

University of Cincinnati

Date: 12/7/2021

I, Kara M Williams, hereby submit this original work as part of the requirements for the degree of Doctor of Philosophy in Educational Studies.

It is entitled:

Exploring Factors in Written Corrective Feedback: Error Type, Feedback Type, and Learner Affective Variables

Student's name: Kara M Williams

This work and its defense approved by:

Committee chair: Hye Pae, Ph.D.

Committee member: Haiyang Ai, Ph.D.

Committee member: Marcus Johnson, Ph.D.

Committee member: Ting Xiao, Ed.D.



41622

**Exploring Factors in Written Corrective Feedback:
Error Type, Feedback Type, and Learner Affective Variables**

Dissertation submitted to the Graduate School of the University of Cincinnati in partial
fulfillment of the requirements for the degree of

Doctor of Philosophy

in Educational Studies (Second Language Studies)

of the College of Education, Criminal Justice, and Human Services

by

Kara Williams
M.Ed. Adult TESOL,
University of Cincinnati, 2015
B.A. of English, Indiana University East, 2011

March 08, 2022

Dissertation Proposal Committee
Dr. Hye K. Pae (Committee Chair)

Dr. Haiyang Ai

Dr. Marcus Johnson

Dr. Ting Xiao

Abstract

This study investigated factors that are related to student success in using and learning from written corrective feedback (WCF). Focusing on learner affective variables and a student writing corpus collected over the span of a semester, different types of feedback and errors were investigated. Previous studies have focused on one or, at the most, two variables, such as motivation, error type, corpus, instruction type, etc., but a combination of all of the different factors, such as error type, motivation, correction type, and corpus, offers a fresh perspective towards learning about student use of feedback. Using expectancy-value theory and Gass' five-step framework as guiding frameworks, this study offers a convergent mixed methods perspective to WCF through a comprehensive quantitative analysis of student writing and corpus data coupled with a qualitative outlook through analysis of student writing and corpus data feedback and student perception of it.

Twenty-two undergraduate ESL students were recruited and their guided writing drafts were studied through the course of a semester. A writing prompt was analyzed with stimulated recall regarding error correction and feedback usage. Motivational testing of student motivation towards feedback and tasks were surveyed through the use of the Motivated Strategies for Learning Questionnaire (MSLQ) and analysis of concordancing and collocations of the writing samples were taken as well. Student interviews were also used to investigate student perception of feedback. The data collected both quantitatively and qualitatively was merged to create themes that helped to show that there was a connection between expectancy-value, motivation, and feedback use and that the breakdown between intake, integration, and output seems to be valid and worth further exploration.

Exploring Factors in Written Corrective Feedback

Keywords: written corrective feedback, expectancy-value, concordancing, collocations, five-step framework

Table of Contents

Abstract.....	ii
Chapter 1.....	1
Introduction	1
Written Corrective Feedback.....	1
Expectancy Value Theory.....	5
Quantitative Q1.....	9
Summary of Chapter 1	9
Chapter 2.....	10
Literature Review	10
Affective Variables and L2 Learners.....	10
Corrective Written Feedback.....	13
Types of Common Errors.....	13
Types of Feedback.....	18
Meta-Analysis of Texts.....	24
Automated Grammar Checkers.....	25
Studies of Learner Corpora.....	27
Gaps in the Research	29
Summary of Chapter 2	31
Chapter 3.....	33
Methodology.....	33
Participants	33
Design.....	34
Materials	35
Procedure.....	35
Quantitative Strand.....	36
Qualitative Strand	37
Integration	38
Summary of Chapter 3	38
Chapter 4.....	39
Results.....	39

Exploring Factors in Written Corrective Feedback

Results for Quantitative RQ 1	39
Motivated Strategies for Learning Questionnaire (MSLQ) Data.....	39
Table 1.....	41
<i>Motivated Strategies for Learning Questionnaire (MSLQ) Survey Results</i>	41
Corpus Linguistic Results.....	44
Table 2.....	45
<i>Changes in the amount of use, and number of errors, of the article system in two corpora, measured through concordancing</i>	45
Table 3.....	45
<i>Collocates of the article system in two corpora</i>	45
Student Use of Feedback	45
Table 4.....	46
<i>Errors/Corrections/New Errors</i>	46
Interview Data.....	48
Table 5.....	48
<i>Data Recorded from Interview Questions</i>	48
Thematic Analysis	52
Table 6.....	52
<i>Themes from interview data and the codes used to create them</i>	53
Theme 1 – Function	53
Previous and Current Experience with Feedback	53
Grammar Checkers	55
Theme 2 – Success	56
Expectations for Success and Course Value.....	56
Value and Importance of Assignment.....	56
Theme 3 – Control over Success	57
Theme 4 – Emotion.....	57
Stimulated Recall Session Discussing Errors and Corrections.....	57
Table 7.....	58
<i>Errors Discussed During Stimulated Recall</i>	58
Results for RQ 3 – Mixed Methods	59
Mixed Methods Interpretation	59
Table 8.....	60

Exploring Factors in Written Corrective Feedback

<i>Interview data, corpus data and MSLQ data in a joint display table</i>	60
Chapter 5.....	64
Discussion.....	64
Discussion of Quantitative RQ1	64
Changes in three grammatical features.....	67
Discussion of Qualitative RQ2.....	67
Interview Data.....	68
Discussion of Mixed Methods RQ3	69
Conclusions	70
Limitations	71
Recommendations for Future Research	72
References	74
Appendix A – MSLQ.....	79
Appendix B - Interview Questions	81
Appendix C - Antconc Examples.....	83
Appendix D - Example of Comments on Participant Essay	84
Appendix E – Codes used for thematic analysis	85

Chapter 1

Introduction

Student writing, especially L2 writing, is a scaffolded learning process, which is a learning process that builds on itself as each layer of the process is taught, that requires not only time but instructor influence. There are multiple layers to this process which start with knowing what the students can do and incrementally increasing the student outcome through practice, helping students achieve success, and working with them through the writing process until they are able to work independently. The focus of this work was the written feedback an instructor gives a student, referred to as written corrective feedback (WCF), through a number of different lenses. Those lenses are feedback type, error type, and learner affective variables and they are all layers of this scaffolding process. A better understanding of them may result in quicker integration of feedback into useful techniques for student writing, when they are used and understood.

Written Corrective Feedback

There are many theories that surround second language acquisition (SLA) and WCF, with regards to students who are learning English as a second language. The ideas of Chomsky and Krashen built a foundation which served as the building point for researchers to prove or disclaim with Truscott leading the pack as one of the first to negate the validity of the practice. Chomsky (1964) believed that all people are born with an innate knowledge of grammar that serves as the basis for all language acquisition, he believed that language was a basic instinct. Krashen (1985) argued that the only important factor in language acquisition is comprehensible input. Truscott (1996) was on the other side of the coin and felt that WCF is a fruitless task. WCF, or the corrections that teachers give on written assignments, is an important part of the

language acquisition of ESL students. Through the years, several researchers have spent much of their time trying to ascertain whether there was a best option for WCF and have continued to fight against Truscott's claim. Bitchener (2008, 2009, 2012), Ferris (2010, 2014, 2015), Hyland (2015), and Han (2017, 2019) have spent years proving the plausibility and reliability of WCF and believe that there is a feedback type for every learner.

Truscott's (1996, 2007) disbelief in the validity and worth of written corrective feedback for either students or instructors has caused heated debates with strong opinions on all sides for the past twenty-five years. Truscott (1996) made the argument that a single type of feedback could not help all learners because there are too many individual differences to account for within the rules and structures that need to be built upon by learners in lexis, syntax, and morphology. Truscott (1996) also argued that the completion of revisions after feedback does not really prove that learning has occurred.

Other research supports the validity of the use and function of WCF in that single and multiple episodes of feedback are advantageous to learners as well as proving that learners benefit from many types of feedback and the feedback was beneficial in correcting many types of errors. (Bitchener, 2008, 2010, 2017; Ferris, 2013; Han, 2017, 2019), but it also supports the claim that there are many valid forms of feedback that may suit one learner better than another and that this feedback can be tailored to fit specific learners based on learner variables.

Bitchener (2017) believed that because learners are given to having different learner-internal motivational and affective factors, such as: motivation, prior experience with feedback, attitude, relationship with their instructor, that impact learning outcomes and processes that these same factors will alter the learner's engagement with the processing of corrective feedback. He also felt that learner attitude and emotion play an integral part in how learners process feedback.

There is growing empirical evidence that WCF can target some types of errors such as errors that are related to spelling, articles, and tenses to name a few. (Bitchener & Knoch, 2010) All of these ideas surrounding WCF made it a topic that was worth researching and attempting to discern whether there is a connection between error type, feedback type, and affective variables. In using multiple types of exploration and research I tried to gain a better understanding of how these pieces fit together.

Statement of the Problem

In the ESL classroom, students are constantly receiving feedback in a variety of forms. Written feedback should be helpful to them because it is telling them explicitly what is wrong with their writing, or implicitly that there is a problem. Some students don't use the feedback that instructors give, and they fail to improve in their writing. This study explored the feedback process in other countries around the world and questioned participant experience with feedback in their home countries and in the US. Sometimes feedback is a frustrating endeavor and sometimes a rewarding one which is both the reason why WCF is never going away and was the reason for this study. An interesting phenomenon was that the scholars were all writing about what type of feedback worked, such as explicit, implicit, metalinguistic (Ferris, 2005, 2013; Li, 2014; Storch, 2010), or did not work, they were writing about the types of errors their students were making and they were just starting to write about the learner but they were not examining the problem from a variety of angles at once.

Bitchener (2017) claimed that research on a single episode of feedback had almost always proved that WCF worked but he was interested in the times that it didn't work. In this article Bitchener not only brought up the topic of why some learners fail to benefit from WCF, he referred to Gass' five step framework (1997) and he made a call to action for other

researchers to research the intake and integration steps within the Gass framework. The Gass framework examines the parts of the learning process which led me to question whether there was a connection between error and feedback type, learner motivation, learner comprehension, and output. Maybe the problem wasn't with the type of feedback, the type of error, or the learner. Maybe the problem is within the way the learner is processing the feedback and their motivation to do so at the correct time. All these things came together and encouraged this research on WCF which focuses on learner engagement with feedback, use of feedback, comprehension of feedback, and focuses on their affective variables. This dissertation research was completed through a mixed methods study, an interview, writing prompts, WCF, stimulated recall, follow up writing prompts, a survey, and corpus linguistic analysis (CL) in order to attempt to discern how feedback was processed with multiple student variables and whether the variables were individual, based on the learner and their motivational processes, or if there was a feedback processing issue of comprehended input, intake and integration (Gass, 1997).

Theoretical and Procedural Frameworks

In order to support the belief that WCF is, in fact, valid and useful, and to support the claim that grammar is not universal, but improved upon through explicit instruction and feedback, there are two main frameworks that guided my dissertation research. The two frameworks are Expectancy Value Theory (Eccles & Wigfield, 2020) and Gass' five step framework (1987) of learning. As English as a Second Language (ESL) students are learning a new language, it is important to learn about how they process learning and how they are motivated toward writing. Each of these frameworks was especially complimentary for ESL students who have a first language already.

Expectancy Value Theory

The first framework is Expectancy Value Theory (Eccles, 2020). This theory states that students' perception of their success relies on two main factors. The first factor is their expectancy for success. Expectancy value theory (EVT) states that students' achievement and achievement related choices are most proximally determined by their expectancies for success, and the subjective task values. The second factor is task value. Task value quite simply relates to how important, useful, and enjoyable the student deems the task. If a student does not want to complete the task because they feel that it is not a valued task, then their motivation towards it will be poor. There are four parts to task value, including attainment value, intrinsic value, utility value, and cost. Attainment value refers to why the task is important to the person and their identity. Intrinsic value refers to whether the task is enjoyable or interesting to the student. Utility value refers to whether the student finds the task to be useful and relevant to them and finally, the cost value refers to loss of time, stress, and loss of valued alternatives. Expectancy for success relates to the student and their confidence level and their belief in their own self-efficacy. It is also important to note that these expectancies are measured by the students in both short- and long-term measures. Expectancy value theory applies to the ESL learning because students need to see the value in their tasks in order to try to complete them and know that they are increasing their skills and moving forward. If the tasks seem too difficult, or there is too little reward, then the students are likely to be unmotivated and may choose not to complete the tasks. In the case of WCF, expectancy value theory is applicable because students need to feel the value of taking the time to make corrections and instructors need to figure out what motivates them toward using the feedback to better their writing. Loh (2019) discusses EVT and its use in the L2 classroom and describes the learner knowledge of the discrepancies between L1 and L2 as

a factor for successful learning and offers the opinion that explicit instruction and a top down approach to be tied into a better understanding of the students' ability beliefs and their academic self-concept. She also recommends setting short term performance goals that are attainable and reasonable and be sure that their feedback to students is understandable. Nagle (2021) completed a study on L2 university students to gauge the link between effort, achievement, and persistence and used EVT as a lens and found that a task value intervention on a writing assignment could be used regarding language learning itself in order to help the instructor and student discern why language learning was important to the student.

The idea of studying emotion and the emotional reaction to WCF is one that really took hold in the early 2000's. The interest started by trying to disprove Truscott's (1996) claims against feedback and has bloomed into studying feedback more closely. The affective variables that students employ such as motivation, anxiety, attitude and self-confidence have already been proven to play a part in the successful uptake of WCF, but we do not know to what extent. In almost every other activity that a person accomplishes in their life, positive or negative ideas about themselves will have an impact on the things that they are trying to accomplish, but the idea to apply this to SLA and how it changes student's uptake of WCF is a new idea (Bitchener, 2017).

Gass' Five Step Framework

Gass (1997) developed a five-step framework that includes comprising attention to or apperception of input, comprehending input, intake, integration, and output. If learners do not notice that feedback has been provided and that there is a gap in the feedback and what they have written, then they fail to produce correct output. If students do not understand the feedback that they are given, it corrupts the effect of the feedback. Explicitness and implicitness of feedback

Exploring Factors in Written Corrective Feedback

may slow comprehension (Gass' Step Two) as well as a level of learner proficiency, depth of knowledge, and individual and contextual factors. Intake means that learners must match the feedback with what is already in their long-term memory. In the fourth step, integration, learners either accept or reject what they have learned, wait for further confirmation, or dismiss. Producing modified output, whether it had anything to do with prior knowledge or not, is the successful step five.

Failure could happen at any one of the five steps. Learning which of the five steps the breakdown occurs for students is the first step in figuring out how to help students. Different instructional interventions could help students based on the different step that the breakdown occurred which could lead to new interventions in both SLS and SLA.

If a student is lacking the correct type of input, which could be proven here as we study feedback types, it suggests a breakdown in step two, or comprehensible input. Learning that a student is not ignoring the feedback they are being given, but not understanding how to process it, could create a scenario for an instructor where they could use a different feedback type. If the student is struggling with step three of intake it could possibly be because there were some intrinsic emotional variables at play that are blocking intake. If a student is having difficulty with step four they may need more practice understanding an underlying grammar rule or they not have successfully integrated the information yet in order to produce output which could be an emotional reaction to feedback, the instructor, or even the assignment. A successful step five that produces correct output is the goal so that students may continue to learn and grow in their feedback process.

Significance of the Study

This research was significant to SLA because recognizing that there are different

applicable factors that may help or hinder students from using and applying feedback is important in classroom use and success in using feedback. If all students were to become capable of processing WCF it would be beneficial to the writing process for both students and instructors. Bitchener (2017) recommends extensive mapping of potential individual and contextual factors. He also challenges someone to undertake empirical research that seeks to validate and extend theoretical proposals and should include self-reported studies in which learners are asked to think out loud as they process the feedback they have been given (stimulated recall) and to reflect on this data in follow-up interviews (immediately after processing), interviews should also inquire into their state of being before being given the feedback.

This research was also significant pedagogically, theoretically, and methodologically. Pedagogically, if it can be determined where the breakdown in processing occurs for students who fail to benefit from feedback, instructors could use the information to intervene at the proper time and correct the processing error. Theoretically, this study supported both Expectancy Value theory and Gass' five-step framework in helping us better understand how factors like motivation change the expectations and values of learners, how those changes alter how learners process feedback, and where the breakdown is happening. A better understanding of why students are making the feedback choices, and responding to feedback in certain ways, will help create a better learning environment for students where their emotional needs are being met. The methodological significance of this studies lies in the fact that it is a mixed methods study, and this is first time these ideas will be combined in order to see how they may change feedback outcomes.

Research Questions

Exploring Factors in Written Corrective Feedback

Quantitative Q1

Is there a change in student output after WCF and teaching interventions on accurate student use of the article system, phrasal verbs, and plurals?

Qualitative Q2

What impact do a learner's affective variables have on their feedback processing?

Mixed Methods Q3

How do error types, feedback types, and affective variables collectively influence ESL students' feedback processing?

Summary of Chapter 1

The theoretical framework discussed within this chapter is useful to SLA and SLS research regarding how learners use WCF by exploring different motivational strategies, feedback types, and learner variables. Both the Eccles theory and the Gass Framework provided a new lens with which to explore the learner perspective on feedback, learning, and the affective variables.

Chapter 2

Literature Review

Written corrective feedback (WCF) has been a contentious topic of conversation in second language studies for the past forty years. The contention is derived from the idea that there are multiple linguistic views regarding language acquisition, which are long standing ideas, and these ideas were contended by a fellow linguist who renounced a core tenet, that written feedback is necessary and helpful, and created an uproar. Chomsky (1974) believed that all people were born with an innate knowledge of grammar that serves as the basis of language acquisition and that language is a basic instinct. Krashen (1985) argued that the only important factor in language acquisition is comprehensible input, while Truscott (1996) blatantly renounced advantages to grammar corrections because he felt there was no single type of feedback that is lasting and advantageous to all. Previous studies completed in SLA have researched WCF from many different angles, with many different outcomes, and the debate has not decreased, only strengthened (Bitchener, 2008, 2010, 2017; Ferris, 2013, 2015; Han 2017).

Affective Variables and L2 Learners

Different researchers have inspected the affective variables and the writing process in different ways. They have completed the research with a variety of study participants, have used numerous methods, and they have shown many results. The studies regard the emotional and motivational variables through different lenses, but all seem to learn that there is an impact on learner engagement with feedback. The five studies included here were dissected based on the findings and affective variables, the study participants, and the method employed. Han (2017) felt that cognitive, behavioral and affective engagement with WCF were changed by situational context, student beliefs about themselves, their instructors and their peers. He also believed that learner beliefs can mediate learner engagement both directly and indirectly. This happens

directly through learning strategies, external operations, revision approaches and revision operations. It happens indirectly through student beliefs, influenced motivation, and expectations. Han and Hyland (2019) The emotions found regarding the reactions to WCF were rich and descriptive and showed that even negative reactions to feedback could bring about positive change in feedback use. They feel that further studies are necessary to attempt to discover what the different nuances of emotion mean towards WCF. They study both positive and negative emotion within this study and how the students react to that emotion, especially in the context of their reaction to WCF. Waller and Papi's (2017) study confirmed the theories that were represented towards the idea of learner perceptions of writing intelligence predicting their orientation toward WCF. If the learner had a high perception of their writing intelligence then they had a positive reaction to WCF, if they had a low perception of their writing intelligence then they felt that they were unable to correctly and accurately use the WCF. They prescribe to the theory that this perception of writing intelligence can be exercised and grown in students to help them elicit better outcomes in their writing and WCF understanding. The results of Ferris' (2013) study were that the level of anxiety that the participants were feeling was directly related to the amount of feedback they were getting and whether they felt they were being successful because of it. Transversely, they felt increased confidence towards their writing and less anxiety when they felt that they understood the feedback they were receiving and that they knew how to use it. Tsao, Tsang and Wang (2017) were testing for intrinsic and extrinsic motivation and writing anxiety, as they pertain to feedback on their writing, and they found that anxiety was medium-high in all learners and while motivation was also medium-high the interesting fact was the intrinsic motivation that was more common. This study is important because these students who had been in the US for at least ten years felt that their intrinsic motivation towards feedback

received on their writing to be greater than that of extrinsic. In all these studies the affective variables proved to be a viable research area that changed student perception of the writing process. They also proved that students have a rich and complex relationship with WCF and that their motivation towards writing and WCF can be altered by outside factors.

The study participants who were represented in these different studies offer a wide variety and reveal to us that affective variables are a part of the writing process for all students and that they are worth examining in every context so that we may learn to use them to our advantage. Han (2017) completed his study with Chinese EFL students at two Chinese Universities, using a low, intermediate and high student from each university. The study lasted for sixteen weeks. The study by Han and Hyland (2019) also used Chinese EFL students but they limited the study to completing two case studies, each at a different proficiency level. Waller and Papi (2017) completed their study with 142 ESL students at a US university and while the previous studies completed their work over the course of a semester this research was completed during the fifth and sixth week in order to increase student/teacher familiarity. Ferris (2013) used ten different L2 writers, from different nationalities, in a sixteen week-long case study while Tsao, Tsang, and Wang (2017) studied 158 Taiwanese college sophomores. The compelling fact was that all these studies, even with their variety of participants and content, yielded results that show that affective variables change student perception and use of feedback.

Of these five studies three of them were case studies and two of them were completed as survey studies with questionnaires. Two of them were large studies with over 100 participants and three of them were small with ten or fewer participants. Between the interviews, surveys, and writing samples that were used as measures it seems that the most productive research was that which included all three of these measure types. The dissertation research was completed by

using writing samples, questionnaires, stimulated recall, and interviews. I also used stimulated recall to attempt to get the participants to talk through their correction process after they processed the feedback and I asked them to discuss their state of mind before they processed any feedback and share what they were thinking about before, during, and after the process.

Corrective Written Feedback

Types of Common Errors.

The type of errors that a learner might make is important to the outcome of processing feedback and was another important facet to inspect while reading the literature. This portion of the review has been intentionally separated by study so that the focal point of each study, the participants, and the methods are clear. Bitchener (2010) was convinced that design limitations were a large part of the breakdown in the research studying WCF as was the lack of well-planned studies which focused on a small number of errors, instead of all errors. Bitchener and Knoch (2010) completed a study on advanced learners, with the article system, to attempt to see if there was an improvement on a rule that they had already been introduced. This study focused on two parts of the article system and was longitudinal. The types of errors that this dissertation focused on were an important factor in the success of the study as so many studies have been completed already, as the sample of studies mentioned here indicate. Bitchener and Knoch's (2010) study also contained a control group with which to compare the results of the group who did receive feedback. The study had 63 participants and was completed at a US university. The participants were divided into four groups which were categorized as control, meta-linguistic correction, implicit correction, or meta-linguistic as well as oral corrections. The participants completed pre and post-test writing samples from pictures and then were later administered a

delayed post-test. They were studying the referential use of the article “a” for the first use and “the” for subsequent or anaphoric uses which is a grammatical accomplishment more suited to advanced learner’s level. The findings for this study were that the treatment groups all outperformed the control group in all tests but that it was only the two groups who had had the meta-linguistic or the meta-linguistic plus oral correction that maintained their understanding after the delayed post-test was administered. They also felt the fact that they were using advanced proficiency learners was important to the study because it gave them referential information from their long-term memory to build on. It is interesting that the meta-linguistic feedback proved again to be so effective in this study because the participants are exploring their mistakes based on the feedback and searching for their hypotheses of what they did incorrectly based on cues from the instructor.

In a study by Ghandi and Maghsoudi (2014) they studied the effect of direct or indirect feedback on spelling errors in Iranian students. The 56 participants were randomly assigned to the study and placed in either a direct or indirect feedback group that focused correction only on their spelling errors. In this study excerpts from a text were dictated to the participants. The participants then transcribed the dictation and were given either direct or indirect feedback based on their group. They did the pretest portion twice and took the mean of the two pretests as a pretest score over a two-week period. Over the next two-week period they provided feedback on the pre-tests dependent on what group the participant was in. In the fifth week they completed a post-test. The findings for this study showed that the indirect feedback, that was student led and teacher supervised, was more effective than the direct feedback that students were provided with. My thinking is that the repetition of the correct spelling by the student themselves enforces the actual learning of the correct form. This is an effective way of teaching a grammar point but I do

not feel that this study was testing feedback in the same way that the other studies were in that the corrections seemed to be a fluid thing and more difficult to quantify due to the fact that students were leading and completing the corrections.

Sheen (2007) completed a study that focused on language aptitude and the acquisition of articles. The study was completed with 91 ESL students from various backgrounds and had a control group, direct only group and a direct meta group. The study used these groups as well as a control group. The class was asked to write a dictated story and the researcher graded the stories, specifically searching for incorrect articles. Sheen used a speeded dictation test, a language analytic ability test, a writing test, and an error correction test. The answers on these tests were used to statistically score the students. The outcome of this research was that the corrective feedback did prove to be effective, specifically the direct metalinguistic was the most effective. They concluded that focused, metalinguistic feedback helps with grammatical accuracy. This study had limitations because only one grammar point was tested. It is okay to test only one grammar point but then the test should be replicated with another grammar point in order to see if the results are due to the grammar point that was chosen or because metalinguistic feedback really does help with grammatical accuracy.

Diab (2015) researched form-focused corrective feedback (FFCF) and the use of it on multiple different error types. The errors he focused on were pronoun agreement and lexical errors in new essays. It was a quasi-experimental study and three courses in a sophomore level English class at an American university in Lebanon participated. The measures that were used within the study were a pre-test, post-test, delayed post-test and interviews. All the groups showed improvement with the FFCF. Even the control group improved, not because of any outside feedback that they received but because they were asked to self-correct while the other

groups were receiving their feedback. Diab also feels that the affective factor of confidence plays an important role of catalyst while internalizing linguistic knowledge structured through the mental processes, and that the focus on only two error types was important in allowing the students to actually understand and focus on a smaller number of problems.

Benson and Dekeyser (2018) used direct and metalinguistic feedback in order to check the differential effects on errors with present perfect tense and simple past tense. They matched 165 adult learners based on the L1 of the individuals and then tested them on grammatical inferencing before placing them in one of three different groups which were metalinguistic, control, or direct. There were 27 L1 groups that participated in the study. WCF was produced electronically for the participants on grammar constructs that were intentionally not taught by the instructors. The direct group was given the correction and the error was marked while the meta group did not receive the correct answer, but the paper was marked with grammar rules and the incorrect item was marked as incorrect. The immediate results of the post-test showed improvement in the groups that had received feedback, while the control group showed no improvement, but the long-term results of the delayed post-test varied by learner and were inconclusive. They are unsure whether the inconclusive nature of the long-term results was because there were only two treatments provided but feel that it is a possibility. They feel that the study proves that feedback is effective with students while working on grammatical accuracy and fluency within a task. This study not only offered another type of feedback because the feedback was offered online but there was more novelty based on the fact that the participants were tested on the grammar point that was being researched, placed in groups based on that test and the most important factor in my mind, the fact that the instruction was withheld. In an ESL classroom it is easy for students to pretend that they understand a rule once it has been taught but

if it is a new concept to the classroom then the instructor is getting a fresh perspective from the tests and research.

Summing up the research on the types of errors, it is important to note that there is overlap within the two groups as they have been separated, but it was done knowingly. In the types of errors section, there is focus on the types of feedback and in the types of feedback section there is some crossover and focus on types of errors. The articles discussed in each section were placed there because the predominant focus of the article belonged in the category in which it was placed. Especially in the types of errors section it would have been impossible to separate the articles completely as the errors have to be corrected with some type of feedback. There was also some mention of feedback types and types of errors within the affective variable section, but these studies were not completed to fit into the grouping of this paper.

All these articles were approached with either different measures, methods, or reasoning behind the study. Almost all of these studies have limitations because of the number of error types that are being investigated but the overwhelming response from the research is that feedback, especially direct or metalinguistic works in the classroom, if the instructor is mindful of how they approach the students, errors and feedback type. It is important to learn that certain errors can be the focus of a specific class session for a teacher and that with the appropriate type of feedback, the errors should improve for most students. It seems counterintuitive that a course could be taught that way but most feedback is given on all errors so it seems that the instruction and feedback should be completed in the same manner. Bitchener and Knoch (2010) feel that culling out specific errors to work on with students, through WCF, is not impossible if the group of students is small and that it is an effective way to work through problem areas and that if teachers and students work together it should be a simple task. If a teacher is faced with a larger

group of students, the students can be separated into groups and micro teach the lessons to each other that the teacher has taught. Another idea from Kurzer (2017), that seems applicable based on the content of this section, was that he recommended that students keep a record of their errors to track and recognize personal error patterns and move toward autonomy as self-editors. This is mentioned here as a number of these articles wrote about student led editing. Another part of feedback that is lacking in many ESL classrooms is the idea that students should play an active role in the feedback process before the writing even starts. Students should understand how errors will be coded, what the codes mean, and instructor expectations for how they will be handled by the student. “Some learners fail to either engage with the feedback and/or successfully process it across various cognitive stages that have been hypothesized as essential for text modification and the ongoing production of accuracy in new pieces of writing.” (Bitchener, 2017) He recommends a more extensive mapping of potential individual and contextual factors. He recommends think-aloud activities for learners as they process WCF, and immediate follow up interviews.

Types of Feedback.

Explicit correction, recasts, clarification requests, metalinguistic feedback, elicitation and repetition are the six types of corrective feedback (Lyster & Ranta, 1997). Ellis (2009) categorized direct and indirect distinctly from metalinguistic and added reformulation into his separation of categories. He then broke down the responses from learners into that of characterizations such as revisions required or no revisions, and attention to corrections only. Some of these forms are more frequently used with the spoken word, such as elicitation and repetition, while others such as metalinguistic feedback and explicit feedback are most common with written work. Explicit (or direct) correction is one of the most common forms of correction

and one of the most hotly debated because many instructors feel that if a student is given the explicit answer as to how to correct the mistake that they aren't really learning anything. On the other hand, students who are given implicit or metalinguistic feedback often do not want to take the time to figure out how to fix the error or they may have less capability than necessary to complete the task for full comprehension, and have no idea how to fix the error. In direct or explicit feedback, the instructor clearly indicates that the student's utterance or writing was incorrect and provides the correct form. While using a recast (in spoken corrective feedback) the teacher doesn't tell the student directly what is wrong, the teacher implicitly reformulates the student's error or provides the correction. Phrases like "Excuse me?" or "I don't understand," allow the teacher to indicate that the message has not been understood or that the student's utterance or writing contains a mistake and that a repetition or a reformulation is required, this is a clarification request. This causes students to have to look up grammar rules and figure out why the sentence or structure was incorrect. Metalinguistic feedback is provided when an instructor doesn't provide the correct form, and then poses questions or provides comments or information related to the formation of the student's mistake. There is an example in the articles that explains that students were provided with the grammar rule that would help them fix the error that was circled but that the feedback did not tell them exactly what they needed to fix. Elicitation is when the teacher directly elicits the correct form from the student by asking questions (e.g., "How do we say that in English?"), by pausing to allow the student to complete the teacher's utterance (e.g., "It's a....") or by asking students to reformulate the utterance (e.g., "Say that again."). Elicitation questions differ from questions that are defined as metalinguistic clues in that they require more than a yes/no response. Elicitation is used more often in oral feedback than in the written forms.

There were several studies that inspected types of WCF. They used different strategies directed at what types of feedback they studied as well as focusing on different learners and methods of study. There were different outcomes that were found throughout but all supported WCF as a viable and strategic process in SLA. This literature review will focus on five that seem to best encompass the overall types of WCF.

Karim and Nassiji completed a study (2018) comparing direct feedback and two types of indirect feedback on new writing for what they call the transfer effect. The transfer effect is how the writing changes with feedback over time, how they transfer and apply the feedback they were given to the new draft. This study is one of very few studies that focuses on all error types with more than one writing sample and multiple types of feedback. Bitchener (2010) would argue that focusing on that many errors is overwhelming for students, but I think it is important to present the study as it was another way of looking at things. Another argument could be made that if the work is being inspected for total improvement that is a more holistic way of viewing a student's work. Some instructors may find it to be ineffective to teach only one grammar rule at a time or they may want to revisit the entire set of issues a student is having week after week. Kang and Han (2015) completed further studies and felt that the results showed that written corrective feedback can lead to greater grammatical accuracy in second language writing, yet its efficacy is mediated by a host of variables, including learners' proficiency, the setting, and the genre of the writing task. They felt that the type of feedback administered might be connected to the proficiency of the learner which is interesting because this is the third mention of learner proficiency as a variable in the different articles. They felt that the timing in which feedback is given is also a variable that needs to be inspected. The article showed that both advanced and intermediate learners benefitted from WCF but that beginners did not. The mention of the timing

of feedback is interesting because so many instructors have such a difficult time in administering timely feedback to their students that there is the possibility that there is a window of time that feedback is most helpful to students. It would be interesting to know whether this need could be met by immediate feedback or if the feedback could be up to a day or even a week old and still be effective.

Nemeti, Alavi, Mohebbi (2019) completed their study regarding whether the differences in direct or indirect feedback changes the learner's ability to think implicitly or explicitly. The data that they collected lead them to the argument that focused WCF can lead to the acquisition of both explicit and implicit knowledge and that explicit knowledge can be transferred to implicit knowledge. They claim that L2 learners learn explicitly through form and function and then that knowledge once learned in this explicit manner moves into their implicit thought process.

Another study by Ferris (2012), who is one of the leading scholars on WCF and who calls for replication studies to be completed on work completed by Lunsford (1988, 2008) and Lalande (1982), where the different studies used a longitudinal study that focused on the types of errors that students were making and the type of feedback that the teacher gave. She then describes other studies that have also been completed longitudinally regarding the change in student writing with feedback over time. Ferris felt that both studies need to be replicated because the taxonomy of errors does not include common errors by L2 students, background information should be obtained about students along with the papers, teachers should fill out questionnaires about their feedback practices, and finally inter-rater reliability needs to be calculated. This author read this review and call for replication because it was an interesting perspective on two different studies, with multiple types of feedback used and the results on the differences in how teachers were giving feedback were surprising. There was very little "standard" grading and

there were many idiosyncrasies apparent. This recalled the thought that it must be very difficult to be a student receiving feedback from multiple instructors if all the feedback is different with no set pattern or design. Even from class to class with no guideline for what type of feedback each instructor offers would be difficult for students to navigate, and even more so for ESL students.

Eslami (2014) completed a study on direct and indirect feedback. The results of this study showed quantitatively that indirect feedback was more effective for students in all test formats. This research showed such definitive results but if a replication study were to be completed it would strengthen the results if the participants were interviewed afterwards because then they could answer how they used the feedback and what made it so effective for them. It would also be interesting to note whether this could be completed with any grammar feature or if it worked specifically well with the simple past tense.

The participants in the different studies were varied by both nationality and proficiency. Karim and Nassiji (2018) studied 53 East-Asian, intermediate, ESL students, Kang and Han (2015) used both intermediate and advanced learners, while Nemeti, Alavi, Mohebbi (2019) used 87 Iranian learners. Ferris (2012) reviewed studies by Lunsford (1988, 2008) and Lalande (1982) and those had varied participants in that the study participants that were of a different variety. Lunsford used a written corpus created from the writing of 1500 students while Lalande used 60 students, from four different classes who were learning German. This wide variety of language learners and variations in participants helps to prove that different types of feedback are both necessary and effective

All these studies are proving, time and time again, that most types of feedback work and that they work for many types of learners, in many types of contexts. The one study that stood

alone is the (2017) study by John Bitchener where he finally asked the questions that sparked my curiosity: Why do some learners fail to benefit from WCF? I wanted to find out how the variables all worked together in the process. Bitchener (2017) applied Gass' (1997) framework to his interest in this work and felt that the second step of the Gass (1997) framework needs the clarification that if learners are to notice with understanding then the corrective feedback needs to be understood by the learner. He also felt that analysis and reanalysis within working memory is necessary while analyzing the third step of intake which allows learners to hypothesize about what they are supposed to do and why. As there are multiple outcomes that a learner may choose, from intake to integration, Bitchener felt that learners are calling on their long-term memory to either accept or reject the information that they are recalling and either process it correctly or they store it for later until they obtain more evidence, they also might choose not to accept their hypothesis when they learn they are incorrect. He feels that learners have more opportunity to test the knowledge of this input when they are writing than when they are speaking because they can actually write it down (create a hypothesis), see it, and make adjustments based on that long-term memory. Bitchener also made a point regarding Gass' (1997) stage five, output, by stating that if the modified output is not accurate then the whole process must be repeated. He felt that the breakdown in the process of this five-step model can happen during any one of the five stages. It should be noted that Storch and Wigglesworth (2010) completed a study where they were interested in why some learners did not benefit from feedback but that was not the primary focus and it was completed through writing prompts, feedback and then listening to learner pairs process the feedback via audio recording. While this was informative from the standpoint of how participants reacted with peers and how they felt about the feedback itself, it doesn't really address where the breakdown occurs unless the

participant were to specifically go through their hypothesis for how the correction should be made verbally. It could possibly work as a replication study if the learners were separated and recorded individually and then were audio recorded as they thought out loud about the process of what they were doing.

Meta-Analysis of Texts.

The study by Kang and Han (2015) was a meta-analysis of some of the studies that are included within this literature review, but it must be included here because it is studying the efficacy of WCF in improving L2 writing accuracy. This study examined twenty-two studies that were completed on WCF. It examined studies with a variety of research designs, treatments, effect sizes and study characteristics. The study results concluded that WCF has a moderate to large effect on grammatical accuracy. It also showed that beginners did not benefit from WCF but both intermediate and advanced learners benefitted considerably. The study did not find an established efficacy in one type of WCF over another. When examining the different moderator variables, the largest effect size was discovered when examining proficiency level which indicates that developmental readiness should be established when offering WCF. (Kang & Han, 2015) The analysis also confirmed that WCF is also more effective than oral feedback and that students learning in a foreign language setting are less receptive to WCF than those who are in a second language environment. Surprisingly long-term treatment does not increase the effect size and short-term treatment does prove to be effective. The genre of the writing task is another moderator variable that seems to suggest that WCF has less impact on some forms of writing. Some of the study limitations that were set forth were the small number of studies included, the fact that a longer longitudinal study is necessary, and the number of moderator variables should be increased to include learner proficiency paired with feedback strategies.

In an article by John Truscott (2007) he examined the effect of error correction on learners' ability to write accurately. He completed this meta-analysis on six controlled and six uncontrolled experiments. As Truscott believed that WCF is ineffective the goal of this article is to persuade readers likewise. He not only believed that WCF is ineffective, he believes it to be harmful. Truscott doesn't argue for zero feedback on student writing, he accedes that this is a standard, but he specifically targets error correction WCF. Truscott cites several issues within the studies that he examines. He discusses the setting of the testing for students and states that the classroom is not changed from initial to follow-up testing with no break between the correction period a testing. He also discusses the fact that students will attempt to avoid using grammatical constructs that they don't fully grasp instead of learning from the feedback. As Truscott is a leading researcher in the field his work must be evaluated but the claims that he makes seem one-sided in the face of so much previous research. "The primary conclusion, based on the controlled experiments, is (a) the best estimate is that correction has a small harmful effect on students' ability to write accurately, and (b) we can be 95% confident that if it actually has any benefits, they are very small." (Truscott, 2007, p. 270) The limitations of this article, which aren't discussed within the article itself, are that there are so few studies that were compiled when the data was evaluated, only six controlled an six uncontrolled experiments were evaluated and he feels confident in sharing a result that feedback is harmful. This article lends little support to my dissertation research but instead fuels my argument that while some students fail to benefit from WCF, it is useful, and we need to find a way to use motivational tools to help develop their skills.

Automated Grammar Checkers.

A new tool that is being used frequently in the ESL classroom, by the students, is the

automated grammar checker. Recently they have become even more popular. These checkers use a score for the student work assessed and they color code a variety of errors. These grammar checkers are becoming a first form of feedback that many students are using without really thinking about the changes they are making within their writing. There are limited studies about the use of grammar checkers as they pertain to the undergraduate ESL classroom and this is an important addition to this study as students will be interviewed regarding their use of a grammar checker in order to attempt to discern what type of changes automated grammar checkers make to students feedback processing and if students are retaining the grammatical rules that are the foundation of these changes. The most common grammar checker in the current classroom environment is Grammarly which has been installed for many college applications as a more advanced spelling and grammar checker (Microsoft Word) would have been in the past. John and Woll (2018) write that while they believe that teachers cannot rely on technology to provide comprehensive written feedback, they feel that they can be employed to help students find certain error types and help them with specific activities.

Another study by Koltovskaia (2020) focused on the cognitive engagement of students when they used an automated grammar checker. The researchers felt that students were too reliant on the supposed accuracy of the technology of the resources they were using but sometimes decided to override the error that was generated due to the fact that they didn't trust that the automated system knew better than they did. In stimulated recall interviews students were shown the errors that were marked, how they corrected them, if they had, and were asked to respond as to why they chose to use the feedback or not. Koltovskaia admits that despite its importance there is a lack of research on student engagement with automated feedback.

Students were asked if they used an automated grammar checker in ESL classrooms

during the interview portion of the data collection. Participants were interviewed regarding their interaction with their grammar checker and questioned about repeat errors in order to attempt to ascertain whether there a difference in retention using the feedback from a grammar checker than the feedback from an instructor. The rationale found in the belief that there may be a difference in retention comes from the idea that while using an automated grammar checker, the correct grammar form is electronically located and fixed with the click of a button.

Studies of Learner Corpora.

In the area of corpus linguistics (CL) there have been many studies that have been geared towards learning more about how students can learn from corpus bodies and this information is important to this study, and the field of SLS, in that students can learn to use CL in order to decipher connections in WCF based on concordances and collocations . Yoon (2016) writes that concordancing (or corpus consultation), is a new way for students to see the work and words of others in their natural states. It helps students see how others would use the same language and they are able to decide whether there is agreement with how they use it and how others have used it before them. It has been gaining attention as a tool for effectively providing patterns in how language is typically used (Hyland, 2003; Johns, 1991). While using corpora is not a new idea it is only recently that it has been used for L2 writing. Hyland (2003) describes concordancing as both a research tool and a reference tool depending on how the author needed to use it. Yoon (2016) believes that concordancing can be helpful in recognizing prepositions, idiomatic expression and lexico-grammatical patterns.

A similar study, that was a guiding study for the corpus work regarding the article system, was completed by Shin, Cortes and Yoo (2018). This study investigated the use of definite articles in L2 writing, specifically in lexical bundles, and the data was drawn from a

large corpus of L2 writing. This study was differentiated from other similar studies in that it relied on a multiword sequence instead of a single word. English articles are known to be tremendously difficult for L2 learners, especially for those whose first languages have no article systems. The pedagogical implications of this study were that the commonalities between omission, addition and misinformation errors could be used to teach students by using lexical bundles. The authors guide future researchers toward inclusion of all the articles with the article system and they include the recommendation that the work be furthered to include work with prepositions.

Another study by Spring (2018) discussed the use of phrasal verbs and the use of corpus linguistics as a way to compile a list of phrasal verbs that allowed the researchers to teach the participants based on the motion, change, or aspect of the particles. This could also be a valuable study to replicate as the results of this study showed that using a descriptive teaching method around the specificities of the particles yielded a better understanding and greater score within the participants.

Ferris (2012) felt that both studies by Lalande (1982) and Lunsford (1988, 2008) need to be replicated, using a corpus body derived from student writing, because the variety of errors does not include common errors by L2 students, background information should be obtained about students along with the papers, teachers should fill out questionnaires about their feedback practices and finally inter-rater reliability needs to be calculated.

In a newer study by Croswaithe, Storch, Schweinberger (2020) they studied the impact of WCF on corpus assisted L2 error resolution. This is an important study because they were testing the use of different types of WCF and teaching students how to use the corpus software and then checking to see which type of WCF was the most successful. They found that students who were

given feedback that was both highlighted and underlined were the most successful at correcting their issue. The implications of this study, that were of interest within this research body, are that the results are significant outside of generalized small grammar problems and can help students with phrases as well.

These studies that used CL to analyze types of feedback, types of errors, and the changes in writing that can be analyzed through a learner corpus were helpful within this body of research. If students can become literate about using a corpus data base, or even generating their own corpus, then they have a better opportunity to learn how to correct errors that they receive feedback on, and to fix their own errors by becoming cognizant of patterns and norms.

Gaps in the Research

The gaps in the research existed because there was almost no existing research that discussed how the different variables mentioned above worked together for successful feedback processing. Bitchener (2017) recommends extensive mapping of potential individual and contextual factors. He also asked for someone to undertake empirical research that seeks to validate and extend theoretical proposals which should include self-reported studies in which learners are asked to think out loud as they process the feedback they have been given and to reflect on this data in follow-up interviews (after processing), interviews should also inquire into their state of being before being given the feedback and after receiving it.

The first gap in the research was that there was so little research available that is trying to discover how the different variables are mixed for successful feedback processing. There is plenty of research available that proves that feedback is a worthwhile expenditure of time for every instructor or it is at the very least a worthwhile cause for all of those who want to put the time into it for their students. Any instructor who has ever taught an ESL course, and provided

students with feedback, has felt the frustration of not knowing why their feedback was not working with a student. With more research and focus on what is happening with the individual learners while they are trying to process the feedback this frustration can end. For a large majority of the student population WCF works as a teaching construct and they use the feedback provided as a helpful tool for their success. For the other smaller portion of the student population WCF can be an exhausting, stressful, emotion laden enterprise that makes them dread not only the class that the feedback is provided in, but English itself.

The next gap was in trying to find out how motivational factors fit into learning about how learners process feedback. Using the Gass framework and expectancy value as the guiding theories may help in finding a link between motivation, values, and how feedback is processed. A way to answer the gaps in the research is to design a study that is representative of all these parts. The previous research is separate in both the purpose and how it is set up. If the different approaches are combined of some of the earlier research, new instruments created, and different ways are found to approach some of the same questions then we should achieve results that will help answer the question of why some people fail to benefit from WCF. Affective measures needed to be a focal point, using Gass' (1997) model, and needed to have a much larger part in the conversation that is based on why second language learners fail to benefit from written corrective feedback. In the research there are no examples where all these different parts are combined. For example, some of the studies have been longitudinal in nature and have studied the changes in writing over time but they have been completed in a corpus-based manner that didn't attempt to change feedback strategies or account for any differences in learner groups, emotions, perspectives or motivation. In other types of research, the research that has been completed only accounts for one L1 type. The focus on predominately East-Asian and Iranian

groups as participants might be limiting as they are not indicative of all L1 learners. Some of the studies did have a variety of participants but in the main the participants were from these cultural backgrounds. Another gap in the research that was not included in this dissertation research but must be discussed in this paper because the gap is apparent, is how feedback changes across content areas. WCF does not simply play a part in language arts classes but can be used in other content areas and it would be beneficial to know how other content area teachers are using it, if they are using it and how they are connecting it between the content area and English. Finally, there was a gap in linking the types of errors, the types of feedback, and the affective factors to a quantitative, corpus linguistic type of research. Using CL to track the changes of student work throughout the processes and throughout a semester illuminated any connections.

If instructors have insight into why their students are not benefitting from instructor feedback it will save time and frustration in the classroom and most importantly it will help students become more proficient in English at a more rapid pace. Han (2017) found that there was a reciprocal relationship between learner beliefs and learner engagement and an engaged student is more likely to be a happy, productive, learning student. An instructor could change the feedback strategy that they are employing with the student and it would create a simpler, less frustrating process for both parties. Instructors will have a better understanding of whether they are providing the most help type of feedback for each student and whether they are giving the feedback at the optimal time. Bitchener (2017) also felt that the level of feedback that is being given to each individual learner needs to match the learner proficiency level.

Summary of Chapter 2

This chapter discussed the results of a thorough literature review on affective variables of L2 learners, common errors made, error type, automated grammar correction, and corpus linguistics. This chapter also addressed gaps in the research. These various concepts came together to form a research body that cohesively established whether there is a connection between the concepts, how to best use a connection, and how to increase learner ability to recognize and create their own errors through CL.

Chapter 3

Methodology

This dissertation was a convergent mixed methods study that attempted to answer the three research questions. This chapter provides information regarding both the quantitative and qualitative strands and describes the materials, design, participants, procedure, and data analysis.

Participants

The participants in this dissertation were 22 undergraduate ESL students from the University of Cincinnati. The participants came from a variety of different countries and spoke a variety of languages. Some of the represented countries were China, Oman, Switzerland, Moldova, Korea, and Venezuela. I acted as both the researcher and the instructor for the course and submitted the appropriate IRB protocol. Student proficiency of English was based on their acceptance into the 1069 course number. Students would have taken a proficiency test such as TOEFL, IELTS, SAT, ACT, or a writing placement test to gain this course access. Students enrolled in this course would be at an intermediate or low-intermediate level. The students were enrolled in an undergraduate academic reading and writing course that focuses on writing summary, response, and argumentative essays and is a mandatory part of a course sequence that must be completed, if they test into it, prior to their being able to enroll in English 1000 at the University of Cincinnati. The students were voluntary participants in the study and were recruited by approved flyer. The average ESL writing course has approximately 22-26 students in it and participation of some of the PI's section 001 were used as well as some participants who were willing to participate from section 002 but who had another instructor. The number of participants out of the two course sections was 42% or 22/52 students.

Design

I completed a convergent mixed methods study because a convergent mixed methods study is used to compare and combine the quantitative or qualitative data together (Creswell & Plano-Clark, 2018) and there was a gap in the research which focused on the idea of combining all of the data together. There was concurrent data that supported each other in both the quantitative and qualitative strand regarding the affective variables, the five-step framework, and how students process feedback; this method yielded the most comprehensive results. Starting with the qualitative strand was important while completing the research because participants grew in their comfort level based on contact and familiarity with the researcher as the study progressed and if participants felt as if they were simply sharing information about themselves through the motivation portion, it caused them to be more open and less guarded. The quantitative strand of this design was completed on participant writing through corpus linguistics (CL) which helped determine, by finding out which words are being paired and if the use of a grammar checker and changes the processing of feedback, if they were making progress from writing sample to writing sample and intervention to intervention. The researchers who created so much literature regarding WCF had quite a bit of advice to give that was attributed to the design of the study. If a study uses one test for comprehension of WCF it cannot be accurate because there is nothing to compare it to within the same group of participants and the exposure was too short. (Storch, 2010) The interviews were completed in order to acknowledge and learn about the participants past experiences and motivation toward WCF and then to also find out about their beliefs about and past experiences with writing. The writing prompts were used on both the quantitative side for CL analysis and used qualitatively with the stimulated recall. All these different tests and analysis were searching within the theories of the Gass model and

expectancy value theory to determine where the breakdown in feedback was happening. For example, if a participant does not understand the feedback they are receiving because they do not even know the grammar rule and it is beyond their scope of understanding it will be easy to classify it within the Gass (1997) model. |

Materials

The materials used for this dissertation research were the Motivated Strategies for Learning Questionnaire (MSLQ) which measured learning strategies and academic motivation used by college students, interview questions, and AntConc software, which is a free corpus analysis tool for concordancing and text analysis. All participants provided the researcher with an interview and the stimulated recall session via Zoom, along with the MSLQ answers, throughout the course of a semester and after draft submission. Participants also submitted multiple writing samples throughout the course of the semester which were combined to create the corpus that was used with the Antconc software for analysis.

Procedure

The research started with student interviews that discussed what the participant's history was with WCF and their perception of it. All these interviews were transcribed and coded using thematic analysis and the interview questions can be found in Appendix B. The first draft of the second student essay was their summary response essay. They were given a guided writing prompt, which was graded and feedback given to the students. During this same interview session with the instructor, via Zoom, stimulated recall was used to discuss error correction on student writing regarding this essay and the errors.. Students were then asked to take the MSLQ. These answers regarding their affective variables were then transcribed and searched for patterns in feedback retention and use. The MSLQ responses were used to learn more about motivation,

value, and expectancy. A group of lessons then occurred, that focused on the entire article system, phrasal verbs, and plurals and then students used the instructors WCF along with the instruction to create their final draft. The articles, phrasal verbs, and plural usage were counted in their summary response first draft, both for number of usages and number of correct usages, the remediation through instruction and WCF was provided, and then the participants later work of their argumentative essay was examined in order to see if there was a change in the number of different types of usages. The MSLQ was used (Appendix A) to determine what students were thinking about and feeling regarding motivation and self-efficacy. There are examples in Appendix C of two samples of screens in Antconc which list concordancing and collocations which can help both students and instructors look for patterns in how words are being used and both correctly and incorrectly paired with other words. .

Quantitative Strand

One of the quantitative methods employed was Corpus Linguistic (CL) analysis and within that analysis changes in student writing over the course of a semester based on teaching interventions and WCF were the focus. CL typically brings a quantitative dimension to the description of languages by including information on the probability with which linguistic items or processes occur in particular contexts through concordancing, the occurrences and patterns of a word used in a text, and how words are typically used together through collocations. The texts that the students wrote created the two corpora that were studied in order to see if there was a quantitative description of where and how student writing changed over the course of the semester, and if WCF along with teaching interventions towards specific grammatical features, changed student writing outcomes. The other quantitative method employed was the use of the MSLQ. Student responses were recorded and quantified by taking the mean factor score of each

answer in order to gain insight into the average response to each question within the class.

Qualitative Strand

Grounded theory was used to make up the qualitative portion of this design and part of the reason for this is that it fit better within the goal of this project as part of its foundation began with the inspection of two theories or frameworks. The qualitative measures that were used were interviews, surveys, and stimulated recall, where participants were prompted to discuss the errors that they made, discuss what they thought about the errors, and if and how they fixed them. They were also asked to discuss how they felt about the feedback they received as a whole. Grounding the research in the theoretical frameworks of Expectancy Value Theory (Eccles, 2020) and the Five Step Framework (Gass, 1997) served the purpose of investigating motivational variables, learner comprehension, and feedback types and attempting to connect the three to better understand why some people fail to benefit from WCF.

The first thing done was the participant interviews which included both the interview portion as well as the stimulated recall with their paper draft. The participants were interviewed about their feelings about feedback, their feelings about learning English, their feelings about different types of feedback and about the experiences with feedback. The stimulated recall portion was completed using a first draft of an undergraduate essay that had been graded and WCF had been offered. It was graded for all error types explicitly and focused both implicitly and explicitly on the three types of errors that the class spent extra time covering. The participants were interviewed after the draft, during stimulated recall, to talk about their affective variables and how they felt about the writing. They discussed the graded draft which was returned to the participant and the participant was asked to talk about each of the errors they

made so that their thought process was verbalized. This was the end of the qualitative data collection process.

Integration

In order to integrate these two strands into a mixed method study I used the qualitative and quantitative strands in order to see if they converged as hypothesized and affective variables changed the processing of feedback creating a failure to comprehend, and successfully use, feedback at one of the Gass levels. Both data sets were also used to test whether expectancy and value towards the writing tasks and the use of WCF aligns with Eccles' theory. Thematic analysis was completed on the interview data and codes were created that were then used to create themes. These themes express the convergence of the data.

Summary of Chapter 3

This chapter discussed the methodology, participants, design, materials, procedure, and it offered insight into the quantitative, qualitative, and mixed portions of this research. It described the reasoning behind many of the methodological choices made within this research and explained how all of the pieces would fit together.

Chapter 4

Results

The results of this research were multi-faceted due to the many components that made up this study. The quantitative results are found in the data collected from the MSLQ and its analysis, as well as through the data found through corpus linguistic concordancing and collocations. The qualitative results are comprised of the thematic analysis, the interview data, and the stimulated recall. Finally, there is a mixed component where the data is compared, contrasted, and merged into new results which take both quantitative and qualitative pieces into account. In order to discuss these parts, they will be divided by research question.

The first part of this results section is comprised of the quantitative results which include the MSLQ and learner corpus data.

Results for Quantitative RQ 1

Is there a change in student output after WCF and teaching interventions on accurate student use of the article system, phrasal verbs, and plurals?

In order to discern whether there was a change in student output, student writing samples were compared from the first writing prompt that was given during the semester and the last writing prompt used during the semester, after WCF and teaching interventions, to see if the use of the article system, phrasal verbs, and plurals changed.

Motivated Strategies for Learning Questionnaire (MSLQ) Data

The MSLQ is comprised of 44 different questions that were a mixture of cognitive, metacognitive, and resource management questions. The MSLQ can be grouped into five different types of questions and they are: internal goal orientation, self-efficacy, critical thinking,

metacognitive/self-regulation, and help seeking and peer learning. (Duncan & McKeachie, 2005)

Each participant was given the MSLQ to record their own responses and then they returned the survey to the PI. Each participant recorded a value of 1-7. In this data a score of 1 means that the participant does not feel strongly about a response and a 7 means that they feel very strongly about a response. Many of the participants were motivated, interested, confident among their peers, and had limited test-taking anxiety. There was a greater disparity in answers with regards to study habits with the participants scattered throughout all the answer options. When it came to challenges in the classroom, 16/20 participants rated this question as a 6 or a 7 while the remaining 4 students rated it a 4 or 5. When participants compared themselves to others in the classroom there were multiple questions that related to this topic and there were two participants who repeatedly reported that they did not feel that they compared favorably to their peers while the rest of the participants were fairly evenly distributed throughout the rest of the top four numbers with a heavier concentration in numbers 6 and 7. There were multiple questions that were related to test taking and the answers were spread out throughout the whole number range. Most participants felt that they were equal to the task of test taking and they did not have too much test-taking anxiety but there was a small number that reported that they felt uneasy about test taking and that it worried them. When they reported on the data about how they felt about the importance of what they were learning in the class, there were normally 14-16 participants who rated the class and the materials at a high value and while the majority of the participants rated the questions at a 7 or a 6 there was usually one participant who would rate questions related to this topic at a 4 or 5. Study and homework practices had the most variety in the answers. Some students reported that they diligently study, create study guides, complete homework assignments, and complete practices while others stated that when things became

difficult for them, or they did not feel that they were doing very well, they quit, or only studied the easy parts. The surprising thing about these responses is that all of the students who participated in this survey received a high grade for this course, yet some of the responses indicated that they may feel that they are not doing their best work or are unwilling to push through on difficult tasks. In eight of the responses the mean indicates that the value is between a 2.21 and a 3.95. This shows the disparity in responses between participants and that while some participants rated the questions related to test anxiety and studying as non-problematic with a 1, other students rated these questions at a 6 or 7. There were also two questions that were rated a 2.10 and a 2.21. One question was related to a participants willingness to give up easily in a difficult situation, the other was related to not listening while the teacher is speaking. On a 1-7 scale I think that it is normal that both of these questions would be in the lower scoring range due to the fact that they may be unwilling to admit to a higher value on either of these questions to their instructor or someone they felt might report back to their instructor. All of the questions and the responses are broken down by mean scale score in Table 1, below.

Table 1

Motivated Strategies for Learning Questionnaire (MSLQ) Survey Results

MSLQ Question	Mean Scale Scores
I prefer class work that is challenging so I can learn new things.	6.15
Compared with other students in this class I expect to do well.	5.35
I am so nervous during a test that I cannot remember facts I have learned.	3.00
It is important for me to learn what is being taught in this class.	6.85
I like what I am learning in this class.	6.70
I'm certain I can understand the ideas taught in this course.	6.45
I think I will be able to use what I learn in this class in other classes.	6.75

Exploring Factors in Written Corrective Feedback

I expect to do very well in this class.	6.55
Compared with others in this class, I think I'm a good student.	5.10
I often choose paper topics I will learn something from even if they require more work.	5.25
I am sure I can do an excellent job on the problems and tasks assigned for this class.	5.95
I have an uneasy, upset feeling when I take a test.	3.30
I think I will receive a good grade in this class.	5.70
Even when I do poorly on a test, I try to learn from my mistakes.	6.60
I think that what I am learning in this class is useful for me to know.	6.80
My study skills are excellent compared with others in this class.	4.60
I think that what we are learning in this class is interesting.	6.55
Compared with other students in this class I think I know a great deal about the subject.	5.20
I know that I will be able to learn the material for this class.	6.35
I worry a great deal about tests.	3.95
Understanding this subject is important to me.	6.75
When I take a test, I think about how poorly I am doing.	3.65
When I study for a test, I try to put together the information from class and from the book.	6.05
When I do homework, I try to remember what the teacher said in class so I can answer the questions.*	6.73
I ask myself questions to make sure I know the material I have been studying.*	5.68
It is hard for me to decide what the main ideas are in what I read.*	3.47
When work is hard I either give up or study only the easy parts.*	2.10
When I study, I put important ideas into my own words.**	6.17
I always try to understand what the teacher is saying even if it doesn't make sense.*	6.05
When I study for a test I try to remember as many facts as I can.*	6.37
When studying, I copy my notes over to help me remember material.*	5.42
I work on practice exercises and answer end of chapter questions even when I don't have to.*	4.32

Exploring Factors in Written Corrective Feedback

Even when study materials are dull and uninteresting, I keep working until I finish.*	6.21
When I study for a test, I practice saying the important facts over and over to myself.*	6.00
Before I begin studying, I think about the things I will need to do to learn.*	5.47
I use what I have learned from old homework assignments and the textbook to do new assignments.*	5.68
I often find that I have been reading for class but don't know what it is all about.*	3.05
I find that when the teacher is talking, I think of other things and don't really listen to what is being said.*	2.21
When I am studying a topic, I try to make everything fit together.*	6.00
When I'm reading, I stop occasionally and go over what I have read.*	5.32
When I read materials for this class, I say the words over and over to myself to help me remember.*	4.47
I outline the chapters in my book to help me study.*	4.63
I work hard to get a good grade even when I don't like a class.*	6.42
When reading I try to connect the things that I am reading about with what I already know.*	6.47

Note. MSLQ Answer Breakdown – Students rated themselves at a level of 1-7, 1 being the least that they agree with the statement or question and 7 being the most that they agree with the statement or question. The mean scale score was taken from the data. n=20 but in * questions one set of data is missing. One question with an ** has two sets of data that are missing.

Corpus Linguistic Results

A corpus linguistic analysis was completed through the concordancing of two learner corpora. One corpus was created out of the summary response rough draft and another was created out of the argumentative rough draft that were written by 20 of the participants. In each corpus the use of the definite and indefinite articles was assessed in order to discern whether use of the article system had increased or decreased over the course of a semester, after having been taught the article system and given feedback regarding the article system over the course of a semester, and if the use was correct or incorrect and if there was a difference in correct or incorrect use over time with intervention. There was a time span of two months between these two essays. AntConc software was used to produce this concordancing and collocation data along with the data for the three grammar features. Each corpus was analyzed separately and the data input into Table 2. The use of the article “the” is used over two hundred times less in the second essay than in the first, while “an” is used more and “a” is used slightly less. Articles are an issue in most ESL courses, because most ESL students do not have an article system associated with their home language, so I used two teaching interventions regarding the article system as well as commenting repeatedly through feedback when an error appeared. Misuse of the article system is problematic in writing and conversation for most ESL students, so focus on the article system, while derivative to some, was completed because many students over the past six years that I have been teaching 1069, have expressed their desire to better perfect it.

Collocates, or words that are frequently used together, of the article system were discovered in AntConc as well which allow you to search for patterns in language which are non-sequential in nature. Word types are the number of unique words while word tokens are the number of words in each segment of language. These are represented in Table 3 as they change

from the first draft of the summary response essay to the first draft of the argumentative essay. These papers were written two months apart from each other during a semester.

Table 2

Changes in the amount of use, and number of errors, of the article system in two corpora, measured through concordancing.

Total occurrences of each article in each essay.	The	An	A
Summary Response	1018 (57 errors)	273 (0 errors)	49 (2 errors)
Argumentative	812 (30 errors)	298 (1 error)	41 (4 errors)

Note. Use of the article system found within two corpora. Samples were taken only from participant writing samples.

Table 3

Collocates of the article system in two corpora

Common Collocates of the Article System	Word Type Summary Response	Word Type Argumentative	Word Token Summary Response	Word Token Argumentative
The	1062	874	9393	7312
A	366	398	2166	2426
An	73	61	288	228

Note. Use of the article system found within two corpora. Samples were taken only from participant writing samples.

Student Use of Feedback

In this section two different writing samples from each participant were collected. The first sample was the analysis of argument rough draft. The sample was graded by the instructor and returned to the participants with explicit WCF. The students then submitted a second draft of the writing in the form of their analysis of argument final draft. In Table 4 the number of errors found on the first paper, the number of errors corrected on the second paper, and the number of

new errors that were created are listed. This data set is only n=21 because there was a paper missing from one of the participants.

Table 4***Errors/Corrections/New Errors***

Participant ID	How many errors the students had on their analysis of argument rough draft.	How many errors the students corrected on their analysis of argument final draft.	How many new errors were created by the student when editing?
DCS1F	5	4	1
DCS2M	13	12	0
DCS3M	22	21	0
DCS4M	31	28	0
DCS5F	23	19	4
DCS6M	9	8	0
DCS7F	1	1	0
DCS8F	6	4	3
DCS9M	16	14	0
DCS10F	9	9	0
DCS11M	9	4	0
DCS12M	19	17	0
DCS13M	23	23	0
DCS14M	17	15	0
DCS15M	24	19	3
DCS16M	10	10	0
DCS17F	34	33	0
DCS18M	27	27	0
DCS19M	5	3	1
DCS20F	5	5	0
DCS21M	27	25	2

Note. Errors made/errors corrected/ new errors created. n = 21 here because participant DCS22M was missing one of their writing samples.

Changes in use of three grammatical constructs after WCF and Teaching Interventions

There are three different grammatical features that are discussed. The first is the article system, the second is plurals, and the third is phrasal verbs. The participants were assigned four essays throughout the course of the semester. The first essay is much shorter in length than the

next three so for that reason the second essay, the summary response rough draft, and the fourth essay, the argumentative rough draft, were used to measure changes in writing against time and through multiple teaching constructs. The instructor taught each of these grammar features during the online class sessions and added grammar practice around each of these constructs. Most of the students had little change in any of these grammatical features. When addressing articles, seven participants slightly decreased their article use while seven participants increased their article use. With regards to phrasal verbs, three participants saw an increase in their use of phrasal verbs while one participant saw a decrease. The use of phrasal verbs in ESL students is an important grammatical feature for them to learn because an increase in use of phrasal verbs in writing should help their fluency in speaking informal English. The use of plurals increased in the writing of 7 participants and increased in the writing of 6 participants. None of the data noted in this section was extreme, and it is inconclusive in nature, but it does lend itself to the knowledge that the participants seemed to be almost evenly split in their use of each of these grammar features and that outside of two cases, the changes were not significant. This data also, although being of an inconclusive and disappointing nature, needs to remain within this body of work as it was integral to the initial proposal of this dissertation.

Results for RQ2 – Qualitative Data - How do learners feel about motivation and feedback that may change their feedback processing?

The qualitative data was arranged by splitting up the questions and responses by the students. Those responses were turned into codes which then became part of the thematic analysis.. Interview data was collected by Zoom interview with all participants (n=22). There were 22 participants who were interviewed, 21 provided essays for the corpus, and 20 submitted

a completed MSLQ. I asked the same interview questions of all participants and then completed their SR with the analysis of argument rough draft.

Interview Data

The interview data collected was divided by question, and added to Table 5, below. After this, thematic analysis was completed.

Table 5

Data Recorded from Interview Questions

Interview Questions Asked	Summary of Responses
History with feedback	New, uncomfortable, love it, helpful, detailed, scary
How feedback was handled in home country	Generalized, one paragraph, no essay writing, no essays, only feedback on grammar, focused on grammar and style, no draft process, lessons focus on grammar and vocabulary, our work was done in class and fixed in class, no feedback, face to face, the same process,
Experiences with feedback in the US	Lots of feedback, sometimes overwhelming, love it. When I get the feedback in the US and the chance to fix it, it stays in my head. Easy to understand.

Exploring Factors in Written Corrective Feedback

<p>Did Seeing Much/Little feedback motivate/demotivate</p>	<p>Sad at first, then motivated. If there's something to fix, I know I'm improving. Why didn't I think of that? Happy someone took the time to develop me. I'm more motivated if I see a lot of feedback. When I see it, I say Oh no, I need to study more, when I see less, I think I'm doing a great job. The first time I see it I say oh, my god, it's so much but they motivate me. My motivation is personal. If there is a serious problem I don't like them. More than 15, I'll be shocked. The number of errors changes my motivation. Courage.</p>
<p>Type of feedback</p>	<p>Explicit is best, I know what to fix and how to fix it. I know what is wrong and I learn from it because I know what is wrong. Implicit is not totally bad because I learn while finding the answers. I prefer when the teacher gives the feedback at each point. It's comfortable, the way you do it. I think I can't identify them myself; I want to learn more. I think both, they complete each other.</p>

Exploring Factors in Written Corrective Feedback

Feedback in other content areas	Yeah, in lots of other courses. No, only in ESL. Business. General Chemistry, history, math/physics,
Value of Course	4's, 4.5 and 5's, mostly 5's 4 – 3 4.5 - 1 5 – 18 Mean Scale Score – 4.84
Expectations for Success in the course	Scores, bypassing 1070, learn English writing, write better, no mistakes, develop writing skills, increasing grammar, develop writing skills to write the perfect essay, understanding MLA, write clearly and have new thoughts about analysis, high score, high expectations of scoring an A, maintaining over a 95, learn to write a be creative
Grammar checker	Yeah, I think it really helps. There were still many mistakes after using a grammar checker that I stopped. I check my work with my advisor instead, no because I don't know how to use the app, sometimes to check if it's right or not,
Numbers of students using grammar checkers	Currently – 11

Exploring Factors in Written Corrective Feedback

	<p>Stopped – 3</p> <p>Never - 2</p> <p>Only using Word – 5 (one also used their big brother along with Word)</p> <p>Stopped and now only word – 1</p>
Feelings about feedback on Paper	Nothing makes me feel negative, I'm happy with the chance to improve and fix it.
Revisions	Split screen and work from the original with comments.
Assignment Importance	All participants stated the assignment was important to them because they needed to learn to write argumentative analysis. It increases my way of thinking in English. Just an assignment like any other assignment.
Value of Assignment	<p>All participants valued the assignment somewhere between a 4.5-5</p> <p>3.5 - 1</p> <p>4 – 2</p> <p>4.5 – 3</p> <p>5 – 16</p> <p>Mean Scale Score – 4.77</p>

Note. Interview Answer Summary- Some responses were duplicated among interviewees, so they were only recorded once within the table.

Thematic Analysis

There were four themes that emerged from the interview data, they were function, success, control, and emotion. These themes emerged through the creation of codes (appendix E) that were found within the interview data. . The first theme was function. Most of the participants were focused on getting the most out of their feedback so that they could become more functional as writers. They valued technique and grammar, and were the most interested in explicit feedback that told them precisely what the problem was that they needed to fix. The second theme, success, was validated through repetitive student responses regarding why the assignment and course were important to them and their expectations for success. Most of the participants stated, whether directly or indirectly, that success was an important value that they held. They wanted the validation of success through a high letter grade. The third theme was control. There were multiple codes created that were geared towards putting the participants in control so that they would create no mistakes and have autonomy towards their learning by knowing what to do. The final theme, emotion, was created because so many of the participants had an emotional reaction to the feedback they were receiving. In the interview questions regarding the types of feedback they received in the US, their reaction to reading their feedback in their SR, and their reactions when they saw the amount of feedback on their papers, their responses were full of emotion. Some of their responses were satisfied and happy while others were overwhelmed and surprised. The themes and their related codes are found within table 6 below.

Table 6

Themes from interview data and the codes used to create them

Function	Grammar and style are most important, working to improve, grammar and vocabulary are most important, explicit feedback is most useful, better writing no matter how much feedback, learning about writing to improve
Success	High scores are important in the class, better writing is the most important, improving my English writing, moving on into 1070, getting an “A”
Control	No mistakes in my writing, knowing what to do, writing perfectly
Emotion	Happy about grades, happy about feedback and amount of feedback, sad about feedback amount, overwhelming to have so much to fix, shocked about feedback, uncomfortable with the number of mistakes

Note. These themes were pulled from the interview data. This table lists the themes that emerged as well as the codes that were found that created them.

Theme 1 – Function

Previous and Current Experience with Feedback

When discussing how feedback was handled in their home countries, many participants stated that the feedback was generalized, that they were sometimes offered a paragraph of

feedback that was more implicit in nature because it was discussing the errors found within an entire writing sample. For example, participants stated that they may have been told that there were some issues with the formatting that they used, or that they were having a problem with their use of plurals but they were not given explicit examples within their writing of exactly where the problems occurred. Some participants had even been given verbal feedback instead of written. Very few of the participants had any prior experience with either the draft process or writing essays. Most of them experienced explicit WCF for the first time in the US whereas in their home countries feedback would have been focused on general grammar and vocabulary issues.

Feedback sometimes overwhelmed the students but at the same time many of the participants stated that the focused, explicit feedback (appendix D) gave them a goal and that the feedback was easy to use and understand. Some students felt that the feedback was the best way for them to improve themselves, while others were demotivated by it because they felt that they had worked really hard and the appearance of so many comments made them feel that they were not doing a very good job. Some of the participants questioned why they had missed the errors in the first place and felt that they needed to study more in order to learn how to catch their errors. Some participants admitted to feeling shocked by the feedback if there was a large amount of it. Although all the participants had different reactions to seeing the feedback, they stated that while it might make them sad, it did not demotivate them, but it might change their motivation to make them work harder.

Nearly every participant reported that they preferred explicit feedback over implicit feedback. Most stated that they appreciated knowing exactly where their errors were and how they should fix them. Two participants stated that they thought that both types of feedback had

merit. One because they felt that the types of feedback completed each other and the other because they felt that the process of finding a way to correct the errors named in the implicit feedback created an opportunity for learning. Some participants were offered WCF in other content areas such as: business, chemistry, math/physics, and other ESL courses, but for the most part the 1069 writing class was where they received the most feedback.

Grammar Checkers

Of the 22 participants that were interviewed, 11 of them currently use Grammarly, 3 of them stopped using Grammarly, 2 of them had never used it, and 6 of the participants were only using Word to check their grammar. There were many reasons for these choices. The participants who chose to use Grammarly felt that it was helpful and most of the participants reported that they checked on the changes that Grammarly was telling them to make before they changed things. Others stated that while they might not check on the changes, they at least were reading the changes in order to decide whether the changes made sense before they would complete them. The three who reported that they had stopped using Grammarly stated that they felt that there were still too many errors after having used Grammarly and they felt that it was not helping as it should. Two participants reported that they were unsure about how to load the app and finally, six participants chose only to use the spelling and grammar checker in Microsoft Word. One participant who chose only to use Word stated that their advisor also checked their work and another participant stated that their older brother helped them review their work for errors. This was significant because it showed that most students were employing some measure of grammar checking within their writing which may have been part of the reason they were so successful in the course. This question is included in this function theme because referencing the function and use of a different type of feedback that the students are using is worthwhile.

Theme 2 – Success

Expectations for Success and Course Value

Nearly all the participants rated the course at a value of a 5 (out of 5), while three of participants rated the course a 4, and one rated it a 4.5. They stated that the course was important to them because they needed it in order to move forward in their collegiate career, they wanted to improve their writing, and they felt that it was important in helping them learn to write for other courses as well. Their expectations for success were greatly related to these same desires which ranged from bypassing the next course in the series (if students earn an A in 1069 they may bypass 1070), learn to write better, learn English and grammar better, getting an A, understanding MLA, and learning to be creative. This relates back to the Expectancy Value Theory because these students, who nearly all received “A” grades, all had high expectations for success within the course.

Value and Importance of Assignment

Most of the participants stated that the assignment held great value to them. Sixteen of them stated that the assignment was valued at a 5, three of them rated it a 4.5, two of them rated it a 4, and the final participant rated the analysis of argument rough draft at a 3.5. While one participant stated that the assignment was just an assignment like any other assignment, most of the participants stated that they felt that the value was high because they needed to learn to write argument and analyze argumentative writing. Some felt that it increased their ability to write in English. This also pertains to EVT because a student’s perception of the intrinsic value of an assignment will lead them to a better performance on the assignment.

Theme 3 – Control over Success

Within the theme of “control” participants were most focused on perfecting their work and they said things like “I need to know what to do” and “I don’t want to make any mistakes.” One participant even stated that they wanted to perfect their English and write the perfect essay. They seemed to be most interested in not only getting better, but in being flawless in their English and writing skills.

Theme 4 – Emotion

Even though it is listed as the fourth theme, emotion is one of the most important themes because it was found in responses spanning most of the questions. Participants referred to their emotional state when they were reading feedback, when they were writing their drafts, in reference to their motivation towards their error correction, even in how they felt when they were completing their first drafts and their revisions.

Stimulated Recall Session Discussing Errors and Corrections

The students participated in SR sessions with me during the interview session and they discussed all of the errors that they had created, they discussed how they fixed them, and they discussed why they thought they made them in the first place. Table 8 shows the breakdown in some of the participant errors. Even though these participants told me that they understood the feedback that was given, many of them had questions regarding why some of the errors existed. The SR session was completed with the first draft of the analysis of argument essay.

Participants were questioned as to whether or not they understood the feedback that was given to them and then the PI and the participant went through, item by item, and discussed each piece of feedback and what the participant thought about it, and if they understood it. Both the participant and the PI had a copy of the paper in front of them and the participant would read the comment out loud and tell the PI what they thought the feedback meant, how they felt about it,

and how they fixed it. Some participants stated that while they made the changes they did not really understand why they were making them. Table 8, below, shows the different responses that were recorded regarding the feedback that the participants received. In most cases the participant could describe what had happened, how they came to finding the correction, but in some cases they had not fixed it at all or couldn't describe what had happened. In five instances in Table 7 below, the participant does not understand the feedback. They stated that they made the change but that they did not really understand why they did it. Some examples of this were when a participant did not know what MLA was at all, while another knew what MLA was but did not know how to create the citation, in multiple cases students were confused as to why they needed to make a change (using have/has, why a sentence was incomplete) but they made the change and asked about it in our session. In multiple examples the connotation of a word choice needed to be explained to the participant where they had used a poor word choice and needed an explanation of why a different word choice was better. For example, one student had used the descriptor of "old people" in their writing. I had given WCF that this needed to be changed to elderly. The participant made the change but wanted to know why this was a necessary change. I explained to the participant that while elderly and old people mean the same thing, one is kind, and the other is not. In other instances, students were simply confused by the nature of the language used within the error correction. For example, one participant did not know what I meant by "authors' stance."

Table 7

Errors Discussed During Stimulated Recall

Students answers during stimulated recall to misunderstanding/not understanding/being confused by feedback. Student comments are bold .
Name the article and essay. I don't understand that one.

<p>What is the author’s stance on this? So, what’s the authors stance? I didn’t understand that one either.</p> <p>Makes to helps. I didn’t use helps here because I used helps a lot.</p> <p>When you are correcting these answers does it make sense and you follow the comments? I didn’t know you were making comments.</p>
<p>Many people instead of people. I should make it generalized? More specific actually.</p>
<p>Cite your source. I usually add the link that I use, I don’t know how to do this.</p>
<p>I think these comments are good. But in the third one I add some in the final draft, but I don’t know if I add it right or not.</p> <p>I know the why people need to change, I don’t know why I need to omit thus resonating.</p> <p>It’s less work for you to change the sentence by omitting thus resonating.</p>
<p>I checked with google and YouTube and I don’t know what MLA is.</p>
<p>Explain this one again, only. The first comment. This one, the author, where exactly do I put the author? Is the body of work the topic sentence?</p>
<p>One of the reasons that have (has). I think I’m confused by the places where I should use have or has.</p>
<p>Drop off/withdraw – the student didn’t understand the difference in connotations.</p>
<p>We discussed substituting elderly for old people. We also discussed that the participant needed to omit do in front of think because it was unnecessary.</p>
<p>Actually, I was confused, this is not a complete sentence. Because I start it with although I need to use the comma instead of the dot.</p>

Note. Answers were recorded from the stimulated recall section of the interview where the PI inspected a rough draft with each participant, and they discussed the participant’s understanding, awareness, and feelings about the WCF that they received. These were instances where the WCF was unclear to the participants

Results for RQ 3 – Mixed Methods

- How do error types, feedback types, and affective variables collectively influence ESL students’ feedback use?

Mixed Methods Interpretation

There is not much conclusive evidence when the qualitative and quantitative data is compiled into a joint display table but there are some similarities, differences, and interpretations that become apparent when the data is discussed in a side-by-side fashion based on themes that emerged. The similarities in the data were mostly derived from the fact that the students valued the course, they valued the assignment, and they attempted to complete the work to the best of

their ability. The differences were found mainly in the fact that some of the data was difficult to interpret due to the nature of the assignments, the nature of the participants themselves, and the fact that some of the changes in data over time were not significant. Finally, the data may be interpreted as the fact that these motivated participants tried, to the best of their ability, to make the necessary changes on their work, they were interested in doing so, but there was still a breakdown in comprehension of feedback which stems from the variety found in the participants' personal affective variables. These results are discussed in Table 8 below.

Table 8

Interview data, corpus data and MSLQ data in a joint display table.

	Qualitative	Quantitative	Mixed Methods
Theme 1 - Emotion	Participants gave emotional responses to most interview questions stating that they were happy, sad, overwhelmed, frustrated, and stressed.	The mean factor score for the answers of an emotional nature were high, meaning that many participants were confident and content in the class while others compared themselves both favorably and unfavorably with their classmates.	Emotion is an integral part of WCF, it plays into both perception of writing, ability, perception of feedback, and processing feedback.

Exploring Factors in Written Corrective Feedback

<p>Theme 2 - Success</p>	<p>Participants were motivated, valued the class, valued the assignment, and used feedback in order to improve their writing.</p>	<p>Students tried to change the outcome of their feedback, in order to perfect their papers and achieve success, by correcting the errors they received feedback for and proved the disconnect in integration when some of them made changes without understanding.</p>	<p>Most students valued the course and had high expectations for success in the course although some still couldn't complete step 5 of accurate output, even with the high value they assigned the course.</p>
<p>Theme 3 - Control</p>	<p>Students stated that they wanted to create perfect papers with no mistakes and a perfect understanding of how to use English. They wanted to be able to write the perfect essay.</p>	<p>This corpus data gave limited information due to the nature of the writing assignments. If the writing assignments had been of a similar nature and topic, the data would be much more conclusive. As it</p>	<p>There are often outliers in data. This data is not an exception. There are trends in the data that assume that most participants are motivated, high achieving, and want to succeed in the course,</p>

Exploring Factors in Written Corrective Feedback

		stands, there are changes that seem predictive of positive change, but it is impossible to be sure.	or be in control of their outcome. While this is the case for most of the participants, there are outliers who make this untrue for all participants.
Themes 4 - Function	Participants stated that they wanted to have better writing through a better understanding of vocabulary, explicit feedback, and grammar checking tools.	Corpus and SR data provided the information that participants were trying to make the changes that they needed to make, they really were focusing on grammar and vocabulary, but that the same amount of participants who created a lower mean scale score by valuing studying, homework,	The same number of participants who created a lower mean scale score by valuing studying, homework, and tasks at less than 7, seem to be less motivated towards thoroughly engaging with the feedback.

Exploring Factors in Written Corrective Feedback

		and tasks at less than 7, seem to be the participants who made the mistakes that some of those preparation tasks could have prevented.	
--	--	--	--

Note. The data found in this table was found by using the mean factor scores from the MSLQ questions, along with the interview responses to see how I thought they merged with the themes that were discovered.

Chapter 5

Discussion

This study had a number of conclusions that could be reached after the different components were inspected. There was a connection between expectancy value, motivation and feedback use, although without stimulated recall that was in real-time it is impossible to determine how strong a connection. The error types that were studied were not specific enough to be assured of a change that is based on teaching interventions and WCF. A similar writing prompt should be used to study writing samples collected over a prolonged period of time. Feedback type does motivate students, especially explicit feedback. The breakdown between intake, integration, and output seems to be valid and worth further exploration.

This study also gave insight into the thinking process and processing of WCF in undergraduate, ESL students. The driving force behind this study was to answer the three research questions and for that reason the discussion will be divided by research question. While exploring the data collected and focusing on the theories of Gass (1997), and Eccles (2020), there were a number of reasons to feel that the idea of a learner grasping the five steps of the Gass Framework and having expectations, and assigning value to their tasks, within expectancy-value theory were ideas that were applicable to WCF and that the idea that correct processing of feedback was linked to these two concepts. The research questions focused on a change in student writing after feedback and interventions, student motivation and affective variables, and a mixing of both of those sets of data.

Discussion of Quantitative RQ1

Exploring Factors in Written Corrective Feedback

Is there a change in student output after WCF and teaching interventions on the article system, phrasal verbs, sand plurals?

If you start by looking at the results of the MSLQ, the scores that were the highest were often geared towards motivation in the class and some of the lowest scoring questions were based on participant nerves and attention span. There were no questions that were answered uniformly. Most participants seemed to be motivated, focused, they valued the course, and the instruction. This speaks to the fact that most of the participants were “A” students and those students had an expectancy for and assigned a value to success. The corpus results showed that there were fewer errors of the article “the” but this is inconclusive due because the essay topics used were different. It would be easy to assume that with a number of positive changes that there was a positive change but there is no way to be sure of that without a similar writing prompt.

There was so much opportunity within this study to test the participants and allow them to grow with WCF. Of the participants who were a part of the study, most had a significant change in output after WCF and teaching interventions. Most of them preferred explicit feedback as well. That lends itself to the plausibility that explicit feedback is effective. Nearly every participant corrected most of the errors on their work with very few of them creating new errors in the process of fixing the old ones. The number of errors that were corrected was usually very close to the number of errors that were made in the first draft but of the 21 participants whose work was reviewed, fifteen of them left problems uncorrected. This is significant because during the SR nearly all (except one) of the participants stated that they felt sure they had corrected all the errors that were found in their first draft. Most of them spoke of splitting their screens on their computers and changing their final draft directly from the WCF found in the first draft. Of the twenty-one participants, only six of them created different errors in trying to correct

their errors and they did not create many new errors. This is a breakdown in the Gass (1997) framework because even though students have stated that they have achieved integration in that they are stating that they recognize and understand their errors, they truly do not because they are unable to accurately fix the errors and create meaningful output. One participant within this study mentioned that they were unaware that feedback was even being offered so the errors that they corrected may have been errors that were overlooked during the proofreading process. Six participants created additional errors while they were trying to fix the errors labeled by their WCF. In some cases, these errors were created because the participant added the word that they should be changing something to, to the text. For example, if the feedback was given that the participant needed to omit a word and they added in the word omit to the essay, this is a breakdown in creating meaningful output and the participant clearly does not have integration yet. The interesting point though is that during SR, every participant, except the one who admitted they had never seen the feedback before, claimed to have fixed all their errors. This does not mean that they were lying, they truly thought that they had fixed their errors, they lacked the total understanding that was necessary to complete the task. It was intriguing to note that talking through the WCF out loud seemed to help the students process the feedback. Even as they were describing how and why they did not understand it, or that they did understand it and what it meant to them, it was clear that discussing the feedback was helpful because it was making them say things out loud that they did not realize they had been thinking. If the course had been in a face-face environment it is probable that some of the questions they had would have been brought up in class but due to the online nature of this particular course, the feedback was left unquestioned until this stimulated recall session. In this case, SR seems to be a tool that is not being used often enough in the ESL classroom. If students were given an opportunity to

discuss their feedback and to explain it to someone else, there might be a better chance at retention and output. This is important to the process of the teacher/instructor relationship with feedback because it gave me the idea of creating time within all of my future courses for going over feedback with students, through a sort of stimulated recall session, in order to make sure we are on the same page in understanding each other and what I mean by my feedback. This data could also be used to gain a better understanding of the differences that occur as the transfer effect for feedback happens. (Karim & Nassiji, 2018)

Changes in three grammatical features

This portion of the data collection was disappointing because I expected to see more change in the grammatical features over the course of the semester with both WCF and teaching interventions. There were some slight changes to the correct use of articles, plurals, and phrasal verbs, and while the larger concordancing and collocation data showed that there were fewer articles being used by the end of the semester, there was no definitive data that showed that changes were due to WCF and interventions. The changes could have been due to the changes in topics and prompts assigned on the essays but the data is included here to demonstrate that there are differences that can be noted. The use of non-specific, or more elementary, error types was intentional in the planning phases of this research but became problematic as it was more difficult to track from draft to draft. As I am constantly trying to help my students with articles, it may have been beneficial to work on the article system and two more advanced grammatical errors.

Discussion of Qualitative RQ2

How do learners feel about motivation and feedback that may change their feedback processing?

Interview Data

Very few of the participants had previous experiences with WCF, and those who did, did not have experiences anything like that of what they would experience in the US. This removed the possibility that I had assumed might exist, that previous negative encounters with feedback had changed the participants willingness to attempt to use feedback again. All the students rated the task, their expectation for success, and the value at a high level but all the students who chose to participate were highly motivated students already. Many of the students reported that their reasoning behind finding a high value in the analysis of argument project was that they needed to learn to write arguments in order to be a productive English student.

As expectancy value applies to their WCF many of the participants gave responses that they felt that if they were seeing feedback on their writing it meant that they were learning and growing as writers and they felt that they were learning from that. As this study relates to Gass, the participants viewed the feedback to be comprehensible but as we talked through some of their feedback some had follow up questions related to how to correct the error, which leads to the consideration that there is a breakdown in step four of integration in order to get to step five of correct output.

A surprise with regards to this data was that very few of the participants had previous experiences with WCF, and those who did, did not have experiences anything like that of what they would experience in the US. This removed the possibility that I had assumed might exist, that previous negative encounters with feedback had changed the participants willingness to attempt to use feedback again. All the students rated the task, their expectation for success, and the value at a high level but all the students who chose to participate were highly motivated students already. Many of the students reported that their reasoning behind finding a high value

in the analysis of argument project was that they needed to learn to write arguments in order to be a productive English student. As expectancy value applies to their WCF many of the participants gave responses that they felt that if they were seeing feedback on their writing it meant that they were learning and growing as writers and they felt that they were learning from that. As this study relates to Gass, the participants viewed the feedback to be comprehensible but as we talked through some of their feedback some had follow up questions related to how to correct the error, which leads to the consideration that there is a breakdown in step four of integration in order to get to step five of correct output. In reviewing student errors that started as one type of error they sometimes morphed into another error all together as the student tried to fix something they didn't entirely understand. This is all to state that this data does support both expectancy value and the Gass framework.

Most of the responses that stated that they felt surprised, happy, overwhelmed or upset when they read their feedback for the first time, were followed up with the fact that they felt that lots of feedback meant lots of room for improvement and that if they felt that they were important because their instructor took the time to give them feedback. Those that were happy about their feedback were happy about the quantity of the feedback, they felt that it meant that they had written a successful paper if the amount of feedback was very small. Every semester I ask my students to be sure to tell me if the feedback they receive is too plentiful and I never hear any feedback from them. This research helps me to understand why. Even if the feedback is daunting, they would rather know and improve.

Discussion of Mixed Methods RQ3

How do error types, feedback types, and affective variables collectively influence ESL students' feedback use?

This question is inconclusively answered with the data collected within this dissertation. There is a link between the factors, and the combined data supports the idea, but it is not clear how much change there would be with different error types, different affective variable input, or use of implicit feedback instead of explicit. There are connections within the data that shows that the MSLQ data seems to coincide with the data found within the WCF errors and corrections (table 4) and the data in the thematic analysis (table 7) in that the students gave answers that they held highly valued their assignments, the class and were taking a mastery approach (Conley, 2012) to learn and understand the material that they were being taught. Table 8, however, seems to indicate that at least some of the students were missing the integration (Gass, 1997) component of the puzzle in that one participant was unaware that feedback was being given and nine others blindly changed their answers in their final drafts while they didn't understand the significance of the change. None of the participants had any previous bad experiences with feedback, many of them had no history with feedback at all. The data in tables 4 and 5 does encourage the belief that students are more appropriately using their articles but it is impossible to be perfectly certain because the topics are self-selected by the students and certain topics may have more or less need for use of the article system overall. This is interesting because the breakdown of the data in table 5 shows very little difference within the semester in use of articles, phrasal verbs and plurals after WCF and two instructional interventions. It is difficult to be completely accurate with this analysis though because, for example, one student wrote their first essay about the environment and the last essay was about the internet. Each of these essays may have a different use of the article system.

Conclusions

This research allows for the plausibility and possibility of the fact that there is a

connection between expectancy value, motivation, and feedback use and to conclude that feedback does motivate students. The MSLQ data showed these participants to be highly motivated and that they were applying task and assignment value, and were supported by the CL data that showed some positive changes in accurate use of the three grammar points. While the interviews that created the thematic analysis had a few outliers, I think it is important to note that all the participants felt quite sure that they had successfully completed every correction that they had received WCF for. While most of them were close to completion, some were five errors off the mark. This supports the idea that there is a breakdown in integration, but it does not necessarily mean that there are affective variables that are causing this breakdown with integration and output. The students seemed to hold views of either a mastery orientation, meaning that they want to learn and understand or a performance approach orientation, meaning that they are most interested in getting the highest score or looking smart (Conley, 2012). All the participants, except two, wholeheartedly preferred explicit feedback as they felt that it was difficult to discern the meaning of implicit feedback. Finally, the thematic analysis verified that there is a connection between all of these affective variables and accurate feedback processing but more work would need to be completed, in different ways, to address some of the problems in the study design.

Limitations

There are several limitations to this study. The first is that the participants who volunteered to take part in the study were students who were mostly successful in the 1069 course. All the students had good grades. Most had A's or A-'s, one participant had a B+ and the other a B. A limitation exists here because students who may have held a lower grade might have had more continued, repetitive, errors and more for the researcher to study. In this

particular 1069 class, grammar and mechanics may impact the course grade by at least one letter grade if the student is not following feedback and course guidelines. Students who did not have a very good grade were less likely to choose to participate in a study that would take some of their time. The rate of participation was 22/56, or 42%, from the two classes. From the opposite point of view, while there was no compensation offered for participation, the students who had the better grades, and positive attitude, were more likely to try to gain extra time with the instructor.

Another limitation is that the stimulated recall occurred on errors that were already processed by the learner and then the drafts were compared by the PI, as opposed to the stimulated recall occurring in real time as the participant processed the feedback. This was because the course was online and asynchronous instead of being in-person as the PI had planned. A fourth limitation that exists is the lack of a relationship between the teacher and the learner. Due to the online nature of this course, the instructors and participants did not bond as much as might have been possible in a traditional classroom setting. Another limitation is that the error types that this work focused on were too elementary, they were difficult to define as they changed, working with more specific errors might make the changes in grammar practices more pronounced over the course of a semester. Finally, the number of participants could be increased in order to give a better idea of the results of a larger student body.

Recommendations for Future Research

If it would possible to start this research project in a similar fashion but use total classes for participants, in order to help eliminate the possibility of only high achieving students signing up, proceed with the study in a face-to-face fashion so that stimulated recall regarding WCF could be processed in a real time manner, and use participants who all maintained the same

instructor, the results might be different and might show a broader example of how students at different levels of success in the same course may process feedback and how the different variables change things for them. As the students who participated in this study were highly motivated, the results did not show much differentiation between among the participants. A larger study, which encompassed more students, more interviews, more SR episodes, and writing samples that were directly related to the same topic would most likely yield a wider variety of results from a student body that is likely to have different grades and expectancy value beliefs.

References

- Benson, S., & DeKeyser, R. (2018). Effects of written corrective feedback and language aptitude on verb tense accuracy. *Language Teaching Research*, 23(6), 702-726.
doi:10.1177/1362168818770921
- Bitchener, J. (2002). The extent to which language learning through negotiation is retained over time. *TESOLANZ Journal*, (10), 81-93.
- Bitchener, J., & Ferris, D. R. (2012;2011). *Written corrective feedback in second language acquisition and writing*. New York: Routledge. doi:10.4324/9780203832400
- Bitchener, J. (2008). Evidence in support of written corrective feedback. *Journal of Second Language Writing*, 17(2), 102-118. doi:10.1016/j.jslw.2007.11.004
- Bitchener, J., & Knoch, U. (2010). Raising the linguistic accuracy level of advanced L2 writers with written corrective feedback. *Journal of Second Language Writing*, 19(4), 207-217.
doi: 10.1016/j.jslw.2010.10.002
- Bitchener, John. (2017). Why some L2 learners fail to benefit from written corrective feedback. *Corrective Feedback in Second Language Teaching and Learning: Research, Theory, Applications*. 129-141 [Kindle Version]. Retrieved from Amazon.com
- Conley, Annemarie. (2012). Patterns of motivation beliefs: combining achievement goal and expectancy-value perspectives. *Journal of Educational Psychology* (104), No. 1, 32-47.
- Chomsky, N. (1964) *Current issues in Linguistic theory*. Mouton
- Creswell, J., Plano-Clark, V. (2018). *Designing and Conducting Mixed Methods Research*. Los Angeles: Sage.
- Crosthwaite, P., Storch, N., & Schweinberger, M. (2020). Less is more? the impact of written corrective feedback on corpus-assisted L2 error resolution. *Journal of Second Language Writing*, 49. doi:10.1016/j.jslw.2020.100729
- Dixon, L. Q., Zhao, J., Shin, J., Wu, S., Su, J., Burgess-Brigham, R., . . . Snow, C. (2012). What we know about second language acquisition: A synthesis from four perspectives. *Review of Educational Research*, 82(1), 5-60. doi:10.3102/0034654311433587

- Duncan, T., & McKeachie, W. (2005). The making of the motivated strategies for learning questionnaire. *Educational Psychologist*, 40(2), 117–128.
- Eccles, J. S., & Wigfield, A. (2020). From expectancy-value theory to situated expectancy-value theory: A developmental, social cognitive, and sociocultural perspective on motivation. *Contemporary Educational Psychology*, 161-198.
doi:10.1016/j.cedpsych.2020.101859
- Ellis, R. (2009;2008;). A typology of written corrective feedback types. *ELT Journal*, 63(2), 97-107. doi:10.1093/elt/ccn023
- Eslami, E. (2014). The effects of direct and indirect corrective feedback techniques on EFL students' writing. *Procedia - Social and Behavioral Sciences*, 98, 445-452.
doi: 10.1016/j.sbspro.2014.03.438
- Ferris, D. R. (2004). The “Grammar correction” debate in L2 writing: Where are we, and where do we go from here? (and what do we do in the meantime ...?). *Journal of Second Language Writing*, 13(1), 49-62. doi:10.1016/j.jslw.2004.04.005
- Ferris, D. R. (2010). Second language writing research and written corrective feedback in SLA: Intersections and practical applications. *Studies in Second Language Acquisition*, 32(2), 181-201. doi:10.1017/S0272263109990490
- Ferris, D. R., Liu, H., Sinha, A., & Senna, M. (2013). Written corrective feedback for individual L2 writers. *Journal of Second Language Writing*, 22(3), 307-329.
doi: 10.1016/j.jslw.2012.09.009
- Ferris, D. R. (2014). Responding to student writing: Teachers' philosophies and practices. *Assessing Writing*, 19 (1), 6-23. doi:10.1016/j.asw.2013.09.004
- Ferris, D. (2015). *written corrective feedback in L2 writing*: Connors and Lunsford (1988). Lunsford & Lunsford (2008); Lalande (1982). *Language Teaching*, 48(4), 531-544.
- Gass, S. (1997). *Input, interaction, and the second language learner*. Mahwah, NJ: Erlbaum.
- Ghandi, M., & Maghsoudi, M. (2014). The effect of direct and indirect corrective feedback on Iranian EFL learners' spelling errors. *English Language Teaching*, 7(8), 53-61.
doi:10.5539/elt.v7n8p53

- Goebel, R. O. (2007). *The psychology of the language learner. Individual differences in second language acquisition*, edited by DÖRNYEI, ZOLTÁN. Malden, USA: Blackwell Publishing Inc. doi:10.1111/j.1540-4781.2007.00514_5.x
- Guo, Q. (2018). The theoretical expectation of the effect of written corrective feedback from information processing perspective. In *Written Corrective Feedback for L2 Development: Emerging Research and Opportunities* (pp. 12-29). Hershey, PA: IGI Global. doi:10.4018/978-1-5225-5103-4.ch002
- Han, Y. (2017). Mediating and being mediated: Learner beliefs and learner engagement with written corrective feedback. *System: An International Journal of Educational Technology and Applied Linguistics*, 69, 133.
- Han, Y., & Hyland, F. (2019). Academic emotions in written corrective feedback situations. *Journal of English for Academic Purposes*, 38, 1-13. doi: 10.1016/j.jeap.2018.12.003
- Han, Z. & Kang, E. (2015). The efficacy of written corrective feedback in improving L2 written accuracy: a meta-analysis. *The Modern Language Journal*, 99, (1), 1-18.
- John, P., & Woll, N. (2018). Using grammar checkers in the ESL classroom: The adequacy of automatic corrective feedback. *Euro Call*, 118-123.
- Karim, K., & Nassaji, H. (2018). The revision and transfer effects of direct and indirect comprehensive corrective feedback on ESL students' writing. *Language Teaching Research*. doi:10.1177/1362168818802469
- Krashen, S.D. (1985). *The Input Hypothesis: Issues and Implications*. Addison-Wesley Longman Ltd.
- Koltovskaia, S. (2020). Student engagement with automated written corrective feedback (AWCF) provided by Grammarly: A multiple case study. *Assessing Writing*, 44, 100450. doi: 10.1016/j.asw.2020.100450
- Kurzer, Kendon. (2017). Dynamic written corrective feedback in developmental multilingual writing classes. *TESOL Quarterly*, 52(1), 5-33.
- Li, S. (2014). The interface between feedback type, L2 proficiency, and the nature of the linguistic target. *Language Teaching Research*, 18(3), 373-396. doi:10.1177/1362168813510384

- Loh, E. (2019). What we know about expectancy value theory, and how it helps design a sustained motivating learning environment. *Elsevier* 86, 1-13.
- Lyster, R., & Ranta, L. (1997). Corrective feedback and learner uptake: Negotiation of form in communicative classrooms studies. *Second Language Acquisition*, 19, 37–66.
- Mawlawi, Diab, N. (2015). Effectiveness of written corrective feedback: Does type of error and type of correction matter? *Assessing Writing*, 24(1), 16-34.
doi: 10.1016/j.asw.2015.02.001
- Maxwell, J. (2013). *Qualitative Research Design: An Interactive Approach*. Sage.
- Nagle, C. (2021). Using expectancy value theory to understand motivation, persistence, and achievement in university-level foreign language learning. *Foreign Language Annals/Early View*, 1-19. doi.org/10.1111/flan.12569
- Nemati, M., Alavi, S. M., & Mohebbi, H. (2019). Assessing the effect of focused direct and focused indirect written corrective feedback on explicit and implicit knowledge of language learners. *Language Testing in Asia*, 9(1), 1-18. doi:10.1186/s40468-019-0084-9
- Schunk, D. H., Meece, J. L., & Pintrich, P. R. (2014). *Motivation in education: Theory, research, and applications*. Boston: Pearson.
- Sheen, Y. (2007). The effect of focused written corrective feedback and language aptitude on ESL learners' acquisition of articles. *TESOL Quarterly*, 41(2), 255-283. 10.1002/j.1545-7249.2007.tb00059.x
- Sheen, Y. (2010). Introduction: The role of oral and written corrective feedback in SLA. Studies in *Second Language Acquisition*, 32(2), 169-179. 10.1017/S0272263109990489
- Shin, Y. K., Cortes, V., & Yoo, I. W. (2018). Using lexical bundles as a tool to analyze definite article use in L2 academic writing: An exploratory study. *Journal of Second Language Writing*, 39, 29-41. doi: 10.1016/j.jslw.2017.09.004
- Shintani, N. (2019). Potentials of writing-to-learn-language activities from second language acquisition research. *Journal of Second Language Writing*, 46, 100676.
doi:10.1016/j.jslw.2019.100676
- Spring, R. (2018). Teaching phrasal verbs more efficiently: Using corpus studies and cognitive

- linguistics to create a particle list. *Advances in Language and Literary Studies*, 9(5), 121-135. doi: 10.7575/aiac.all.s.v.9n.5p.121
- Storch, N. (2010). Critical feedback on written corrective feedback. *International Journal of English Studies*, 10(2), 29.
- Storch, N., & Wigglesworth, G. (2010). learners' processing, uptake, and retention of corrective feedback on writing. *Studies in Second Language Acquisition*, 32(2), 303-334.
10.1017/S0272263109990532
- Teng, M. F. (2020;2017;). The effectiveness of group, pair and individual output tasks on learning phrasal verbs. *Language Learning Journal*, 48(2), 187-200.
doi:10.1080/09571736.2017.1373841
- Truscott, J. (1996). The case against grammar correction in L2 writing classes. *Language Learning*, 46(2), 327-369. doi:10.1111/j.1467-1770.1996.tb01238.x
- Truscott, J. (2007). The effect of error correction on learners' ability to write accurately. *Journal of Second Language Writing*, 16, 255-268.
- Tsao, J., Tseng, W., & Wang, C. (2017). The effects of writing anxiety and motivation on EFL college students' self-evaluative judgments of corrective feedback. *Psychological Reports*, 120(2), 219-241. doi:10.1177/0033294116687123
- Waller, L., & Papi, M. (2017). Motivation and feedback: How implicit theories of intelligence predict L2 writers' motivation and feedback orientation. *Journal of Second Language Writing*, 35, 54-65. doi: 10.1016/j.jslw.2017.01.004
- Weiner, B. (2010). The development of an attribution-based theory of motivation: A history of ideas. *Educational Psychologist*, 45(1), 28-36. doi:10.1080/00461520903433596
- Yoon, C. (2016). Concordancers and dictionaries as problem-solving tools for ESL academic writing. *Language Learning & Technology*, 20(1), 209-229.

Appendix A – MSLQ

Motivated Strategies for Learning Questionnaire* Please rate the following items based on your behavior in this class. Your rating should be on a 7- point scale where 1= not at all true of me to

7=very true of me.

1. I prefer class work that is challenging so I can learn new things.
2. Compared with other students in this class I expect to do well
3. I am so nervous during a test that I cannot remember facts I have learned
4. It is important for me to learn what is being taught in this class
5. I like what I am learning in this class
6. I'm certain I can understand the ideas taught in this course
7. I think I will be able to use what I learn in this class in other classes
8. I expect to do very well in this class
9. Compared with others in this class, I think I'm a good student
10. I often choose paper topics I will learn something from even if they require more work
11. I am sure I can do an excellent job on the problems and tasks assigned for this class
12. I have an uneasy, upset feeling when I take a test
13. I think I will receive a good grade in this class
14. Even when I do poorly on a test, I try to learn from my mistakes
15. I think that what I am learning in this class is useful for me to know
16. My study skills are excellent compared with others in this class
17. I think that what we are learning in this class is interesting
18. Compared with other students in this class I think I know a great deal about the subject
19. I know that I will be able to learn the material for this class
20. I worry a great deal about tests
21. Understanding this subject is important to me
22. When I take a test, I think about how poorly I am doing
23. When I study for a test, I try to put together the information from class and from the book
24. When I do homework, I try to remember what the teacher said in class so I can answer the questions

Exploring Factors in Written Corrective Feedback

25. I ask myself questions to make sure I know the material I have been studying
26. It is hard for me to decide what the main ideas are in what I read
27. When work is hard I either give up or study only the easy parts
28. When I study, I put important ideas into my own words
29. I always try to understand what the teacher is saying even if it doesn't make sense.
30. When I study for a test I try to remember as many facts as I can
31. When studying, I copy my notes over to help me remember material
32. I work on practice exercises and answer end of chapter questions even when I don't have to
33. Even when study materials are dull and uninteresting, I keep working until I finish
34. When I study for a test, I practice saying the important facts over and over to myself
35. Before I begin studying, I think about the things I will need to do to learn
36. I use what I have learned from old homework assignments and the textbook to do new assignments
37. I often find that I have been reading for class but don't know what it is all about.
38. I find that when the teacher is talking, I think of other things and don't really listen to what is being said
39. When I am studying a topic, I try to make everything fit together
40. When I'm reading, I stop occasionally and go over what I have read
41. When I read materials for this class, I say the words over and over to myself to help me remember
42. I outline the chapters in my book to help me study
43. I work hard to get a good grade even when I don't like a class
44. When reading I try to connect the things; I am reading about with what I already know.

Duncan, T., & McKeachie, W. (2005). The Making of the Motivated Strategies for Learning Questionnaire. *Educational Psychologist*. 40(2), 117–128

Appendix B - Interview Questions

WCF Questions

What is your history with WCF?

How was it handled in your home country by the student and the instructor?

How does WCF compare in the states to what you grew up with?

What has your experience been like with WCF in the States?

How do different types of WCF make you feel?

How does WCF impact your motivation toward your writing?

Can you give an example?

What type of feedback do you find the most/least helpful?

Implicit/explicit/color coded.

Examples: I saw a big the elephant.

I saw the big and the grey and the huge elephant.

How does WCF change across content areas for you?

What would your ideal WCF look like?

What are your expectations for success?

To what degree do you value this course/assignment?

Grammar Checking Tool Questions

How do you feel about using a grammar checking tool such as grammarly?

Do you use a grammar checker when writing?

Which grammar checker do you use?

When you are accepting a change to your work that is recommended by a grammar checker are you paying attention to the feedback the grammar checker is providing? Please describe.

Please talk me through the process of making changes to your work while using a grammar checker.

Stimulated Recall Questions

What were thinking when you saw this WCF?

What did you do to correct your answer, if you did correct it?

Why didn't you correct that answer?

What was your thinking process while you were reading the feedback?

What was your thinking process while you were completing revisions?

How do you feel about this assignment?

Is this assignment important to you?

To what degree do you value this assignment?

Appendix C - Antconc Examples

These are examples of concordancing and collocations, as seen on Antconc, using the MICASE corpus. The concordancing and collocations that were used in this research were created with corpus bodies that were created through participant writing drafts.

AntConc 3.5.8 (Windows) 2019

File Global Settings Tool Preferences Help

Corpus Files
MICASE Corpus.txt

Concordance Concordance Plot File View Clusters/N-Grams Collocates Word List Keyword List

Total No. of Collocate Types: 5176 Total No. of Collocate Tokens: 72500

Rank	Freq	Freq(L)	Freq(R)	Stat	Collocate
1	5	4	1	6.92212	sched
2	5	2	3	6.92212	resistances
3	4	2	2	6.60019	vestibules
4	4	2	2	6.60019	mes
5	4	1	3	6.60019	meas
6	4	1	3	6.60019	maxilla
7	4	1	3	6.60019	densities
8	4	1	3	6.60019	cuttings
9	10	5	5	6.33715	miskitos
10	3	2	1	6.18515	vermiculations
11	3	1	2	6.18515	toxicities
12	3	0	3	6.18515	tentative
13	6	2	4	6.18515	tai
14	6	2	4	6.18515	cithia

Search Term Words Case Regex

Window Span Same

From... 5L To... 5R

Min. Collocate Frequency 1

Start Stop Sort

Sort by Invert Order

Sort by Stat

Clone Results

AntConc 3.5.8 (Windows) 2019

File Global Settings Tool Preferences Help

Corpus Files
MICASE Corpus.txt

Concordance Concordance Plot File View Clusters/N-Grams Collocates Word List Keyword List

Concordance Hits 7250

Hit	KWIC	File
1	so this cell would be diploid for the A allele and you know that's	MICASE Cor
2	phase one, that were diploid for the A allele.\xA0<PAUSE:05>\xA0	MICASE Cor
3	tion, and i've plotted it this way, the_ a better way to plot it woul	MICASE Cor
4	? um, you have three copies, of the A chromosome, and many ti	MICASE Cor
5	a, reciprocal exchange between, the A gene on, chromatids two e	MICASE Cor
6	? SU-f:\xA0Johnny Darters have the a- have the dagger right? SS	MICASE Cor
7	you identified a successor from the A- Lab who might uh, be int	MICASE Cor
8	nigrated in from various places, the a lot of the fish will overwint	MICASE Cor
9	de you some information about the, a priori probabilities that gc	MICASE Cor
10	any bigger, then you know that the a- the length at T plus one is	MICASE Cor
11	.\xA0]: the planner.]\xA0testing the abilities of the planner\xA0]:	MICASE Cor
12	e things not schedulable, to test the ability of the system to maki	MICASE Cor
13	nd again i am fortunate to have the ability to collaborate with th	MICASE Cor
14	ant to see if this compound has the ability to do that. and, again	MICASE Cor

Search Term Words Case Regex

Search Window Size 50

Start Stop Sort Show Every Nth Row 1

Kwic Sort

Level 1 1R Level 2 2R Level 3 3R

Clone Results

Appendix D - Example of Comments on Participant Essay

The image shows a writing interface with an essay on the left and a list of comments on the right. The essay text is as follows:

have the good effect in the two sides of the speakers. We can use the Apps just to help us to contact each other in the emergency problems, or if we are far away from each other. We need to know what is the most important in the life. If we don't visit family in the long time, there will be a distance between the family members. For example, when the brothers don't see each other in the long time how they will cooperate to solve any problem that met them in the future. For the friend, you can anytime hang out with them. For example, if are at university, you can go to eat or play after the lectures are done. Try to speak and make a conversation between you, also try to avoid your phone by put it in the bag. Apps are just for having fun, not to use them all the time.

She wrote about the video she saw. The story of the video was about a woman who forgot her phone somewhere, she spent all the next day without her phone. She said "the life is worse" she said that because when she spent the time with her husband, she talked with him and he even didn't listen to her because he was using his cellphones. When she went out with her friends, she couldn't even have a good conversation with them, they all used the telephones! She had a bad day and said "the life without the telephone is very lonely" she said that because everyone she knows was ignored her and spend his time in his devise. If she tried to catch all the

The comments on the right are:

- Kara Williams has a
- Kara Williams omit the
- Kara Williams for a
- Kara Williams meets
- Kara Williams

Appendix E – Codes used for thematic analysis

Happy about feedback/motivated	IIII
Happy about feedback/amount of feedback	IIIII
Sad about feedback/amount of feedback	IIII
Overwhelmed to have so much to fix	II
Not overwhelmed because I'm getting help	IIIII
Shocked about feedback	III
Uncomfortable with the number of mistakes I made	I
Getting my writing better for future classes	II
Grammar and vocabulary are most important	IIII
Getting my grammar and style right	III
Writing Perfectly	IIII
Knowing exactly what to do	III
No mistakes in my writing	I
Getting an "A"	IIIII
Moving on to 1080 (bypassing 1070)	III
Better writing is the most important	IIII
Improving my English writing	IIIIII
High Scores are most important	II