carry enough corrective force and do not interfere with conversation the same way other types of CF do.

Overall, Rana’s case provided more support to the idea that perfectionism may have had a negative impact on student response and reaction to CF. Like Tim, Rana’s introversion may have been behind her preference for prompts. Her case also added support to the finding that students were influenced by the correction of others in the classroom.

Rose

Personality. Rose was a woman from China and in her early forties. She reported having ten years of instructed English experience. Figure 18 shows Rose’s personality test scores. During the interview, Rose remarked that most of her personality test scores were an accurate representation of her personality.

Figure 18*Rose's Personality Test Scores*

Rose's extroversion score was very high, and she said that this was accurate, "Yes, I show these traits, especially in this category." She explained that she was not reserved or timid, saying "No. [laughs] Of course not, because I want to improve me, myself." She said that because she was learning English, "you need to expose yourself to more and more people and more and more people who said native language, you need to show this attention, otherwise you can't get your English better." When asked about her sociability, she said that she enjoyed being sociable, but also being alone, saying:

When I go out, I will be social. When I stay home I will spend a lot of time just single...I never attend any clubs in my life and I always stay alone, not because I want to focus my learning but because I am not sociable enough to get information about any clubs or activities that's out there. Maybe I can, but I am not really wanting to get that information.

Nonetheless, she said that her extroverted personality benefited her in language learning, saying “Outgoing personality is good for learning a new language, since it exposes a sense of liveliness and confidence so that I can get more opportunities to make a new friend abroad.” Observations of her behaviour in class also supported her high extroversion score, as she was always answering questions, laughing and interacting with everyone, always speaking up in class.

Rose’s neuroticism score was about average. While she described herself as “so sensitive” she said that this was an accurate score because she was good at regulating her emotions. She explained, that when she feels distressed, she pushes through these emotions and perseveres. She said that she was emotional and sensitive, and her emotions could interfere with her learning because when she is struggling, “it makes me feel sad and question myself. Consequently, I put the pressure on myself constantly.” However, she said that she did not let her mood affect her learning. She explained, “no matter if you are sad or happy you have to do this. Because eventually you will control yourself and continue.” She also revealed that she was not afraid of making errors in the classroom “because everyone will make mistakes.” Thus, although she felt emotions deeply, she was able to control her emotions, and that was why her neuroticism score was approximately average.

Rose’s conscientiousness score was slightly higher than average. She said that this score was appropriate, and this trait influenced her learning positively. In the interview, she described herself as “ambitious,” saying, “Nothing can stop me as long as I set a target. ‘I won’t stop until I win’ is what I told myself when restarted to learning English last year.” Moreover, Rose said that she always tried to be organized, even if she did not always succeed, because “it is a critical skill for most of the individual who has a hectic work [Rose is a journalist].” Rose added that it was not difficult for her to focus, her cell phone was her only possible distraction, but she had a

strategy to manage that. She explained, “when I do my homework, I have to, have to, put it in my bag, otherwise I would-, I can’t have my cell phone with me, and social media.” She said that she consistently met deadlines, saying, “in general, I won’t push it to the edge of deadline. I will always prepare, not too much, but not to the last day.” Thus, based on these descriptions of her habits and behaviours, her higher-than-average conscientiousness score was justified.

Rose scored quite high on agreeableness. Her attitudes and behaviours supported this score. In the interview, she revealed her attitude that students should support each other: “You always have a group, and you have to help each other and you need your peers and connect with each other.” She gave me an example of keeping a fellow student, John, awake in class and trying to help him not get in trouble for sleeping in class. She said that she believed that high agreeableness had a positive effect on her learning because “who is good at co-operating in a group would be the one that gains more benefit.” Overall, based on the observations of her behaviour, Rose was warm, supportive, and eager to help others in the classroom, thus, her attitudes reflected in her behaviours and her agreeableness score appears to be accurate.

Rose scored very high on openness to experience. She even joked, “because I am so open? Too open? [laughs]” Rose described herself as “a perceiver,” which, in her opinion, meant that “I prefer to be open minded and receive new opinions and new environments and I try to do different things.” She said that she believed that her openness to experience had a neutral effect on her learning because “I am keen on trying new things in a short period. Sometimes I change my mind and interests quickly. That seems like so irrational.” Thus, overall, Rose’s high openness to experience score appears to be justified.

Class Performance, Response to, and Experience of CF. Rose’s pretest accuracy of past tense use ratio score was .50. She took the second longest speaking turns of all the students

and received 23 instances of CF. Her posttest score was .62, which gave her a pretest to posttest past tense accuracy change improvement of 24%.

Rose said that she welcomed oral error correction because it allowed her to recognize errors that she would not have otherwise noticed herself. She explained:

It's [CF] good, because sometimes you have no ideas, you can't recognize oh that's wrong, of course I will make mistake, the same mistake again. [laughs] But it's good. I will know, ah, that is the, that is the correct, which one is correct, I should change to the accurate word.

When asked what type of correction she preferred, in keeping with her high agreeableness score by demonstrating trust, she said that she trusted the teacher, as a professional, and accepted whatever she was given:

The teacher, as a professional teacher, she will know what she need to do. It's not up to me because I will accept the teacher's way, how she wants to do it, because I trust she's professional so she will know when she can correct the students' words or maybe not.

Some students will be embarrassed by that, but somebody like me [laughs] I will not. She acknowledged that some students may have been embarrassed by correction, but said she was not, and that she welcomed it.

Rose said that she did not feel unhappy or embarrassed by CF because it was the teacher's professional responsibility to correct her, saying, "It's fine! That is the duty of the teacher! [laughs]." However, in contrast to those students that expressed that they would have felt somehow cheated if the teacher did not correct them, Rose said that having no CF would not have caused her to feel distressed. She explained that she would just assume that she did not make any errors, revealing that she would just miss them and not know she made them.

Rose expressed a preference for written types of CF on her speaking because she considered herself a visual, not an auditory, learner. Therefore, Rose believed that it would help her to see her errors written out, saying, “Actually, writing would be better for me.” She explained that sometimes she would hear information and then quickly forget it. Therefore, she would prefer a visual correction, so that when she sees it written, she will understand it and remember it better, saying, “When I saw that, I will recognize it and remember it harder.” Like other students who also said that they preferred written correction, Rose said that she thought that written correction of her speech would be the most effective form of CF because it would help her remember the CF. She explained,

For me? Personally, I think corrections in the paper would be better for me because sometimes when she said [CF] [laughs] in that moment I know, but then I forgot. If she writes it down, then I will remember, oh that’s a mistake.

Rose appeared to benefit from CF, as evidenced by her engaging in past tense self-correction. In fact, because she was randomly selected to speak later during the discussion on day one of the instructional treatment, she began self-correcting on past tense before getting any CF herself. This suggested that she listened to the CF received by previous students and benefited from it. She continued making self-corrections throughout the treatment process. Another indication that CF was beneficial for Rose was that she noticed and recognized her own progress. As we listened to the stimulated recall segment from treatment day six, she exclaimed, “oh, it’s much better than the first day!” indicating that she had noticed her own improvement.

Another potential indication of the impact of CF was that Rose corrected others along with the teacher when she noticed their errors because, as she later explained, she was making the same errors as them. Thus, as evidenced by her report and her actions in class, the CF

appeared to raise her awareness and vigilance of past tense, and it was something she focused on when she spoke in class, and when she listened to others speak.

Rose noticed explicit correction and said that she found it helpful. She said it helped her clarify confusion and made her realize what the error was. In one instance, the teacher began correcting her with a prompt, but she did not understand what the teacher was talking about, and tried to correct herself again and again, still unsuccessfully. When the teacher finally provided explicit correction, Rose understood what the error was, and realized that what the teacher was correcting was grammar.

With more implicit types of CF, while Rose sometimes noticed explicit recasts and prompts, sometimes she did not. For example, when she was corrected with a prompt, she responded by saying the incorrect word with extra stress, and in the stimulated recall explained, “Maybe I’m not, at the time I didn’t realize that she’s correcting my grammar, but I know enhance is wrong.” She revealed that she thought the teacher said ‘hence,’ and she kept thinking, “Why hence? Why is it ‘hence’ it should be ‘enhance.’” This example illustrates that using a prompt had created confusion. Rose had realized that she made an error, but she was unsure what that error was, and initially assumed it was word choice, instead of word tense. This example also highlighted Rose’s tendency to think about the correction and try to understand it first, and resist uptake of the correction until she understood why what she said was incorrect, instead of compliantly repeating what was said.

However, there was an indication from the stimulated recall, that Rose’s noticing of prompts may have improved over time. When playing her examples of the stimulated recall from the later instructional treatment days, I asked her if the prompts or corrections were more effective now than they were in the past, she replied, “Yes, of course, it’s effective. The more

you study the more you realize which one is correct.” This suggests that, if exposed to this type of CF over a longer period of time, with experience, she may learn to recognize its corrective force better, and benefit from it more over time.

Like prompts, Rose sometimes noticed explicit recasts, and sometimes she did not notice them at all. When she noticed them, she found them to be clear and direct. She told me that sometimes the teacher corrected students “directly,” for example, “When you say I wear some t-shirt yesterday and she said ‘wore.’” Thus, Rose indicated that she noticed that the teacher used recasts on students’ speech, and that she considered explicit recasts to be a direct type of CF.

In other instances, she did not notice the corrective force of an explicit recast. She reported that not only did she not notice the correction at the time, she also did not notice it after two re-plays during stimulated recall. When I explained it to her, she exclaimed, “‘Ah!... maybe I focused on what I said?’” indicating that she may have been too focused on what she was saying to pay attention to the CF. The reason for this may have been, as she revealed:

When I speak in the classroom, I put more emphasis on what I say being correct, but in the real world, like now, I forget it, it’s more content. When [the teacher] is there you have to be speak accurately, more accurately than daily life.

It appears that, counter-intuitively, Rose’s hyper-focus on the accuracy of what she was saying reduced her ability to benefit from prompts and recasts, because she was too caught up in planning her words and sentences to understand what the teacher was correcting and why.

In another instance, an explicit recast was a source of confusion. Even when listening to it during stimulated recall Rose was still confused over the correction and said that she “has no idea about this.” She revealed that, at the time, she was aware that the apparent problem was grammatical, “I was thinking about gives or give. It’s the grammar,” but she did not realize that

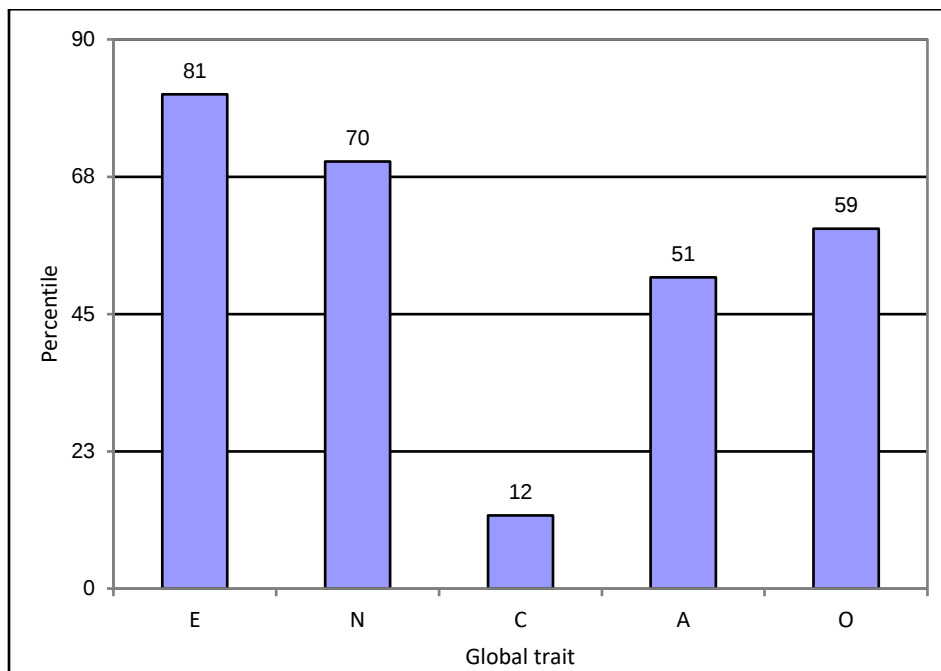
the focus of CF was on the tense of the verb, and thought it was something else. Rose also indicated that the CF had an impact on the flow of the conversation saying, “I can’t say it was an interruption, but it really stopped the flow of my mind and I needed to focus on which one is the best...And I was thinking give, or gives, oh it’s gives, and then I can continue.” This example illustrates that a recast caused confusion and interrupted the flow of the conversation for her.

Occasionally, Rose’s reaction to CF was misunderstood as an indication that she was upset or uncomfortable, rather than benefiting from the CF. In one such instance, when Rose received a recast, she responded with an exaggerated emphasis of the corrected phrase, appearing to be irritated. However, when this section was played to her during stimulated recall, she exclaimed, “I didn’t realize! She’s correcting my grammar! I am sorry [laughs]... I am talking about meaning, and she is correcting my grammar! [laughing]” In fact, it was revealed that Rose was not irritated. She explained that she was thinking and focusing on her word choice, and realized that the teacher indicated that there was an error, but did not realize that the teacher was correcting her grammar and not her word choice.

Overall, Rose’s case highlighted that too high a focus (high conscientiousness) was not necessarily a positive for student’s ability to take in CF because she was too caught up in planning the accuracy of her grammar to pay attention to the teacher’s CF. Her experience with CF also lent support to the findings that CF served an awareness-raising function and improved vigilance of past tense, and once again, highlighted the value of students being exposed to the correction of others.

Nora

Personality. Nora was a woman in her late teens from Saudi Arabia. She reported having over ten years of instructed English experience. Figure 19 shows Nora’s personality test scores.

Figure 19*Nora's Personality Test Scores*

Nora's extroversion score was very high, and she confirmed its accuracy when the first thing she said when asked to describe herself was, "I am very talkative. I love to talk... and I don't feel shy talking about my experiences and in general." She said that she was very open and forthcoming, more so than other people, saying: "You know, I found out people don't like to talk about themselves. They love talking about others, but they don't like talking about themselves. But for me why, why shouldn't I talk about myself?"

Moreover, Nora believed that her high extroversion had a positive impact on her learning, explaining, "I learn more when I interact with people." She provided examples during the interview that supported this statement. Nora said that she started conversations on the bus with people, and it helped improve her speaking skills. One such instance was when she met a man from Montreal on a bus, and they started talking, exchanged numbers, and after a month of

texting with him, she said she noticed that her spelling and vocabulary significantly improved. Another such instance was when she and I were on the same bus during the first week of the study, and we spent the 30-minute bus ride talking. Another example was when she noticed a woman with an “old phone... a blackberry” and she wanted to ask her about it and ended up in a friendly 30-minute conversation with the woman about her phone and her children. Nora said that she considered all these examples opportunities to practice her speaking.

Nora also illustrated how her high extroversion and talkative personality had a positive impact on her language learning:

I think extroversion helped me to speak more fluently because I never felt shy to speak up or ask questions once I needed to. For example, I remember when I was studying English at the university, we had to describe some pictures as a part of our speaking test, and the teacher had to train us before the test. I always raised my hand to be the first one who start describing the picture which improved my speaking a lot. I also became a friend with my English teacher at that time because I love to talk which made me more fluent.

Nora’s neuroticism score was also quite high. She verified that this was accurate because she was an emotional, and emotionally labile person:

Mostly I really get affected by my emotions... Sometimes I get really emotional. I love when you tell me things, but I don’t like when it’s like direct, so if you say, I really like your dress but the colour doesn’t match. Sometimes I get really upset when it’s really direct... I encourage people to criticize me, but between me and myself, I don’t like it to be direct. Tell me everything is good [laughs].

In this example she demonstrated that her emotions were labile and easily influenced by the actions of others, which explained her high neuroticism score.

Nora revealed that she experienced strong emotions and that she had a very powerful episodic memory. Nora described how she formed strong associations with people or situations, and the accompanying feelings she had about those people and situations. She reported that her emotional experiences strongly influenced her attitudes, such as shaping her view of an entire course due to one incident. In this example, she recalled when a teacher said something to her that she found very hurtful and made her very distressed. She said that every time she tried to study or work on assignments that he gave her, she kept remembering his words and thinking, “I hate this.” This illustrates that she generalized her negative emotions from that one incident to the entire course. The same was true in another example, when she had a teacher whom she described as “an angel.” She said when she always thought of what this teacher taught her, she still remembered her voice and the positive feelings that she gave her, and how happy Nora felt when the teacher told her that she was clever. These examples, again, supported Nora’s high neuroticism score.

Nora said that her high neuroticism has a negative effect on her learning, explaining:

I think this trait affected my learning process badly because sometimes when teachers criticize me specially the direct once I get really sad, and I start to hate the environment that I am surrounded with. For instance, I had one of the teachers criticizing my spelling very directly. I felt really bad, and I even cried after the class, so the teacher had to apologize.

Similarly, she told me that if her brother said something hurtful and they had a fight, because of her negative emotions “I wouldn’t be able to study or do my stuff” because she struggled with

controlling her emotions and focus. If he called her a loser, she would keep thinking about it, ruminating on this subject and using examples like her recent low grades as proof that he was correct, which would result in her crying and not doing any of her work. Such inability to regulate her negative emotions and the strong emotional responses as described above are a strong indication that her high neuroticism scores were accurate. Moreover, Nora said that she had a tendency for rumination and self-recrimination, saying that sometimes she thought, “I should have done this better, did this, not this. Which is not good sometimes,” which, again, would increase her neuroticism score.

Nora’s conscientiousness score was quite low, which she acknowledged as accurate, because “If you look at my bag right now, it’s so messy! I don’t care about details...I just throw stuff in, I’m so disorganized.” In addition to her admitted disorganization, she also said that she was not a good learner because she was “lazy,” and instead of accomplishing her plan of waking up early and studying vocabulary, she ends up “in the bed sleeping and using my phone.” This self-reported description supported her low conscientiousness score. Furthermore, Nora said that she was often forgetful, saying “I forget some of the things very easily...That’s my problem,” and revealed her problem with focus and distraction, saying, “I go off topic [laughs] and then I go back!” Her inability to fully focus was also evident in class, when video recordings and observations showed her playing on her phone under the table; she was even checking her phone during the interview. In addition, Nora told me she frequently felt impatient during group discussions and described her dislike for discussion activities where she must wait her turn to speak because “sometimes I have an idea, and I really want to say my idea.” Nora said that she believed that her low conscientiousness had a negative influence on her learning, saying,

“Sometimes it has a negative impact because I sometimes spend half an hour looking for my papers just to study...I really need to be organized” [laughs].

Nora’s agreeableness score was average, and she said in the interview that this was a fair assessment of her personality. She also revealed that she liked to be independent and feel unique, and not necessarily work with others. She said that sometimes she had her own ideas, and while she listened to others’ opinions, she would “prefer to do her own thing and not someone tell me, this is right, and this is wrong...It’s good to feel unique and feel like I’m different from others.” This independence and desire to stand apart from others would lower her agreeableness score.

However, through observations of her classroom behaviour there was evidence of her behaving as a supportive individual, which should have elevated her agreeableness score. For example, during the first week of the study, I observed an incident when students were presenting in groups sketches of robots that they had designed, and when Nora’s group (which included John) presented their robot, other boys were laughing at John, saying, “Why does your robot look like John?” Nora stood up for him and said, “He’s cute, that’s why.” When I asked her why she had said that she told me that, as it was happening, “I felt it was embarrassing for him and John’s face was getting red. And then he did not defend himself...I felt like someone has to do it.” This incident demonstrated that she was compassionate and kind, and supported other students, even though observations showed that John was not a student she was particularly close to in the class as she rarely interacted with him. Furthermore, during the interview she revealed that she cared about people, saying “For me, if you don’t care about others and you don’t have emotions for them, you are not human!” and that she believed in treating people in the same manner as she wanted to be treated. Nora said that she believed that life was a circle, and if you made someone feel bad, you will be in their place one day. She told a story about how an

elderly woman saw her crying on the subway and proceeded to give her tissues and candy, and eventually cheered her up. She said that after that incident, when she saw a girl crying on the subway, even though she was busy and wanted to go with her friends, she decided to do what the elderly lady did for her, and made the girl feel better. These incidents illustrated that Nora had compassion for others, which would increase her agreeableness score.

Nora said that she thought her agreeableness had no influence on her learning process “because it’s not very high or low.” However, due to the fact that agreeableness is an amalgamation of many different traits, it obscures what has emerged in this study to be an important factor that allowed Nora to be receptive to CF and thus, arguably, benefit more from it. This factor was her lack of competitiveness with others. Nora did not appear very competitive or perfectionistic (saying “I am not perfect” and feeling comfortable and even eager to find and acknowledge her errors during stimulated recall). During class, I observed her smiling when various students were getting corrected, and when I asked her why she smiled, she revealed that she was cheering for them to get better. In one instance, when Rose self-corrected and worked with the teacher’s CF to get the right tense, Nora said she was smiling because she was thinking, “Yes, Rose, good! You are making a mistake and the teacher is helping you!” In another example, when we discussed Nora smiling at Lance’s speech, she said that when someone made an error and corrected it, she thought, “Yes! They did it.” These behaviours showed that she was supportive of her peers and felt pleased about their progress.

In another instance, when Lucy talked about her hope of being accepted into medical school, video recordings showed that Nora smiled and whispered “good luck” to her, even though Lucy did not even notice this as she was talking to the teacher and sitting on the other side of the classroom. These examples illustrated that, instead of feeling competitive towards her

classmates, Nora wanted them to succeed. In fact, at one point during the interview, Nora verbalized her supportive attitude, saying, “We can all be up together, we don’t have to destroy each other, you just need someone to push you up.” This personality characteristic was in contrast to Hope’s competitive stance, and it may be one of the reasons why Nora was able to benefit from CF more than Hope (as measured by Hope’s lack of noticing of CF and rejecting the CF she noticed).

Nora scored about average on openness to experience. She said that this score was accurate, and she was “very satisfied” with her percentile on this measure. She said she was not someone who wanted to stay safe and protected. Instead, she liked to have new experiences, she loved to learn new things, and meet new people. She said that how conventional or unconventional she was, depended on her mood. She explained that if she was doing something for a person she really liked, and she believed that they deserved what she is doing, she would become very elaborate and creative. She gave an example of a math teacher she really loved, and how Nora decorated her entire book, with stickers and drawings, even though it was going to be thrown out at the end of the term. It was so creative that the teacher wanted to keep her book. Thus, her creativity and imagination “depends on whom I am doing this for.” Nora also exhibited intellectual curiosity when she said that she was very interested to read about the research study she was participating in after it was finished. Accordingly, based on these self-reported behaviors, her average score on openness to experience was justified.

Nora believes that her openness to experience had a positive effect on her learning. She said, “Of course positive, because if I wasn’t that much open, I wouldn’t be able to come here to Canada. I would be scared and just be with my parents and have people surround me to protect

me.” Furthermore, she said that she believed that her imagination “helped me mainly to improve my spelling where I start giving an image to words.”

Class Performance, Response to, and Experience of CF. Nora’s pretest accuracy of past tense use ratio score was .77. She took average to longer speaking turn lengths, as compared to other students. She received six instances of CF. Her posttest score was .91, which gave her a pretest to posttest past tense accuracy change improvement of 19%.

Nora expressed a very positive attitude towards CF. When asked how she learned grammar, she credited the pivotal role of feedback, naming it as the top technique the teacher should implement to help students learn speaking skills, saying, “I think fixing our grammar so whens like I speak. I don’t mind like the teacher interrupting me and saying this is wrong, don’t say this, say this.” She explained that she mostly learned grammar through writing, when her teacher corrected her essays, and then Nora would go home and rewrite them again. She explained that she thought oral CF was effective because it drew her attention to the error and made her remember it in the future, saying “It mostly like stick in my mind so whens I speak again, I remember, oh, I made this mistake. And for me, the teacher voice stick in my mind, I still hear it over and over.” Furthermore, Nora said that she was not embarrassed, distressed, or annoyed by CF saying, “No, not at all because the reason I am here, because I am not perfect, I want someone to interrupt me, I want someone to tell me, it’s wrong, say this.” In this quotation she revealed that she welcomed and accepted correction, and that she understood that she would make mistakes, which also served as evidence of her low perfectionistic tendencies.

Nora’s words and actions provided evidence that she was not a perfectionist. During the stimulated recall she laughed at her errors as she heard them on the video and made fun of her own pronunciation. She appeared to be enjoying herself and was not uncomfortable. Nora

described how, with experience, she realized the importance of CF and accepted it. She told a story of her experience when she first came to Canada: Her first teacher pointed out what she had said incorrectly, and initially, she felt very dejected. However, when she moved on to the next level and worked on this feedback she realized, “No, this is the right way to do it. So I shouldn’t be embarrassed of knowing my mistakes.” Now, she felt that there could never be too much correction, saying, “No, I would go with as much as possible.”

She said that although the teacher “rarely” provided CF to her personally, she was happy when the teacher in this course provided feedback because “It’s helped me a lot because sometimes I have a problem with switching tenses... I remember when she corrected me, I repeated the sentence and tried to correct myself.” Nora added that when she received the CF, she focused on tenses more, and explained that she found it effective, saying, “Yes, it was because when you are a new language it’s like the basis words and it’s black, you don’t see mistakes, everything looks the same.” Thus, Nora believed CF was effective because the CF helped her see her errors.

More evidence of CF’s beneficial impact emerged in the self-corrections of past tense that occurred on the first treatment day and the sixth treatment day. Nora said that the self-correction came “naturally,” because the teacher’s grammar correction of the tenses was “still in my mind” and influencing her. In fact, even as she was listening to the stimulated recall segments, she tried to correct one of her tense utterances on the tape. Thus, it appears that, even over two weeks since receiving CF, tense use was still at the forefront of her mind.

When asked about the different CF techniques used by the teacher, Nora was only able to describe explicit recasts, and did not notice other types of CF. When I explained the different techniques to her, Nora expressed a preference for prompts, saying, “No, I think allowing people

to think is better than giving them information. Because if you give someone information, it's easy come easy go." Stimulated recall reinforced that Nora had trouble noticing prompts. In response to one of them she said, "I did not notice it! [laughs] I was thinking about what I am going to say next." When the teacher tried to prompt her to speak in the past instead of present, she ignored her and pushed on without using past tense. Nora revealed that she did not choose to ignore the teacher on purpose, but that she did not notice it, saying "it comes out naturally, I don't really think about what tense I am using, I just think about what I am going to say." Thus, although Nora expressed a preference for prompts, in practice, she did not notice implicit prompting.

Nora did notice explicit recasts and they appeared to be helpful, if initially confusing. Nora explained, "Yeah, at the beginning I was confused for a few seconds [laughs] and then I was like, oh! ...I got the idea, she means past, she doesn't mean present." She confirmed that she understood the teacher's focus on grammar and found recasts effective. Moreover, she was not affected emotionally by the correction, saying, "No, it was fine. It's wasn't, like, why did she do this? She's a teacher, she must do this."

In another instance, a recast was not as helpful. The teacher provided a recast and when faced with Nora's hesitation, tried to clarify it with an explicit correction. Nora reported that she was confused by what the teacher had wanted, telling the teacher, "Sorry, yeah". During stimulated recall, Nora explained, "She was correcting me and then I was saying no [laughs]...because I did not understand what she's saying." Thus, her apology was an indication of her confusion.

In another instance, when provided with a correction, although Nora understood what the teacher meant, she rejected the correction, saying, "No, they still are." When listening to this

section during stimulated recall, she laughed and said, “They say that you shouldn’t stick with your opinion, you have to listen, but I am here, sticking with my opinion.” She laughed again saying, “No, it was like, I think I am correct [laughs]. This shouldn’t be happening...[laughs].” While acknowledging that she should not do this, nonetheless, she said that she had thought she was correct, and maintained her choice of tense. It was interesting that she framed grammatical rules as a matter of opinion. Possibly the implicit nature of recasts, as opposed to clear explicit correction may have implied teacher’s uncertainty and made the choice of tense appear to be a matter of opinion.

Nonetheless, in a follow up recast, Nora noticed the correction, accepted it, and reported during stimulated recall that she found the correction beneficial. She said, “Yeah, I really have problem with tenses.” She revealed, in that moment, the CF made her briefly switch her focus from content to grammar:

For a second, because when I speak, I don’t think about grammar, I really focus on what I’m going to say. And when someone is telling this is this, I like it, she’s doing good, but like for a second, I did not lose track, but my thinking switched to grammar.

Finally, Nora said that another reason she found the CF effective was because she remembered it and kept thinking about it even after the class was over. She said that because she did not write down the correction, she had to try to recall what had been corrected. In fact, she expressed a need for a written record of her errors a few times during the interview, saying:

I like handouts. Most teachers, they give information orally, and then when you go home, you just forget, what is this, what can I do? I like it when it’s both, orally and it’s written, so I can go back and just check over time.

Thus, overall, recasts appeared to be a beneficial type of CF for Nora, if they were noticed. Unfortunately, the teacher used explicit CF to correct Nora only once, so her reaction to this type of CF could not have been adequately explored. Because both Nora and Sarah scored very low on conscientiousness, it is possible to compare the two and note that they tended to miss corrections and forget them. This may be a result of their difficulty maintaining focus, in Sarah's case, or in Nora's case being unable to focus on both content and grammar simultaneously, which suggests that they would not benefit from types of CF that are not explicit.

Overall, Nora's case highlighted the negative effect that low ability to focus (low conscientiousness) had on a student experience of CF. She tended to miss corrections and forget them. Her experience of CF also added support to its awareness-raising function. Her case also demonstrated that high neuroticism without perfectionism is not as detrimental to student experience and response to CF.

Emergent Themes from Interview and Stimulated Recall

Interview and stimulated recall data allowed for an examination of student participants' experience of, and response to, CF. This added an additional dimension to the understanding of student personality and CF effectiveness, and the relationship between these two variables. The dimensions that were identified were aspects of students' experience of CF such as attitudes towards CF and its effectiveness in general, and their attitudes and experiences regarding their peers receiving CF from the teacher. Another related feature of the data was student attitudes towards peer feedback. Other emergent themes included the particular manner in which students responded to CF: smiling and laughing in response to correction and disagreeing with correction. The emergent themes are described below.

Attitudes Towards CF. Interview and stimulated recall data indicated that student participants, regardless of personality, overwhelmingly expressed a desire to be corrected, and many of them revealed that they were not being corrected as much as they wished. For example, when asked how she felt when the teacher corrected her speaking, Lucy said:

I want that, we need that. I think we don't feel comfortable every time we did the same mistake, and no one correct us. So the teacher should correct us. Every time we did mistakes, the teacher should correct us.

Similarly, Rose said:

It's good, because sometimes you have no ideas, you can't recognize oh that's wrong, of course I will make mistake, the same mistake again. [laughs] But it's good. I will know, ah, that is the, that is the correct, which one is correct, I should change to the accurate word.

She added, "I think the critical role of teacher is to correct my faults. Otherwise, why I be here? ... That is why I need your help. Help me, and correct me, and I will know how to do it."

Likewise, Hope said that when the teacher corrects her, "It's perfectly fine. Yeah. Actually, otherwise, it makes no sense."

In fact, Tim said in his interview, unprompted, that "point out grammar mistakes" is one of the teacher's main responsibilities, and revealed that when the teacher corrects him, "I feel satisfied... I think it's normal." He described his response to correction on his speaking as "Say thank you and remember it."

Like Tim, Sarah revealed in the interview, also unprompted, that CF on grammar is one of the top three techniques a teacher can use to improve spoken language. In fact, two other students, Hope, and Nora, all included oral CF on grammar as one of top three things a teacher

can do to improve speaking. Nora said that oral correction was the main tool the teacher can use to repair her speaking. She said, “I think fixing our grammar so whens like I speak. I don’t mind like the teacher interrupting me and saying this is wrong, don’t say this, say this.”

In the interviews, participants of all personality types, said that if the teacher did correct them, it was only occasionally, and not as frequently as they wished. Lucy emphatically expressed frustration that teachers do not provide CF on speaking enough, arguing that they should do it more. She said, “More. Because sometimes I listen to other students, maybe I didn’t recognize mine, I don’t recognize mine, yeah. But when I listen to other students I s-, I heard many mistakes. So I think the teacher should correct them.” In this comment there was a strong suggestion that she felt cheated when the teacher did not correct grammar errors in students’ speech.

Similarly, Hope said that she believed that if the other students make errors and the teacher does not correct them, they will not become aware of their errors and they will keep repeating them. She said that unlike her, other students in the class made a lot of grammar errors in English, and because she had been studying with them for two months, she thought it had affected her speaking as well. She explained that she thought that she has been picking up their grammar errors “because when you hear it, when you hear it- it’s logical.... Yeah, because it affects.” When prompted to explain the logic behind her assertion she said that when you spend time with someone who is more proficient in English than you, you learn from them, and make less errors. She said, “I think, yeah, because I have a Saudi friend who speaks very good English, and when I go outside with her, I get influenced by her speaking.” Hope explained that she thought this phenomenon works in the other direction as well, which is why, fearing that she would learn incorrect English from her peers’ spoken errors, when she listened to other students

speak in class, she thought, “I don’t know, I correct in my mind, I want to say, Hope, focus, don’t make this mistake.” As a result of this belief, she also felt cheated when the teacher did not provide enough oral CF. She said, “Actually, I think we had a lack of it in this session. That’s why I think my speaking level is decreasing.” Thus, Hope is another student who indicated that she felt cheated when speaking errors were not corrected because she felt that this negatively impacted her speaking skills.

A less extreme version of the same perspective was expressed in the interview by Nora, who said that she usually noticed the errors of others, and if they were not corrected by the teacher, she got the urge to correct them herself (and observations confirmed that she sometimes actually did this), but then stopped herself, thinking “no I shouldn’t do this, like it’s the teacher’s job. But sometimes I do it.” She revealed that she believed that the errors that others made were “a real problem” because she found herself repeating them. For example, she recalled that Lance was using the incorrect collocation ‘according to’ instead of ‘based on,’ and she caught herself making the same error “because it was in my head.” She said that she wanted to speak up and correct him but stopped herself because she felt that it was not her place to do that. Another example she gave was of Rose, who Nora said had “very good vocabulary, but she doesn’t use it correctly, so sometimes this really bothering me [laughing].” Thus, Nora said that she felt the teacher should correct these students more because she believed they would benefit from CF, and because she felt she had been affected by their errors, saying, “sometimes when you think about something, like this shouldn’t be happening, the next day you may make the same error because it’s in your head.” On the other hand, Nora said that the teacher rarely corrected her, but this did not bother her because she felt the teacher would not let her errors go. She claimed, “No, it was fine, because [she] is a good teacher and if she saw something, she would speak up, she wouldn’t

let it go.” Thus, there appeared to be a hyper-focus among students on the errors of their peers, even more so than their own errors, and a real fear that these unaddressed errors were negatively affecting their own speaking skills and progress.

Likewise, Rana said that some teachers in this school disappointed her because she noticed that “some students do the same mistake all their session. But I didn’t hear my teachers correct them.” Thus, again, interviews and stimulated recall revealed that students felt cheated when they noticed others’ errors, yet the teacher did not correct these errors.

Response to Correction of Others. Interviews and stimulated recall sessions revealed another feature of participants’ strong preference for oral CF: that students reported that they believed that they benefited when others were corrected. For example, Tim admitted that he was not in the habit of listening to his peers when other classmates spoke in class, but when they were corrected, that made him pay attention. He explained, “For example when I talk with Sarah with some topic and [teacher] correct Lance, in that time I may pay more attention.” Likewise, Lucy said that she listened to others’ corrections because it captured her attention when the teacher corrected another person: “For me, yeah. Because I learn when someone did some mistakes, or even me, and someone correct me, so I learn from this mistakes.”

In her interview, Hope expressed a similar sentiment, “Actually, as I said before, I care a lot about the grammar, because if you correct it, your English will be so good, so I think even if the teacher corrected other students, I focus on that.” Rose also said that she listened when others were speaking and paid attention to their CF “because we always have the same problem in the grammar.” She said that this was especially true when the other student was from the same country as her, “because sometimes we have grammar mistakes in the same way. And it’s my common mistake.” Similarly, Rana said that when others were getting CF, it captured her

attention, and this was also evidenced by the video recordings: When Rana and Lucy were writing notes to each other while another student was speaking, Rana looked up when the student received CF.

Sarah, while saying that she is generally distracted when others are speaking and often “misses it” when others are corrected, revealed that when she did notice a correction, it made her feel better that other students were making the same errors as she was, and it also helped her “recall memory to the past tense.” Her comment was supported by evidence from the video recordings and observation, that showed that she smiled when others made the same errors as she did.

Peer Correction. Stimulated recall revealed that student participants’ positive attitude towards teacher CF also applied to peer feedback. During the instructional treatment, peers offered CF help to each other in at least six different instances. Students appeared to accept the CF of others as a sign of help, as was the case in this example, when Sarah corrected Tim simultaneously with the teacher:

Tim: I think my father’s eating habits was unhealthy because he eat outside already-

Teacher: ate-

Sarah: ate-

Tim: He ate outside already.

Whenever there was peer correction, observations showed that there appeared to be no visible or overt resulting resentment or friction, and stimulated recall with student participants, for the most part, confirmed these observations. For example, during stimulated recall of the exchange above, I asked:

Interviewer: Did it bother you that Sarah corrected you?

Tim: No.

Interviewer: Why not?

Tim: Because we are friends [smiles].

When asked if he would correct her when she made an error while speaking, he said that he would.

Further interest in the emergent data feature of peer feedback arose during Hope's interview, when she revealed that she was receptive to peer feedback only if it did not come from a student who was from her own country, which would upset her. The intricacies of what students like Hope considered acceptable and unacceptable peer feedback added another dimension to this study's findings on student CF responses.

Smiling or Laughing in Response to Correction. Class observations revealed that smiling or laughing in response to CF was a common reaction of the student participants in this study. Tim, Lucy, Sarah and Rana confirmed in the interview that they were smiling because they made an error or were being repeatedly corrected. Tim smiled at a teacher's CF "'Cause I make the, made the mistake second time." Similarly, Rana said she smiled because she made the same error again. In another instance, she smiled because she was dissatisfied with herself: In response to a recast, she said she smiled because she was disappointed because she did not explain what she had wanted to say. Since she could not explain what she meant, she said that she was "smiling here, because I didn't have any vocabulary or explanation to say."

Likewise, Sarah said that she smiled and laughed in response to CF because she was embarrassed. She explained, "Maybe it's a way to avoid embarrass...for made a mistake again." In another instance, she laughed when the teacher corrected her because she "said the wrong word again." During stimulated recall Sarah indicated that she was not aware that she was

making these facial expressions, but when she saw herself doing them on video, she admitted to smiling because “I was happy because people made mistakes the same.”

Rose also laughed when she or another student made what she considered easy errors. She said she laughed, “Because we come from same country and we have same problems, and it’s common mistake [laughs]!” When Sarah laughed at Rose’s self-correction, Rose laughed with Sarah as she watched this on video during stimulated recall. She explained:

It’s funny! Because it’s short time and you made same mistake, so it’s funny [laughs]...

It’s funny, yeah, it’s funny. Because it’s not complicated or it’s a really hard, because it’s a really simple mistake. It’s too simple. The problem should not be happening in AP8.

Too simple for us [laughs] But it happens many times.

An interesting phenomenon emerged from the triangulation of the data from observations, video recordings, with interview and stimulated recall data. In a number of instances where a student’s response to CF was open to multiple interpretations, the teacher (as evidenced by the video of her approaching the researcher during a break in class and pointing this incident out to the researcher) and the researcher observer (as evidenced by observation notes taken as the incident was happening) both misinterpreted laughing and smiling at CF as students laughing at each other or being distressed about being corrected. In one instance, the teacher, who revealed in discussion with the researcher before the start of the study that she did not provide oral CF out of concern for how students would feel and react to it, interpreted Rose’s exaggeration of her response or laughing responses to CF as an indication that she was uncomfortable or bothered by the feedback. On these occasions, when Rose exaggerated her words or laughed at the CF of another student, the teacher pointedly turned to the camera, and looked directly at the researcher, her facial expression urging the researcher to pay attention to

this moment, and then approached the researcher during the break to make a comment about it. However, stimulated recall revealed that this interpretation was not correct. Rose frequently laughed at corrections, saying, “Because I made a mistake many times...It’s just funny.” When Sara laughed and smiled at CF the teacher also looked at the researcher meaningfully, yet Sara described this in the interview as an unconscious reflex, which was misinterpreted as a sign that she was uncomfortable and distressed due to CF.

In another situation, it appeared that Lance and Nora were laughing at being corrected, possibly because they were embarrassed or uncomfortable about the CF, yet Nora’s stimulated recall revealed it had nothing to do with that, at least on her part. She said that she smiled because something was going through her head. She said that English is not her first language and when she learns words, she associates them with others, and she was remembering the person who taught her that word, explaining, “It wasn’t about him.” Yet, onlookers may misinterpret her behaviour as a reason against the use of CF.

In another example, Lucy said that she was not embarrassed that the teacher kept interrupting her; she just smiled when she realized that she made a mistake. In another instance, in response to a recast, she repeated the recast and smiled. She explained that she disagreed with the correction, but still repeated what the teacher had said. She explained her actions by saying, “I don’t know, because here, in some cases, teachers don’t like students to correct them.” She thought the CF was incorrect, but because some teachers do not like when students challenge them, she complied, but she said she “smiled because I am right.”

Disagreeing with Correction. The example above with Lucy accepting the correction, but smiling because she believed she was correct, highlights another common theme in students’ responses to CF that emerged from qualitative data. Interview and stimulated recall data revealed

that some students disagreed with the teacher's correction and resisted it. Rose, Rana, Lucy, Nora and Hope all thought, at some point, that they were correct, and the teacher's correction was incorrect. For example, Rose explained her response to a prompt: "Maybe I'm not, at the time I didn't realize that she's correcting my grammar, but I know 'enhance' is wrong" and she said that she thought that the teacher was saying 'hence,' and she kept thinking: 'why hence' ... Why is it 'hence' it should be 'enhance.'"

In response to another prompt she, again, thought she was correct, and the teacher was incorrect. She explained that the teacher "thinks that I needed to use 'thought' past tense, but actually, I am talking about present, so I use 'think,' because I didn't say 'now,' so it's was a misunderstanding." When asked if she was annoyed or frustrated by this exchange, she attributed it to a simple misunderstanding that was part of everyday interaction: "It was fine. It's inter- I think it's interaction."

In a third instance, the teacher attempted to correct Rose's mispronunciation of the word 'steak.' The teacher tried to correct her a few times but only when Hope, who was sitting next to Rose, repeated it to her, did Rose say it correctly. During the stimulated recall, Rose revealed that she had understood what the correction was, but she was just resistant to it until she realized that the teacher was correct. Rose explained that the first time the teacher said 'steak,' Rose thought "No, it's stick, and then [the teacher] says steak, steak, and I think, no stick." Rose explained that she started to spell it out in her mind 's-t-e-a-k', and only then she "realized that it was not stick, steak!" She explained that her acceptance of the correction had nothing to do with Hope and her clarification, but because she had convinced herself of the accuracy of the correction herself.

Similar to Rose, Nora also resisted the teacher's CF, going so far as saying, "No" and proceeding to use the present tense as she wanted. She laughed as she explained why she did it, saying, "No, it was like, I think I am correct [laughs]. This shouldn't be happening...[laughs]," and acknowledged that she should not be doing this in class.

Hope was the most resistant to correction. In one instance, she refused to admit her error, trying to blame faulty pronunciation, even though it was far fetched, saying, "Maybe I meant available and not valuable. I don't use it, I don't use it usually, valuable." She even went as far as refusing to accept the correction, forcing the teacher to move on. In response to a prompt she replied, "Yeah, I don't know, I feel like I did the grammar properly, but I didn't know why did she?" indicating that she disagreed with the CF. When I explained to her what the teacher wanted her to change, she responded with, "Seriously, every teacher has their opinion on this grammar." She said she recognized what the teacher had wanted from her but said that she wanted to keep it the way she had said it.

Interestingly, all but two of these cases were in response to implicit prompts, suggesting that implicit prompts are subtle and vague enough to indicate that the teacher may be uncertain and allow room for debate. This idea was supported by the fact that Nora referred to the CF as an opinion, saying, "They say that you shouldn't stick with your opinion, you have to listen, but I am here, sticking with my opinion," which suggested that she saw this type of CF as debatable. There is also a possibility that the personality of the student had an influence. The students who never resisted CF, Tim and Sarah, scored high on agreeableness, and this may be related to them unconditionally accepting the teacher's corrections. Interestingly, Rose also scored high on agreeableness, and unlike the other examples of students disagreeing with CF, she never

suggested that the teacher was mistaken, just that it was a misunderstanding and not anyone's fault.

Summary of Findings

The first research question - *What is the relationship between student personality traits and the effectiveness of oral corrective feedback in the classroom?* - was answered by correlating the data from the personality test and pre/posttest oral production tasks. These two measures were used to establish a relationship between the two variables. Whereas extroversion, conscientiousness and agreeableness did not appear to have any relationship with accuracy gains, the trendlines on the scatter plots suggested that openness to experience and neuroticism were traits of interest and merited further attention during qualitative analysis.

How do students with different personality traits respond to and experience oral corrective feedback in the classroom? was answered using qualitative data. Some trends emerged. Students of all personality traits were revealed to have an overwhelmingly positive attitude towards teacher CF, and a mostly positive attitude towards peer correction. They also believed strongly that being exposed to the correction of other students' errors benefited them as well. Moreover, various students were found to respond to teacher CF by smiling or laughing at correction, and/or disagreeing with, and even resisting, the teacher's correction. Those that never resisted were students with high agreeableness, which may suggest a connection between resistance and personality.

However, individual differences emerged when it came to student responses to different types of CF, and personality appeared to play a role in these differences. Students with competitive personalities almost completely failed to notice CF on their own errors, but the evidence suggested that they may have benefited from hearing other students being corrected.

Perfectionists tended to find all CF disruptive and upsetting, even the more implicit types such as explicit recasts. Others responded to confusing implicit CF with a tendency to try to make sense of the CF, and resist it until they understood what was incorrect, instead of compliantly repeating what the teacher said. Occasionally, such ambiguous moments were misunderstood as an indication of the student being unhappy or uncomfortable, a tendency to assume the worst about CF and its impact on student well-being. Yet that was not the case, and stimulated recall revealed that the student ended up benefiting from the feedback.

This study's findings demonstrated that having a positive attitude towards CF had a generally positive influence on its perceived effectiveness, and that CF worked as an awareness-raising reminder of accuracy for all students. An interesting phenomenon emerged that students treated prompts as suggestions or differences of opinion that they chose to ignore. This may have been due to implicit prompts being subtle and vague enough to indicate that the teacher may have been uncertain of what she was saying, and thus, allowing room for debate. Furthermore, there was a suggestion that a close relationship of trust was essential for CF to be beneficial. Finally, this study's findings revealed that students experienced and perceived explicit recasts as the most helpful type of CF, while implicit prompts appeared to be the least noticed type of CF and thus, possibly the least effective.

While attempting to explain the quantitative findings with qualitative data, an interaction of neuroticism with agreeableness, came to light. Whereas quantitative analysis revealed that neuroticism may have a positive relationship with accuracy gains, student interviews demonstrated that the situation was more complex than that, especially when competitiveness (low agreeableness) came into play. These findings would not have been revealed without the use of a mixed-methods approach. Moreover, the toxic impact of perfectionism on student

experience of CF emerged. Furthermore, qualitative analysis revealed that, overall, extroversion, surprisingly did not appear to have a significant relationship with student experience of CF, except for a preference for prompts expressed by introverted students. Meanwhile, openness to experience did make students more open and receptive to CF of different types.

Conscientiousness did not seem to have a specific influence on either student reaction or response to CF, except that those with very low conscientiousness, and low trait focus, found prompts ineffective and confusing, whereas another participant revealed that a hyper-focus on accuracy reduced her ability to benefit from more implicit types of CF, as she could only attend to the task of planning grammatical sentences.

In the next chapter, these findings are contextualized within the context of existing research, and study limitations and implications are discussed.

Chapter 5: Discussion and Conclusions

In this final chapter, the findings for the research questions are discussed in the context of existing research. Then, limitations of this study are outlined, as well as the potential theoretical and pedagogical contributions of its findings. The aim of the first research question - *What is the relationship between student personality traits and the effectiveness of oral corrective feedback in the classroom?* - was to establish a relationship between student personality and accuracy gains in past tense use.

Student Personality and Accuracy Gains

The results of the personality test revealed some general trends. The student participants in this study, as successful language learners studying English in a foreign country, scored higher than average on the extroversion personality trait, which finds support in previous research (Ehrman & Oxford, 1990; MacIntyre & Charos, 1996). They also scored lower than average on neuroticism, which could be related to the higher-than-average extroversion, as MacIntyre and Charos (1996) found that extroversion had a negative impact on anxiety. This group of students also scored ten percentiles lower than average on conscientiousness, which was expected as the teacher indicated that this was a ‘remedial class’ that included some students who had struggled at other levels and programs, possibly due to their lack of motivation or discipline. Finally, the students scored lower than average on openness to experience, which was unexpected, as by its definition, it is expected that language learners who travel to a foreign country to learn another language would be more willing to tolerate and seek the unfamiliar.

With regard to CF outcomes, six out of eight students showed improvement from pretest to posttest, with improvement ranging from 10% to 110% and regressions ranging from -16% to -24%. This provides support to the consistent findings in the literature that CF is an effective

instructional technique (Li, 2010; Lyster & Saito, 2010; Lyster et al., 2013; Sheen, 2011). Of note was one student, John, who had shown the highest improvement of 110%, but through video and classroom observations, as well as peer comments, it was evident that he frequently slept in class, so his scores, while they should be acknowledged, are not as meaningful.

The finding from this study that CF is an effective mode of instruction is generally supported by existing literature (Basturkmen & Fu, 2021; Li, 2010; Lyster & Saito, 2010; Lyster et al., 2013; Nassaji & Kartchava, 2017; Oliver & Adams, 2021; Sheen, 2011). Although this study's findings did not demonstrate tremendous gains statistically on the posttest, they were similar to Ellis (2007) who found that recast gains on the use of past tense “-ed” structures were only moderate, with no overall difference between participant performance in recast group and control group. Furthermore, student participants started self-correcting themselves on the past tense after even a brief exposure to CF, which, as suggested by Ellis and Sheen (2006), is evidence that students can develop metalinguistic awareness due to exposure to recasts. For example, the study participant Rose reported that CF raised her awareness and vigilance of past tense such that past tense accuracy was something that she focused on when she spoke and when she listened to others. Nonetheless, as the findings of this study demonstrate, CF is not always effective; the vast empirical database of CF includes mixed findings on its effectiveness (Han, 2021).

The quantitative analysis, while handicapped by a very small sample size that made obtaining any statistically significant results impossible, suggested that neuroticism and openness to experience had a positive relationship with student improvement from pretest to posttest use of past tense after the provision of CF. This finding was further explored qualitatively in the individual interviews and stimulated recall sessions.

Previous research may help explain the low correlations between some global personality traits and the outcome measures (Carrell et al., 1996; Diseth, 2003; Ehrman & Oxford, 1995; Fazeli, 2011b). One possible reason is that personality provides no information about the cognitive level of the individual, nor about their maturity, both of which have a significant impact on the language learning process. To further complicate things, personality traits may interfere with each other, which may result in an interaction effect between the two variables, or the small sample of participants may have a restricted range, both of which would reduce correlations. The strongest links between personality and language performance have been found at the primary trait level, as opposed to the global trait level. These intra-trait differences may reduce the predictive capacity of the global traits (Dörnyei, 2006). Finally, the relationship between personality traits and learning may be indirect, and mediated by situational variables (Carrell et al., 1996; Diseth, 2003; MacIntyre & Charos, 1996; Wakamoto, 2000).

Meanwhile, examination of the posttest data revealed that some students, namely Lance, Sarah, Nora, Rose and John were showing evidence of being in the process of learning the target feature as they began to over-use it and insert it where it did not belong. This suggests that oral CF may have raised their awareness of the past tense and encouraged experimentation that may contribute to learning. Another interesting phenomenon that emerged was that in the posttest, Sarah treated the teacher's clarification comments as recasts, even though they were not intended as CF, which suggests that, at the very least, the CF she was exposed to during the intervention part of the study was successful in bringing grammatical accuracy to the forefront of Sarah's focus.

A number of other variables may have had an influence on the findings as well, in particular, the length of speaking turn, the number of obligatory contexts (OCs), and the amount

of CF provided. Length of speaking turn did not appear to have a relationship with accuracy outcomes, but one personality trait did have a significant relationship with speaking turn length: the higher the extroversion the longer the speaking turn length. The number of OCs did not appear to have any association with accuracy gains; however, there was some indication that more OCs were associated with more accuracy on both the pretest and the posttest, though these relationships did not reach significance. Finally, the results indicated that the number of instances of CF provided related to the FFM personality traits very differently than the change in accuracy findings, so their influence on the relationship between FFM traits and accuracy gains has been mitigated. An interesting finding was that, although this relationship did not reach significance, there was a suggestion that the number of CF instances may be negatively related to accuracy. This was partially explained by the fact that those with lower accuracy on the pretest received a larger amount of CF. This also suggests that students may not pay attention or notice all CF they receive, or they may benefit from one type of CF but not others; thus, the amount of CF alone does not provide sufficient nuance. Furthermore, as was the case in this study, students may be impacted by not only CF on their own speech, but also by CF that is directed at the speech of others. Overall, this suggests that classroom interaction can never be completely quantified accurately.

Response to and Experience of CF

The answers to the second research question - *How do students with different personality traits respond to and experience oral corrective feedback in the classroom?* - revealed phenomena that were conducive to CF effectiveness and applied to students of all personality traits, as well as revealing meaningful individual differences.

Attitudes Towards CF

The overwhelmingly positive attitude towards oral CF expressed by the student participants in this study is in accordance with findings by other researchers (Faqeih & Marsden, 2014; Harmandaoglu Baz et al., 2016; Kartchava, 2016; Schultz, 1996; 2001; Sheen, 2011). Nora explained that the CF in this study was helpful because it helped her recognize her errors. Similarly, Rose said that if there were no CF, she would assume that she did not make any errors and miss any errors that she made. These findings are also in support of other research on students' emotional response to oral CF in an EFL context: Agudo (2013) found that 85.15% of respondents believed that oral feedback provided by teachers was useful for their language learning, and 66.33% respondents said that they had learned a lot from the oral feedback provided.

Likewise, this study's findings that students did not feel that they received as much feedback as they needed also has support in existing literature. Most participants, of all personality types, said that if the teacher did correct them, it was only occasionally, and not as frequently as they wished. This echoes findings by Schulz (1996) and Harmandaoglu Baz et al. (2016), who found that students felt cheated when they noticed others' errors that were not corrected by the teacher.

Similar to findings of Nabei and Swain (2002), who reported that students tended not to listen when the teacher was talking to other students, some students in this study admitted that they did not listen when others spoke. Despite this, overall, participants in this study showed that they benefited from CF provided to others, a finding which supports previous research in Nabei (2012), Havranek and Cesnik (2001), and Hyland and Hyland (2006). Furthermore, this study's findings included some evidence of actual benefit of listening to others receive CF, specifically

awareness-raising of the target grammatical feature and prompting of self-correction, seen as an indicator of learning (Havranek & Cesnik, 2001; Sheen, 2011). In fact, the case of Lucy, who missed most of her own CF and yet still appeared to benefit from the CF provided to others, suggests that CF provided to others can potentially be more beneficial than CF directed at a student's own errors. This echoes Havranek's (2002) findings that although students who were provided CF improved from the correction in about 50% of all cases, as measured in a subsequent test, their peers appeared to benefit even more, with an average success rate of 60%.

Some of this study's findings, however, contradict existing research. For example, the student participants in this study did not indicate that CF caused enough anxiety to be detrimental to their desire to speak in class, as found by Mak (2011) or that CF may be causing "damage [to] the learners' feelings and discourage[s] the process of learning if used very frequently" as suggested by Agudo (2013, p. 274). However, while a very positive attitude towards CF, as exhibited by the student participants in the present study, positively affected their learning experience, it may not be the ultimate goal or the most essential element, as it initially appears. In fact, as Havranek and Cesnik (2001) showed, a moderately positive attitude towards CF resulted in better learning than a very positive or a very negative attitude. Furthermore, students may not always be able to accurately articulate their feedback preferences, and even more crucially, may not always be the best judges at what is most effective for their learning (Oliver & Adams, 2021). For example, Tim said he preferred prompts, but his experience of them indicated that they confused him. Similarly, Nora, expressed a preference for prompts, but she did not actually notice them when the teacher used them to correct her speaking. In fact, Havranek and Cesnik's (2001) finding that being irritated by CF can be conducive to learning, when in combination with good linguistic competence, is reinforced this study's findings for

Sarah, who was embarrassed by correction but still receptive to it, and overall, found that CF (especially recasts) was quite beneficial for her learning of past tense “-ed.” Thus, an important caveat in interpreting the results on student attitudes towards CF is that, as this study reinforces, it appears that in order for CF to be beneficial and effective, student attitudes towards it do not necessarily need to be overwhelmingly positive.

An interesting phenomenon that emerged from the data was that ambiguous responses to CF such as laughing and smiling at corrections could be misinterpreted as laughing at each other or being distressed about being corrected, providing support to existing research that teachers fear that CF (especially explicit CF) could hinder students' participation, and that teachers are frequently concerned about embarrassing their students with CF (Nassaji, 2013; Zyzik & Polio, 2008).

In addition to increased self-correction and awareness of the target feature, the provision of CF in this study also prompted occasional peer correction, which is similar to Doughty and Varela's (1998) and Panova and Lyster's (2002) findings that recasts can lead to peer correction, with students modelling the teacher's behaviour. Peer correction can have both potentially positive effects and some downsides. A possible drawback of peer CF may be that the peer may provide an incorrect correction, especially if the teacher is not complementing the peer feedback (Han, 2002). Another problem with allowing peer feedback in the context of this particular study was that allowing students to interrupt their peers while they were speaking in front of the whole class may have caused a qualitatively different affective reaction than teacher feedback, and thus, different personality types may have responded differently to it. While students may bestow the teacher with the authority to interrupt them, being interrupted by peers may be particularly

aversive to some students, as Hope indicated when she said that being corrected by students from her own country was a cause of upset and embarrassment for her.

Finally, there was a finding that five participants disagreed with the teacher's correction and resisted her feedback. An intriguing aspect of this finding was that most of these instances of resistance or disagreement were in response to prompts (except for two instances, which were in response to recasts), suggesting that prompts may be subtle and vague enough to indicate that the teacher may be uncertain, and allow room for debate. Hope treated prompts as suggestions that she chose to ignore, giving credence to this possibility. Nora also rejected a teacher's recast and framed it as a matter of opinion and her standing up for her opinion. It is possible that the more implicit nature of prompts and recasts, as used in this study, may not have clearly signalled to students the need to correct, allowing them to believe that the choice of tense was a matter of debate. Ironically, a tendency for disagreement and resistance to correction, which may initially seem counter-productive in the classroom, may be an advantage for these students because Ehrman and Oxford (1995) found that defiant classmates were slightly ahead of their compliant counterparts in both speaking and reading.

The Role of Different Types of CF

The results of this study have support from some of the existing research on noticing of various types of CF. In particular, the finding that more implicit types of CF such as implicit prompts and explicit recasts were not noticed by students, and thus, their corrective force was not fulfilled (Lyster & Mori, 2006). For example, Lucy did not appear to notice most of her corrections and did not notice prompts at all. She misinterpreted teacher's interjections as content clarification requests, not grammar; Hope had a comparable reaction to CF. Similarly, Rose sometimes misinterpreted CF as corrections of word choice and not grammar. Sarah and Nora

also did not notice most prompts; Sara and Tim were both confused by them. Hope ignored prompts and treated them as suggestions, even when noticed; she also repeatedly did not notice the corrective force of recasts. While Nora noticed recasts, some of them were a source of confusion. Moreover, Rose noticed explicit correction and found it helpful, but with more implicit types of CF, she only occasionally noticed them, with prompts being the least effective type of CF for her, causing confusion and interrupting the flow of conversation.

While there was some indication that noticing of prompts may have improved over time for Rose, the fact that prompts and recasts were consistently a source of significant confusion for virtually all participants is cause for concern. As Agudo (2013) found, while most students did not resent being orally corrected in the classroom, what actually upset them was not understanding what the teacher was correcting. These findings are further supported by existing research on the ambiguity of recasts: that they may be misinterpreted by students as confirmation checks, thus overlooking their corrective force, or as feedback on content instead of form (Ellis & Sheen, 2006; Nassaji, 2016; Panova & Lyster, 2002). In fact, this study's results seem to echo Egi's (2007) findings that only 57% of recasts were noticed and that students often interpreted CF as response to content, while Mackey et al. (2000) reported that recasts were inaccurately perceived on morphosyntactic features as much as 75% of the time.

Nonetheless, overall, for Nora, Sarah, Rose, Tim, and Lucy recasts appeared to be a helpful type of CF when they were noticed, and definitely more so than prompts. In fact, while some students expressed a preference for prompts, they appeared to benefit from recasts more because they noticed them, and because they caused less confusion for them about the nature of the correction. This qualitative finding contrasts with the quantitative findings of Havranek (2002), who found that elicited self-correction (prompts) was the most effective type of CF,

while recasts were the least effective, and Lyster and Saito's meta-analysis (2010), that CF was more effective when it was delivered in a more pedagogically oriented (prompts) than a conversationally oriented (recasts) manner. It is also in contrast to the findings of Yang and Lyster (2010) and Kartchava and Ammar (2016) that prompts were more effective in learning of past tense than recasts, and Panova and Lyster's (2002) study that found that students did not notice recasts but noticed implicit prompts, and that recasts were shown to be the least effective type of CF.

Some important features need to be taken into consideration when interpreting these results. In this study, the teacher used repetition and emphatic stress to make recasts more explicit, and thus presumably more effective, leading to higher levels of learner uptake. Thus, the findings of this study are aligned with Sarandi and Celik's (2018) research that found that explicitness of recasts may lead them to outperform prompts, and other research that suggests that teachers should use explicit recasts in communicative classrooms because they are more salient, and therefore, more likely to result in learning (Doughty & Varela, 1998; Nassaji, 2009; Sheen, 2004). Furthermore, the target form in this study was sufficiently salient to all the students, and in contrast to Sheen (2007; 2010) findings that students lacked awareness of the grammatical target feature, all student participants in this study were aware what the target feature was and clearly stated it in the interview. Nassaji (2016) cautions that the corrective force of the feedback being noticed depends on the target structure, and this is especially true in the case of more implicit types of CF. When the target feature is more salient, that may increase the effectiveness of the implicit CF. Likewise, Kartchava and Ammar (2016) suggest that the noticeability of CF is dependent on the grammatical target it addresses, as they found that

feedback on past tense errors (the target feature used in present study) was noticed more than feedback on question forms.

In this study, those recasts that were noticed appeared to be beneficial, somewhat supporting existing teacher practices of widespread recast use. Furthermore, teacher hesitance to use explicit correction also found support in this study's findings, as some students spoke out against the use of explicit correction. For example, Sarah said that explicit CF would "shock" her and that the interruption it created was disruptive. However, explicit correction was not the only CF type viewed as upsetting: Rana described all CF as disruptive due to the interruption CF creates, and that at lower levels of proficiency, the disappointment of making errors would stop her from speaking altogether. Similar to Doughty and Varela's (1998) finding that some students, by their nature, were uncomfortable receiving more than one or two instances of correction within one exchange, Rana, Sarah and Tim suggested that multiple recasts in succession were embarrassing and upsetting.

An intriguing finding regarding the various types of CF was that a significant number of students (Rose, Nora, Rana, and Hope) requested written and metalinguistic explanation types of CF instead of the three CF types used in this study. This finding is supported by Ellis et al. (2006) who argued for the value of metalinguistic explanations, Sheen (2011) who said that metalinguistic CF even in brief time-outs can be very effective, and Ferris (2014) who found that a combination of oral and written feedback was the most effective approach.

FFM Personality Traits and CF

The goal of the trait approach to personality, which study is grounded in, is to analyze, classify and interrelate personality traits (Coon et al., 2014) and thus, in this section, finding from both research questions are combined and presented by each of the five global personality

traits of the FFM. While this study is exploratory, the findings suggest that personality traits overall do appear to play a role in how students respond to and experience CF, and whether or not they use and may benefit from it. Individual traits correlated with accuracy of target feature use differently, and were associated with different qualitative responses to CF, as is outlined below.

Extroversion

In this study, extroversion did not appear to have a relationship with learning outcomes, measured as a reduction in past-tense errors: Of the two highly introverted student participants, one improved on the posttest (Tim) while the other (Rana) did not. This was consistent with findings that extroversion-introversion appeared to have almost no relationship with language learning (Abdi & Mohammadi Darabad, 2012; Ehrman & Oxford, 1995). This is despite other research suggesting that introversion is a desirable trait for academic achievement and learning in general (Ackerman, 1999; Liadra et al., 2007) as well as language learning (Carrell et al., 1996; Dewaele, 2005), while others suggesting that extroversion may have an advantage in language learning (Ehrman & Oxford, 1990; MacIntyre & Charos, 1996).

However, while extroversion did not appear to have a relationship with CF effectiveness in the quantitative portion of the study, the personality trait of introversion appeared to play some role in student CF preferences. Introverted students showed a clear preference for prompts. This finding echoes the findings of a study on CF preferences between introverts and extroverts (of intermediate proficiency) in written CF, which found that explicit CF was more effective for extroverts, whereas indirect implicit feedback was more effective for introverts (Banaruee et al., 2017). The introverted students, Tim and Rana, also both reported that they did not ask questions or ask for clarification of CF. This is logical, because those who are introverted tend to be more

independent and introspective (Cheraghi Shehni & Khezrab, 2020), and that may be why they prefer to work out the correct answer on their own, and not have it provided to them by the teacher. Rana's desire for a delayed, depersonalized, written metalinguistic explanation to the whole class, instead of immediate CF, is in line with existing literature that introverts are characterized by avoidance of surprises and risks (Ehrman & Oxford, 1990). This preference shows that Rana does not want to be placed in a possibly disconcerting or confusing situation, and that she is relying on metacognitive strategies, which introverts tend to prefer (Ehrman & Oxford, 1990; Sharp, 2008), although that has been disputed (Fazeli, 2012a). Similarly, this finding is supported by the Banaruee et al. (2017) research that showed that introverts "tend to benefit more from implicit feedback that is directed toward the whole group of learners rather than the learner who has committed an error in his/her writing of compositions" (p. 19).

This study's findings on extroversion, in the context of findings by Ehrman and Oxford (1990), Sharp (2008) and Fazeli (2012a) that extroverts and introverts use different learning strategies, supports the idea that extroversion or introversion are more desirable depending on the context and method of instruction.

Neuroticism

This study's findings indicate that neuroticism may have both a positive and a negative association with student CF outcomes, and this can be contextualized in existing research that also shows mixed findings on the impact of neuroticism on learning (Diseth, 2003; Ehrman & Oxford, 1995; Robinson et al., 1994). This study's qualitative findings may be a small first step in explaining why this is the case. Initially, there was a suggestion based on quantitative data that neuroticism may have a positive relationship with accuracy gains, and some qualitative data appeared to support this as well, in support of existing research that neuroticism is positively

correlated with achievement (Diseth, 2003) and that high neuroticism may be beneficial to SLA (Robinson et al., 1994). However, qualitative data seemed to emphasize the negative influence of neuroticism as well. For example, Nora reported that her strong emotional responses had a negative effect on her learning. This has support in research findings that neuroticism correlates with a less effective learning approach, which is motivated by fear of failure (Diseth, 2003), and that certain kinds of anxiety are detrimental to language learning (Ehrman & Oxford, 1995).

One crucial factor in whether the students' response and reaction to CF was positively or negatively affected by neuroticism appeared to be whether or not the student had a linear view of learning, a fear of making errors and perfectionistic tendencies. Negative influence of perfectionism on learning is well documented in existing literature (Drizinsky et al., 2016; Flett et al., 2016; Greenspon, 2008). The literature shows that perfectionists have low error tolerance (Drizinsky et al., 2016), which can be detrimental to CF effectiveness. More support for this relationship exists in Ehrman and Oxford's (1995) findings that cognitive inflexibility, conceptualized as a need for order and a preference for sharp distinctions between ideas, is a disadvantage in language learning. These individuals cannot tolerate the necessary temporary lack of clarity when learning semantic and grammatical categories. Hope was a participant who exemplified these traits. She reported not noticing the vast majority of CF directed at her, refused to acknowledge her past tense errors, and insisted that she did not make errors because she had "fixed" them. She relentlessly tried to defend her errors or justify them. Rana, like Hope, also showed a tendency towards perfectionism, wanting to do things "perfectly" and fearing errors. This may be one of the reasons why she did not improve on the posttest, as research indicates that the constant pressure of trying to achieve perfection can undermine learning and exacerbate anxiety (Flett et al., 2016).

When Hope argued that her errors were actually correct, she may have been drawing on her intrinsic (more trait-like) perfectionism in reacting to CF in this manner. Individuals like Hope, who have very high expectations of themselves and their performance, tend to classify an incorrect response more often as a correct response than low-perfectionism participants, and show a larger number of undetected errors. It is hypothesized that this may be due to their high self esteem or inability to admit imperfection (Drizinsky et al., 2016).

Another factor, which appeared to interact with neuroticism and may explain its complex relationship with CF outcomes, was whether the student was focused on achievement or failure. Hope, with her focus on not making errors, was someone who was motivated to reduce failure, whereas Nora saw errors as an opportunity for improvement. This was exemplified by her excitement for Rose when she was being corrected by the teacher and Hope construed this as the teacher “helping” Rose. Thus, unlike Hope, Nora was focused on what she could learn and how she could improve, a process that accepts errors, which indicated an achievement focused motivation. These two different types of motivations reflect Higgins’ (1997) regulatory focus theory conceptualization of a promotion focus on gains and accomplishments and a prevention focus on reducing failure, preventing losses and relying on safety, and may be used to explain why, even though Nora and Hope both scored high on neuroticism, Nora’s accuracy improved, and her responses to CF indicated evidence of learning, while Hope’s responses suggested the opposite.

Conscientiousness

In this study, because both Nora and Sarah scored very low on conscientiousness, their response and reaction to CF was examined, and it was apparent that they both tended to miss corrections and forget them, either due to difficulty maintaining focus or being unable to attend

to both content and grammar. This suggested that they would not benefit from CF types that are not clear in intent or linguistic target. Moreover, comparing these observations with the finding that Rose (who scored high on conscientiousness) reported that her hyper-focus on the accuracy of her speech also reduced her ability to benefit from CF suggested that, overall, it appears that conscientiousness' influence on student response to CF is mediated by focus, with the relationship being U-shaped: too low or too high a focus may be detrimental for the effectiveness of prompts and recasts. This finding provides a possible constraint to the findings in existing literature that conscientiousness is positively correlated with achievement, high strategy use, and successful language learning (Costa & McCrae, 1992; Diseth, 2003; Fazeli, 2011b; Reiss, 1983).

Openness to Experience

This study's finding of a positive relationship between openness to experience and accuracy gains, assumed to be due to CF effectiveness, aligns with existing research (Carrell et al., 1996; Chamorro-Premuzic et al., 2007; Diseth, 2003; Ehrman & Oxford, 1990; 1995). Quantitatively, the correlational analysis for openness to experience showed the largest effect of all five traits, and the lowest p value, suggesting that openness to experience may have the strongest relationship between personality trait and past tense use accuracy improvement. This finding is supported by literature that has reported an association between openness to experience and achievement (Diseth, 2003; Liadra et al., 2007). Qualitative data further supported this finding. Lucy, who described herself as someone who enjoyed participating in activities such as riding rollercoasters and bungee jumping, scored relatively high on openness to experience compared to her classmates and showed improvement from pretest to posttest. Hope explained that her relatively high openness to experience trait had a positive influence on her ability to benefit from CF because it made her more open to new ways of doing and learning.

Similarly, the intellectual curiosity (an openness to experience characteristic) exhibited by Nora and Rose may have contributed to their accuracy improvement because of the association between openness to experience and student preference for a deeper learning approach (Chamorro-Premuzic et al., 2007; Diseth, 2003; Sharp, 2008).

It appears that students that favour less structured learning situations, are more curious, open-minded, adaptable to changing situations, and can tolerate moderate levels of ambiguity are more likely to persist in language learning than those who cannot, because they are more likely to take risks, as risks are essential for language learning. And those who are open to risk would be open to the possibility of making errors, and thus, be more open to CF.

Agreeableness

In this study, agreeableness, overall, appeared to have no relationship with accuracy gains, and this finding adds to existing literature, which is too limited to be conclusive. Qualitative data, however, indicated that agreeableness may have a positive influence on student response and experience of CF. First, Tim revealed that his high agreeableness influenced his response to CF because he puts more effort into uptaking the correction to avoid disappointing the teacher. Both his accuracy gains in the quantitative phase of data analysis and his response to CF in the qualitative phase of the study suggested that he appeared to benefit from CF.

Moreover, competitiveness (a low agreeableness characteristic) appeared to reduce noticing of CF. For example, Lucy, who was admittedly highly competitive, frequently did not notice CF, and when she did, she disagreed with it. Hope, also highly competitive, was convinced that the teacher never corrected her spoken grammar, until she was shown evidence to the contrary during stimulated recall. In fact, competitiveness (particularly how competitive some students were with others) seemed to be a critical attribute that influenced whether the

response and reaction to CF would be conducive to learning. In fact, in this study, high competitiveness emerged as an important facet of agreeableness that interacted with neuroticism. This interaction may explain why Nora, who was highly neurotic but not competitive, was receptive to teacher CF and appeared to benefit from it, whereas Hope, who was highly neurotic and very competitive, did not accept any CF and did not appear to benefit from it. This emergent finding provides support to the idea that maybe it is not isolated personality traits, but rather a combination of traits that have a more substantial impact on learning outcomes (Dörnyei, 2006).

Limitations

While personality traits do appear to play a role in how students experience CF, and whether they benefit from it, it is important to consider a number of limitations when interpreting and contextualizing these results.

One limitation of the study design is that the sample size limited the degree to which the findings could be generalized through robust quantitative analysis. Participant attrition exacerbated this problem, as some students did not attend class regularly or missed crucial steps in the study. Removing participants from the quantitative analysis, where the sample size was already quite low, reduced the power and feasibility of the planned statistical analysis.

Moreover, this study focused on a single grammatical feature at a particular proficiency level. As such, findings cannot be generalized to infer that the influence of CF on other grammatical features (Sheen, 2011) and learners at other levels of proficiency (Nassaji, 2013) would be similar. A more expansive study design is needed to be able to explore these variables.

Another potential limitation of the study design was that ultimately, it was the teacher and not the researcher who taught the class and it was at her discretion to decide how much to deviate from the study instructions (Rounds, 1996). While observations revealed that the teacher

made every effort to follow the instructions, it was inevitable that her teaching style and preference for a particular type of CF, or no oral CF at all, would impact the efficacy of CF, and thus influence the findings. The teachers' hesitance towards explicit CF came through in her choices of how often to use different types of CF. As a result, she used explicit CF infrequently, and recasts most often, so some students never received all three types of CF. It should be noted, however, that this kind of CF type distribution reflects research findings on the use of CF in classrooms (Dilans, 2016; Lyster & Mori, 2006). In addition, in the context of the classroom, the treatment may have been artificially enhanced because the teacher's approach at this level was ordinarily to avoid oral CF, and when she did provide CF, it may have been more salient than expected (Ding, 2012; Lyster & Mori, 2006). It should be acknowledged that part of the reason why the teacher participant in this study adhered so closely to study instructions was that the researcher was the teacher's friend, and as such she was highly motivated to collaborate. In addition, the instruction was designed to be a cooperative process, making the study design and goals compatible with those of the teacher. Involving the teacher in the decision-making process (such as which target language feature to use, and the design of materials to elicit this language feature) may have contributed to her investment in the experimental process and had a positive influence on the study.

Other limitations emerged due to the possibility of alternative variables and factors outside of class that may have had an influence on the study findings. For example, if the students were taking any other classes and they received any formal instruction on the past tense, that could have influenced and distorted the results. This possibility was investigated by asking students about any other instruction they may have received during the interview and on the biographical information survey form. Some students reported studying for IELTS, but none of

them studied any grammar in their preparation. Nonetheless, exposure to language can never be fully accounted for in an ESL environment and may have contributed to the positive CF outcomes in this study.

As a result of these design limitations, the findings of this study are best positioned as exploratory, and due to the low sample size, and consequent low statistical power of the quantitative analysis, the results are not generalizable until further study is conducted. The individual cases, however, revealed interesting phenomena and outcomes for this specific group and context.

Context-specific factors, in fact, may also have had an impact on the findings. While students in this class showed an overwhelmingly positive attitude towards error correction this could be due to the nature of this type of EAP class. This was a credit-bearing content-based EAP class, where accuracy was privileged by the students, and this may not be true in other contexts, such as settlement classes where fluency and communication may be privileged over accuracy, and students may not welcome interruption and grammatical correction. In addition, the context may also have played a selective role attracting students with certain personality traits, who focus on and respond to specific types of instruction, such as CF. In fact, students in this class scored higher than average on extroversion and lower than average on openness to experience. This may not be the case in a different context such as settlement language classes or workplace ESL classes. Future research across different contexts may provide further insight into how individual differences (such as personality) intersect with the impact of oral CF in the classroom.

Other limitations involved the instruments used in this study, in particular, the spontaneous oral production tasks, the personality test and stimulated recall. These are examined as follows.

Due to the challenges of finding a participating classroom, the scope of possible participants was expanded to include a variety of different proficiency levels and ESL programs available. As a result, it was not feasible to pilot the spontaneous oral production task questions. Another reason why the questions could not be piloted was that they were created in collaboration with the teacher, and thus, tailored to the language needs of these specific students, in this specific class, at their particular proficiency level. The impact of this limitation is that, as a result, not all spontaneous oral production tasks were equally effective at eliciting the obligatory contexts, and some elicited significantly less than others. Another potential limitation of this instrument was that during the spontaneous oral production tasks students may have been learning what to say from each other, as they listened to each of their classmates speak. The ones who were called on to speak later may have had an advantage over those who spoke earlier. In an attempt to reduce the impact of this limitation, counterbalancing was applied on the order in which the teacher called on the students (over the course of a two-day pretest and posttest). Furthermore, during their interviews the students were asked if they had planned what they wanted to say in advance, as they listened to others speak. Some of them said sheepishly that they tuned others out. Others admitted that they did plan in advance a little, but only in terms of content and not grammar.

Like any instrument, the Five-Factor Model personality test that was used in this study has its limitations. While it summarizes the fundamental regularities in human behaviour, it cannot account for all the richness that encompasses human individuality, and all the processes

that contribute to it. Every introvert may be introverted in a different way, yet that will not be reflected in the scores on the test. On this measure, different people can get the same score, and the result is a characterization of a person only on a global level. There are arguments as to whether five factors are too many, or too few (McCrae & John, 1992). Also, there are cross-cultural limitations to any Western-designed personality inventory. Nonetheless, while this test has limitations, it is a useful and well-validated starting point (McCrae & John, 1992).

Another limitation of the personality test is that it relies on self-report. The potential problem this presents became evident in the case of John who had one of the highest conscientiousness scores in the class but was frequently observed to be sleeping in class, as evidenced in the video recordings, and other students' remarks during their interviews. Scoring so high on conscientiousness does raise some questions about the validity of these scores and the dangers of relying on a self report personality test only. However, this study did not rely on the results of the personality test as a complete measure of the participants' personality. During the interview, participants were asked if their scores reflected their true personality, and their responses and self-reported descriptions supplemented their scores from the test, which provided data on individual richness that the test was not be able to capture on its own. Moreover, there is evidence that the student participants took the study seriously and attempted to be honest and adhere to the rules that were set for them. For example, Sarah, a close friend of Tim's, revealed in her interview that she asked Tim that morning what the interview was about, and he told her that he was asked not to reveal this information, so he did not tell her anything.

During the interviews and stimulated recall sessions, a particular limitation emerged regarding two personality traits, agreeableness and openness to experience. There appears to be numerous heterogeneous subtraits subsumed under these two global traits, erasing profound

differences between individuals. For example, Lucy was unhappy that her score on agreeableness was not higher than it was, due to her competitiveness lowering her score. The same was also the case for openness to experience. Rana, as well, said her agreeableness score should be higher, and, again, this discrepancy may be due to too many traits being subsumed by one global trait. Compliance and altruism may not necessarily belong in the same category. This problem of having too many subtraits under one global trait erases profound differences between individuals. For example, based on their agreeableness scores, it would be difficult to tell the difference between Nora and Hope on that trait, but there is a profound difference between them in competitiveness and orientation towards others.

Finally, there are the challenges of administering a personality test to L2 students, as language may have had an impact on their understanding of the questions and thus, the results. To mitigate this limitation, a handout was created based on linguistic piloting to neutralize difficult language on the personality test. The advantage of using the handout was that it appeared useful for some of the participants: When they completed the personality test, they were observed looking at the handout when answering. It also reduced the number of vocabulary clarification questions they asked. One possible reason for this is that the challenging words have been addressed by the handout. However, the handout may not have been the best approach of implementing pilot results because it was also observed that other students largely ignored it, and instead, preferred to ask the researcher or the teacher what words or expressions meant. Thus, the handout may have simply isolated the challenging vocabulary, without supporting meaningful comprehension of these words and expressions. It is possible that a more effective approach would have been to pre-teach all the words and expressions on the handout, and this would have encouraged students to pay attention to the information on the handout, although that would have

required more classroom time allocated for the study, in which not all students agreed to participate. On the other hand, it did not appear that the difficult words and expressions used on the personality test influenced the test results, as evidenced by the participant reports during the individual interviews that the test scores were a sufficiently accurate reflection of their personality. Moreover, the test is designed to ask similar questions in a different manner to keep track of response consistency, so any one question would not have had a significant impact on the results.

Despite the efforts to reduce the influence of language proficiency on the personality test results, another limitation of the test that emerged for some participants was that while the direction of their personality scores was accurate, the scores may have been distorted to the more extreme direction by them choosing *strongly agree* instead of *agree*. This sensitivity to word choice may be of particular importance for L2 students taking the test. For example, although Sarah agreed that her low conscientiousness score was a fair representation of her personality, she insisted that it was “too low!” This limitation also suggests that for better interpretation of the scores, the direction of the score may be more important than the percentile itself, as it may be influenced by a number of factors outlined above.

Finally, stimulated recall was selected as an instrument for this study because it is considered a particularly effective tool in obtaining participants' perspectives. It allows the interviewer to find clarification for unclear or ambiguous moments on the spot. It is not an intrusive tool because it does not interrupt oral interaction since it is administered after the interaction has concluded; it allows researchers to understand oral interaction better, and it is often used to measure learner's noticing (Egi, 2004). However, this instrument also has limitations related to issues of memory and retrieval, timing, and instructions (Egi, 2004; Gass &

Mackey, 2017; Mackey et al., 2021). Still, collecting data as soon as possible after the event, which is what this study attempted to do, scheduling the interviews within a two-week time frame while the course and the class activities were still fresh in participants' minds, may have improved accuracy of recall (Gass & Mackey, 2017). In addition, the stimulated recall procedure is based on an assumption that human consciousness can be observed in the same manner that one can observe events in the external world (Gass & Mackey, 2017). Thus, the procedure is as valid as the validity of this assumption.

Despite the aforementioned limitations, this does not make the endeavour itself without value. Any research will have limitations, many stemming from the assumptions each researcher must make before adopting a particular approach, methodology, and instrument. Thus, replication and future research will be critical in order to corroborate or refute this study's findings.

Theoretical Implications

A characteristic limitation of the existing studies on individual differences (IDs) in SLA is that the bulk of this type of research does not examine whether or in what manner IDs affect students' ability to utilize instruction for learning (Sheen, 2008). This study has added this valuable (and currently lacking) dimension to the body of literature on CF. Sheen (2011) argued that existing research focuses on the link between IDs and improvement of proficiency, instead of a more detailed look at the processes to get there, such as CF. The qualitative data in this study answers Sheen's (2011) call for research that examines IDs in how students process language instruction.

Furthermore, this study attempted to fill some methodological limitations of existing research on CF, such as basing the study in an authentic classroom, using a medium length

treatment (Lyster & Saito, 2010), and including an open-ended spontaneous (implicit) speaking task as an outcome measure (Ellis et al., 2006; Spada, & Tomita, 2010). The presence of these features is important because researchers advocate for more authentic classroom studies, longer treatments, and more implicit outcome measures.

Another contribution of the study is the use of an improved personality measure. Most existing studies on language learning and personality use the Myers-Briggs Type Indicator to measure personality, an instrument of questionable validity, whereas the Five Factor Model is considered to be superior (Diseth, 2003; MacIntyre & Charos, 1996; Sharp, 2008). This is significant because it adds to the existing research base with a more contemporary and valid measure of personality and addresses one of the methodological limitations of the research on personality in SLA: a recurrent reliance on a limited, outdated, and deficient measurement of key variables. This limitation of the existing research makes findings hard to interpret (Robinson et al., 1994), but building a research base with a more valid construct measure will allow for inter- and intra-disciplinary research with a common, validated construct.

Furthermore, the mixed-methods approach employed in this study to understand the relationship between personality traits and the effectiveness of CF, made it possible to examine the topic's different dimensions. Accordingly, this resulted in a triangulation of data, and thus, a deeper examination of the topic, and more meaningful conclusions than either quantitative or qualitative approaches would have produced separately. For example, the quantitative data relied on accuracy scores as a measure of CF effectiveness, yet qualitative analysis revealed that some students (Lance, Sarah, Nora, John, and Rose) started to overuse past tense and insert it where it did not belong. This was an indication of learning, even if it did not reflect positively on their accuracy scores. Adding a qualitative research question and data sources to quantitative data

made it possible to not only examine whether student participants with different personality traits improved their target feature accuracy after provision of CF, but to also deeply understand their experience of CF, and attempt to untangle how their personality traits may have played a role in CF effectiveness. Similarly numerical data enriched and improved the quality of qualitative data analysis. While the complex role of neuroticism was expected based on existing literature, the numerical data compelled the exploration of the role of openness to experience further during qualitative analysis. Thus, using the mixed-methods approach addressed some of the weaknesses of each approach, allowing for a richer and more insightful analysis of the data.

Pedagogical Implications

The findings of this study may help guide teachers in their CF practices. It is evident that students want CF, and the results of this study support the idea that CF is beneficial for language learning. In addition, this study investigated the most popular types of CF among both researchers and practitioners: recasts, prompts and explicit correction; thus, these findings can be of benefit for many teachers. The qualitative findings in particular can help guide teachers in making their CF practices more effective.

One important pedagogical implication is that this study suggests that there is a need for awareness among both teachers and students that personality has a relationship with student learning and how they respond and react to CF. In this study, students reported that talking about CF, and how they respond to it, was an awareness-raising experience, both in their understanding of themselves and how their personality influences their learning, and also in making them verbalize their CF type preferences. Thus, there is value in introducing metacognitive discussion in the class that would allow the students to think about their behaviours and emotional reactions, verbalize (even if only to themselves) what their personality traits are and how they relate to their

emotions and behaviour. A caveat is that for this to be effective, student language proficiency needs to be sufficiently advanced for them to be able to participate in these discussions. There needs to be an emphasis in the classroom that how one responds and reacts to classroom activity, including CF, is related to one's personality, and no CF strategy or as Hope put it "respectful" approach from the teacher will satisfy the student if they are psychologically unwilling or resistant or averse to error correction.

A short personality test as part of a needs analysis followed by a discussion of the results and implications, and a clear explanation of the teacher's approach to CF will be useful and helpful to both students and teachers alike. This will allow the teacher to get to know their students, their personality traits and CF preferences, while the students will learn about themselves and what part they play in making CF effective. Thus, while this study suggests that teachers would highly benefit from learning more about their students and their personalities so they can attempt to individualize their instruction and CF practices, it is also important that students need to learn more about themselves with respect to their personality and CF, and that they are explicitly made aware of the teacher's CF strategy and approach. This kind of metacognitive work would be beneficial not only in language learning contexts but in other learning contexts as well. Some teachers may be hesitant to administer personality tests to their students as they can be seen as invasive, particularly if they are asked to share the results. It is, therefore, important to not only give students a choice as to whether to take a test or not, but also to clearly explain the purpose and value of doing so, and allow the student to give informed consent to participate.

Moreover, this study suggests that in certain contexts, such as in small academic context classrooms where a teacher has an opportunity to get to know their students over a period of

time, it may be feasible to tailor CF to the personality of the student. For example, after learning about their students' personalities either through a personality test or a class discussion (or both), teachers can avoid frequently correcting students who score very low on conscientiousness, while encouraging highly competitive students to be more aware of CF by making it more explicit. Novel forms of technology are making such individualization more feasible (DeKeyser, 2012). Teachers can now use adaptive learning technology to customize learning to the individual, or deliver instruction through multiple forms of media, to provide immediate feedback, or provide students more options to accommodate different learning preferences.

One emergent cause of CF ineffectiveness in this study was that the experience of receiving CF was confusing. This is an important consideration for teachers, as they need to make every attempt to reduce this confusion, as Nassaji (2016) pointed out “when providing feedback, teachers should not only make sure that the learner interprets the feedback as corrective but that the learners should also be able to recognize what the feedback is about and what to do with the feedback” (p. 554). A metacognitive discussion about the different CF types, and student preferences for these types, is a worthwhile discussion to devote some time to at the start of a class, in order to improve the classroom experience for students, and help guide teacher's CF practices. Raising students' meta-awareness about CF may automatically make CF more explicit to students because they will be more metacognitively aware of it, and it will also provide them with tools to recognize the corrective force of more implicit types of feedback. Moreover, explicit training in CF types and how to respond to them effectively may help students move beyond the CF preferences associated with their personality type, as the most successful learners are those that are very flexible (Ehrman & Oxford, 1990).

Teachers can support different students with specific strategies as well. Participants who scored very low on conscientiousness said that they often forgot the corrections that they received. Delivering CF in writing and summarizing errors visually during class might be helpful for students generally, and those with low trait focus in particular. As Sheen (2011) points out, this kind of metalinguistic CF (even in brief time-outs) can be very effective.

Another pedagogical implication that emerged from this study was that the spontaneous oral production task, utilized here as a research instrument, was actually a desired teaching technique. When asked what were the top three techniques that a teacher should use to help improve her spoken language, Lucy replied, “Like what we had done with you, she asks questions and then we answer it all and we listen.” Hope named the spontaneous oral production task procedure in response to the above question as well, saying that one of the key things a teacher can do to improve student speaking is motivating them to speak with an interesting or controversial topic, as was done in the study, saying “Yeah, this kind of controversial question to make them speak a lot and see other people’s perspectives... Yeah, these things really make your speaking stronger.”

Another important implication that emerged is that when teachers are concerned about student reaction to CF, they may misinterpret socially uncomfortable moments during which students try to process the feedback as a sign that the student is upset or aggravated. Yet, in this study, that was overwhelmingly revealed not to be the case. Thus, it appears that when teachers are worried about upsetting students with CF, they tend to dread CF and over-analyze student comfort level much more than the students who are actually experiencing the correction. Raising awareness on this discrepancy between student comfort with CF and teacher interpretation of it may have important pedagogical implications.

Overall, an important message from this study may be the support it lends to an implicitly held belief by teachers that student personality does have an influence on students' ability to benefit from CF and, subsequently, their learning process.

Future Directions

Future research should build upon existing findings and explore if different CF types' effectiveness (recasts vs. prompts vs. metalinguistic vs written CF) are impacted by student personality traits differently. Since written CF is even more frequent in language learning classrooms than oral CF, qualitative examination of how students respond to and experience written CF would also be a worthwhile endeavour. Other questions that will be of benefit to teachers is whether students with specific personality traits have different preferences for types of feedback, and whether students with particular personality traits notice and benefit more from feedback provided to them versus feedback provided to other students.

Furthermore, replication of the current study in future research exploring the impact of FFM personality traits on CF effectiveness will be critical in order to corroborate or refute this study's findings. Future studies should attempt to carry out similar research in other contexts, use larger samples and longer periods of time for the delayed posttests, and include control/experimental design instead of a repeated measures design. This may result in more generalizable and robust claims. Because research has shown that effectiveness of CF may not emerge until a longer posttest delay (Faqeih & Marsden, 2014; Sheen, 2007), looking at the impact of personality traits on CF effectiveness longitudinally may reveal relationships that were overlooked in this study because the posttest in this study was conducted too quickly after the intervention, and there may not have been enough time for evidence of CF effectiveness to emerge. In addition, with the recent exponential growth and proliferation of online learning, with

many students now learning language in online only or hybrid contexts, this study may need to be replicated in an online environment to see how students with different personality traits engage in online learning differently.

The role of perfectionism and competitiveness that emerged in this study can be explored more in-depth. Is it possible that the classroom context intensifies expression of certain personality tendencies such as competitiveness or perfectionism? Is there a way a teacher can reduce the negative impact of traits like competitiveness while maximizing their positive impact on learning and achievement? Since these subtraits appeared to be particularly influential in the current study, they are worthy of further exploration.

If certain traits or subtraits are consistently found to have a relationship with CF effectiveness, work can be done to develop a questionnaire tool for teachers that focuses on these particular traits that influence CF effectiveness. This tool may help screen students' reactions to CF based on very particular personality traits or subtraits, without having to subject students to an existing personality inventory. Although it is possible that, if given sufficient time, teachers may eventually get to know their students, and establish intuitively who can handle error correction (and who cannot), it is not possible for many teachers who have large classes with continuous enrollment. Thus, such a tool would be extremely useful for these teachers, because the earlier this information can be obtained, the better.

This study had a personal impact on me as a teacher. Reflecting on my interactions with students as a novice teacher, this study supported some of my implicit assumptions, in particular, that student personality is a variable that influences how students react, utilize and respond to CF, while disproving others. This study suggests that if a student like Sarah is embarrassed by CF, it does not indicate that they want or need me to stop providing CF. It also does not mean

that if a student asks me to provide them CF that they are actually ready and willing to receive it (like Hope). I used to believe that the main trait that influenced student receptiveness and willingness to be corrected was how extroverted or introverted they were; however it emerged in this study that openness to experience, perfectionism and competitiveness may mediate student ability to benefit from CF much more so. Finally, as a teacher, I came to the realization that I need to stop fearing the worst in student response and reaction to CF. Uncomfortable moments are part of learning and growing, and there is room for some embarrassment and laughing at oneself.

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Appendix A: Personality Test

Source: <http://personality-testing.info/tests/IPIP-BFFM/1.php> [09/11/2016 6:24:03 PM]

	Disagree		Neutral		Agree
I am the life of the party.	☐	☐	☐	☐	☐
I feel little concern for others.	☐	☐	☐	☐	☐
I am always prepared.	☐	☐	☐	☐	☐
I get stressed out easily.	☐	☐	☐	☐	☐
I have a rich vocabulary.	☐	☐	☐	☐	☐
I don't talk a lot.	☐	☐	☐	☐	☐
I am interested in people.	☐	☐	☐	☐	☐
I leave my belongings around.	☐	☐	☐	☐	☐
I am relaxed most of the time.	☐	☐	☐	☐	☐
I have difficulty understanding abstract ideas.	☐	☐	☐	☐	☐
I feel comfortable around people.	☐	☐	☐	☐	☐
I insult people.	☐	☐	☐	☐	☐
I pay attention to details.	☐	☐	☐	☐	☐
I worry about things.	☐	☐	☐	☐	☐
I have a vivid imagination.	☐	☐	☐	☐	☐
I keep in the background.	☐	☐	☐	☐	☐
I sympathize with others' feelings.	☐	☐	☐	☐	☐
I make a mess of things.	☐	☐	☐	☐	☐
I seldom feel blue.	☐	☐	☐	☐	☐
I am not interested in abstract ideas.	☐	☐	☐	☐	☐
I start conversations.	☐	☐	☐	☐	☐
I am not interested in other people's problems.	☐	☐	☐	☐	☐
I get chores done right away.	☐	☐	☐	☐	☐
I am easily disturbed.	☐	☐	☐	☐	☐
I have excellent ideas.	☐	☐	☐	☐	☐
I have little to say.	☐	☐	☐	☐	☐
I have a soft heart.	☐	☐	☐	☐	☐
I often forget to put things back in their proper place.	☐	☐	☐	☐	☐
I get upset easily.	☐	☐	☐	☐	☐
I do not have a good imagination.	☐	☐	☐	☐	☐
I talk to a lot of different people at parties.	☐	☐	☐	☐	☐
I am not really interested in others.	☐	☐	☐	☐	☐
I like order.	☐	☐	☐	☐	☐
I change my mood a lot.	☐	☐	☐	☐	☐
I am quick to understand things.	☐	☐	☐	☐	☐
I don't like to draw attention to myself.	☐	☐	☐	☐	☐
I take time out for others.	☐	☐	☐	☐	☐
I shirk my duties.	☐	☐	☐	☐	☐
I have frequent mood swings.	☐	☐	☐	☐	☐
I use difficult words.	☐	☐	☐	☐	☐
I don't mind being the center of attention.	☐	☐	☐	☐	☐
I feel others' emotions.	☐	☐	☐	☐	☐
I follow a schedule.	☐	☐	☐	☐	☐

I get irritated easily.	☐	☐	☐	☐	☐
I spend time reflecting on things.	☐	☐	☐	☐	☐
I am quiet around strangers.	☐	☐	☐	☐	☐
I make people feel at ease.	☐	☐	☐	☐	☐
I am exacting in my work.	☐	☐	☐	☐	☐
I often feel blue.	☐	☐	☐	☐	☐
I am full of ideas.	☐	☐	☐	☐	☐

[Continue](#)

Appendix B: Biographical Information Survey

Gender: _____Male _____Female

Age (please circle one): 15-17	31-35
18-20	36-40
21-25	41-45
26-30	46-50

What language (s) did you learn as a child and still understand?

What other languages do you use to communicate? _____

Where were you born? _____

List all the countries you have lived in (not just visited on a holiday). Please indicate how long you stayed there in brackets and what language you spoke/learned while you lived there?

Did you learn English with a teacher or on your own? _____

How old were you when you started to study English? _____

If you learned English with a teacher, how long did you study it? _____

Please rate your speaking skills in English (1 = poor to 4 = excellent) _____

Please rate your grammar skills in English (1 = poor to 4 = excellent) _____

List all other English classes you are taking right now. Please include all classes and tutors, even if not at this school. Also, please indicate in brackets what subject you are studying (e.g. grammar, communication, etc.)

When did you come to Canada? _____

Why? _____

Appendix C: List of Possible Spontaneous Oral Production Tasks

If past tense -ed is the target language feature

- ✧ Please tell the class something interesting you did on the weekend.
- ✧ Your homework last night was to watch the news. Please describe a news story that you found interesting or exciting and why.
- ✧ What is your favourite memory from your childhood/when you were young? Tell the story.
- ✧ Share with the class a crazy/exciting/funny story that happened in your life.

If comparative -er is the target language feature

- ✧ Describe and compare yourself and your best friend/sibling. How are you the same? How are you different?
- ✧ What is/was your favourite subject in school? What is your least favourite subject in school? Compare both and explain why.
- ✧ What is your favourite book? What is your least favourite book? Compare both and explain why.
- ✧ What is your favourite film? What is your least favourite film? Compare both and explain why.
- ✧ What is your favourite TV show? What is your least favourite TV show? Compare both and explain why.

If articles is the target language feature

- ✧ Draw a picture of a room, or a place. Describe it.

Appendix D: Spontaneous Oral Production Task Samples

1. *Recall a time in the past when technology helped you with something? Recall a time when technology made life difficult. For example: Were you ever late for an important appointment? Tell this story. Did technology help you or did it make things worse? Has a computer virus ever caused problems for you? What technological problems annoyed you recently?*

2. The day before, students had to listen to a lecture about “Culture shock,” and had to answer comprehension questions on the content of the lecture. On this day, the teacher reviewed with the students the four stages of culture shock: honeymoon stage, culture shock, adjustment stage and recovery stage. The task was: *Talk about a time, while living in another country, when you felt that you were experiencing one or more of the above stages. What happened? Describe in detail.*

3. Students had to read an article called “Blue-Sky Research” for homework.

Basic/Blue-sky research can lead to unexpected applications. Can you think of an example from the past when an important research discovery was made that had a huge impact only later on? Describe it.

4. *Are you happier now or were you happier when you were younger? Give examples.*

5. Based on a listening they had done the day before: *I want you to talk about a situation in the past when you made an irrational decision about spending money and explain it. Try to be as specific as possible. If you haven’t had such an experience, you can talk about a friend or family member who did.*

6. *Was participating in the research study a positive or negative experience for you? Be honest and pick a side. Use examples from the past 4 weeks to support your argument.*

Appendix E: Interview and Stimulated Recall Questions

General Questions:

How do you learn best? In terms of language, grammar, and in general.

What is your teacher's role in the classroom to help you learn?

Name the top 3 things a teacher should do to help you improve your spoken language?

How do you feel when your teacher corrects you?

What upsets you in the classroom?

How would you describe your personality?

Do you consider yourself a good learner? Why or why not?

What personality traits in your opinion help you learn? Which traits in your opinion make it difficult for you to learn or are troublesome to your learning?

Specific Questions:

These questions will emerge from the quantitative findings, i.e. . . .

Did you notice which types of correction techniques the teacher used?

Why do you think the teacher used them?

Do you like them? Why?

How do they make you feel?

Do you think you learn from them? Why or why not?

What happened in this particular situation [on the tape]? What did the teacher do here? Do you think it was effective?

How does this [results of the personality test] aspect of your personality affect your learning?

How you respond to correction? Why? What makes correction effective?

Appendix F: Supplemental Handout

Vocabulary List

Abstract (adjective)

- relating to or involving general ideas or qualities rather than specific people, objects, or actions

Abstract ideas are concepts such as love and hate. “Honesty” is an abstract word. The word “poem” is concrete, the word “poetry” is abstract.

Brackets (noun)

-either one of a pair of punctuation marks () used to enclose written material

Chores (plural noun)

-a routine task, often unpleasant but necessary, especially a household one

Synonyms: task, duty, errand, housework

Exacting (adjective)

-requiring a lot of time, attention, or effort from someone; very difficult or demanding

Insult (verb)

-to do or say something that is offensive to (someone) or to do or say something that shows a lack of respect for (someone)

Irritated (adjective)

- feeling impatient, slightly angry or annoyed

Seldom (adverb)

-not often, almost never

Shirk (verb)

-to avoid doing something that you are supposed to do

Stressed (adjective)

-feeling very worried or anxious

Sympathize (verb)

- to feel sorry for someone who is in a bad situation; to feel sympathy for someone because you understand that person's problems

Vivid (adjective)

-producing clear images in the mind; seeming like real life because it is very clear, bright, or detailed.

If you have **a vivid imagination**, you can imagine things that are not real very clearly and easily. *Synonyms:* realistic, clear, lifelike, detailed, colourful

Expressions

At ease

- in a relaxed and comfortable state

Draw attention to myself

- to make people notice you; make yourself stand out

Feel blue

-be depressed or sad

Keep in the background

-to be shy, modest, quiet, not easily noticeable, or out of sight

Like order

-you like things to be organized, to be put things in a particular order or position; you like things to be in a state in which people behave properly, follow rules or laws, and respect authority

Life of a party

-a person who is lively and helps make a party fun and exciting; someone who is the center of attention at a social gatherings

Make a mess of

- to ruin (something) or to make many mistakes in doing (something)

Mood swings

- a sudden, unexpected change in the way that someone feels and behaves, especially when they become very angry or unhappy

Take time out for others

-help others