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The Efficacy of Dynamic Written Corrective Feedback on Intermediate-high ESL Learners' Writing Accuracy

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THE EFFICACY OF DYNAMIC WRITTEN CORRECTIVE FEEDBACK ON

INTERMEDIATE-HIGH ESL LEARNERS' WRITING ACCURACY

by

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BRIGHAM YOUNG UNIVERSITY

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ABSTRACT

THE EFFICACY OF DYNAMIC WRITTEN CORRECTIVE FEEDBACK ON

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This study investigated the efficacy of dynamic written corrective feedback (DWCF) on intermediate-high students' writing accuracy when compared to a traditional grammar instruction approach. DWCF is an innovative written corrective feedback method that requires a multifaceted process and interaction between the teacher and the students in order to help the students improve their writing accuracy. The central principle of DWCF is that feedback should be manageable, meaningful, timely, and constant. The research question was raised based on the positive effects of DWCF found in advanced-low and advanced-mid proficiency level students (Evans et al., in press; Evans, Hartshorn, & Strong-Krause, 2009; Hartshorn, 2008; Hartshorn et al., in press). Similar to previous studies, this study attempted to examine the effectiveness of DWCF in terms of proficiency level. It further explored students' perspectives and attitudes towards DWCF.

Two groups of ESL students participated in this study: a control group (n=18) that was taught using a traditional grammar instruction method, and a treatment group (n=35) that was taught using a DWCF approach. The findings in this study revealed that both methods improved the intermediate-high students' linguistic accuracy in writing.

However, the findings of this study suggest that the instruction utilizing DWCF is preferable to traditional grammar instruction when it comes to improving intermediate-high students' writing accuracy for two reasons: first, DWCF was slightly more effective than the traditional grammar instruction used, and second, students strongly preferred the instruction using DWCF to traditional grammar instruction.

The findings of this study further validate other work suggesting the positive effects found in advanced proficiency levels. This study indicates that ESL learners benefit from manageable, meaningful, timely, and constant error feedback in improving their linguistic accuracy in writing. Furthermore, this study suggests the desirability of applying DWCF to other contexts.

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CHAPTER 1: INTRODUCTION

Research Background

The dichotomous debate on the efficacy of written corrective feedback (WCF) is a major issue in L2 writing pedagogy because of its contradictory outcomes (Ferris, 2004; Guénette, 2007; Hyland & Hyland, 2006; Russell & Spada, 2006). Truscott (1996, 1999) ignited this vigorous discussion by proclaiming that grammar correction is ineffective and may have harmful effects on L2 writing. Ferris (1999) evaluated Truscott's original review article, "The Case Against Grammar Correction in L2 Writing Classes" and refutes Truscott's argument, saying that his claim is premature. She also contends that there is a need for further studies on WCF in L2 writing classes.

In an attempt to further resolve the question of whether or not error correction (EC) improves L2 writing accuracy and how EC should be handled, Chandler (2003) conducted a study comparing the improvement in accuracy between an experimental group and a control group. The experimental group received EC from the teachers and was then required to self-correct the errors, while the control group also received EC but was not required to do anything with the feedback. According to the results of her study, the experimental group demonstrated a significant improvement not only in accuracy but in fluency as well. Her study indicates that we should require students to correct their errors that have been marked in order to increase grammatical and lexical accuracy. However, Truscott (2004) critiqued Chandler's assertion; his counterargument was that the efficacy of EC cannot be demonstrated by studies without a control group that receives no correction because students' writing accuracy could have improved due to other factors such as " writing practice, input obtained in the class, or outside exposure"

(p. 337).

After several years of debate and inconclusive research, Ferris (2004) stated, "we are virtually at Square One" (p. 49) reasoning that previous studies are "incomplete and inconsistent" (p. 49) in design, and the positive effects of EC have not yet been proved. She urged us to perform "longitudinal, carefully designed, replicable studies" (p.60) which would allow us to compare the efficacy of error treatment both when students receive error feedback in their writing and when they receive no error feedback.

Despite the need for further studies regarding the effectiveness of EC, Truscott (2007) reaffirms his argument that "research has found correction to be a clear and dramatic failure," and he suggests that the question we should be asking is, "How harmful is correction?" (p. 271).

In this seemingly never-ending debate, Guénette (2007) provides a useful perspective regarding corrective feedback. She reviewed previous studies concerning EC and states that conflicting outcomes on EC have originated from using different research designs and methodology. Russell and Spada (2006) support this claim through their meta-analysis of research on error feedback stating that previous empirical studies on error feedback "address diverse questions, consider a variety of types of corrective feedback, study different populations, employ different measures, and apply different methodologies" (p. 139). Johnson (2009) also raised this criticism regarding the issue of research designs and methodology on EC through his meta-analysis. Guénette (2007) also points out that confounding variables, which are difficult to isolate, could be a second cause of the different results in EC research.

As Russell and Spada (2006) remind us, "much more work needs to be done" (p.

156) in the studies on error feedback effectiveness and investigating "similar variables in a consistent manner" (p. 156) is essential "to establish clear patterns across studies" (p. 156) on error feedback. Guénette (2007) suggests examining comparable groups over time in order to test the efficacy of one feedback type over another or no feedback. She further argues that we should endeavor to design suitable EC strategies depending on "the students' proficiency levels and developmental readiness" (p. 51). Guénette (2007) also recommends that we should consider external variables when developing appropriate EC strategies. She urges teachers to pursue their efforts to design and provide appropriate feedback relying on external variables such as classroom context and student differences.

Along with Guénette's study, Evans, Hartshorn, McCollum, and Wolfersberger (in press) approach the issue of EC with a perspective of how we can assist learners in improving their writing accuracy through consideration of contextual factors such as the learner, as well as situational and methodological variables. In an attempt to accommodate the need for feedback to be timely, manageable, meaningful, and constant, Dr. Norman Evans, a professor in the Department of Linguistics and English Language at Brigham Young University (BYU), designed an EC method called dynamic written corrective feedback (DWCF). This strategy was specifically designed to help students improve their linguistic accuracy in writing contexts. It was developed and refined at BYU's intensive English programs in Hawaii and Provo over the course of 15 years.

DWCF is an EC strategy that requires a multifaceted process and interaction between the teacher and the students. A brief summary of the DWCF process is that the students write a 10-minute paragraph at the beginning of almost every class session. Then, the teacher provides indirect, coded feedback on the students' paragraphs; if necessary,

direct feedback can be provided as well. When the papers are returned to the students, they edit their papers on their own, according to the teacher's feedback. This process of the students editing and the teachers giving feedback is repeated until the students have achieved an error-free paper; however, the students are constrained to make each paper error-free within one week. Further detailed explanations about the process of DWCF will be addressed in the *Instructional Methods* section in Chapter 3.

An exploratory study implementing this method demonstrated significant improvement in written paragraph accuracy over the course of a 13-week semester (Evans, Hartshorne, McCollum, & Wolfersberger, in press). A further study using DWCF revealed that ESL learners also significantly improved their writing accuracy in their new, longer writing samples; moreover, this method did not disadvantage students in other important aspects of writing such as fluency, complexity, or rhetorical conventions (Hartshorn, 2008; Hartshorn, Evans, Merrill, Sudweeks, Strong-Krause, & Anderson, in press). Another study examining the efficacy of DWCF in a university setting also showed statistically significant improvement in written accuracy in a new piece of longer writing when students were treated with this method compared to a traditional writing instruction approach (Evans, Hartshorn, & Strong-Krause, 2009).

The findings of these studies indicate that students' linguistic accuracy does improve significantly with DWCF. However, despite the promising outcomes seen in these studies, there is a need to carry on further investigation of the efficacy of WCF using this strategy. One reason for this is that the studies using this strategy in the past have been executed only with advanced-low and advanced-mid ESL learners. The variable of proficiency level may have affected the results. Implementing this strategy

with students at other proficiency levels who also have the linguistic competence to self-correct, such as an intermediate-high level, may be the next logical research step in order to strengthen and verify the outcomes found in previous research.

Purpose of Study

The purpose of this study is to examine the efficacy of dynamic written corrective feedback on intermediate-high ESL learners' writing accuracy.

Research Questions

To what extent does dynamic written corrective feedback improve intermediate-high ESL learners' linguistic accuracy in their 30-minute essay writing when compared to a traditional grammar instruction method?

Along with the main research question, the following supplemental question was addressed.

What are intermediate-high ESL students' perspectives and attitudes towards dynamic written corrective feedback?

Definitions

This section intends to explain and clarify the key terms used in this paper.

Accuracy: Wolfe-Quintero, Inagaki, and Kim (1998) define it as "the ability to be free from errors while using language to communicate in either writing or speech" (p. 33).

Attitude: Ramirez (1995) defines it as "a set of beliefs that a learner holds about the community and people who speak the target language, about the language, and the learning task itself" (p. 165).

Beliefs, perceptions, and perspectives: Kalaja and Barcelos (2003) broadly define

beliefs as "opinions and ideas that learners (and teachers) have about the task of learning a second/foreign language" (p. 1). The terms *beliefs, perceptions*, and *perspectives* are used interchangeably in this paper.

Direct feedback and indirect feedback: Direct feedback refers to "the provision of the correct linguistic form by the teacher to the student," (Ferris, 2006, p. 83) and indirect feedback happens when " the teacher indicates in some way that an error has been made—by means of an underline, circle, code, or other mark—but does not provide the correct form, leaving the student to solve the problem that has been called to his or her attention" (Ferris, 2006, p. 83).

Dynamic written corrective feedback: An innovative written corrective feedback method that requires a dynamic process and interaction between the teacher and the students in order to help the students improve their writing accuracy (see the *Instructional Methods* section in Chapter 3 for a detailed description of the process).

Errors: "Morphological, syntactic and lexical deviations from the grammatical rules of a language that violate the intuitions of native speakers" (Ferris & Hedgcock, 2005, p. 264).

Error correction, written corrective feedback, or grammar correction: Russell and Spada (2006) define corrective feedback as "any feedback provided to a learner, from any source, that contains evidence of learner error of language form. It may be oral or written, implicit or explicit" (p. 134). For the sake of consistency in using these terms, written corrective feedback in this paper does not refer to feedback on any aspect of language other than the grammatical form, and error correction in this paper is confined to only the written format. Truscott (1999) refers to grammar correction as "corrections of

grammatical errors in many different forms for the purpose of improving a student's ability to write accurately" (p. 329). Although the construct of grammatical errors is not clearly defined by Truscott, this paper uses the term *grammar correction* synonymously with error correction. Therefore, the terms *written corrective feedback, error correction*, and *grammar correction* are used interchangeably in this paper.

Feedback or response: Feedback and response are also used interchangeably in this paper. They refer to "the process of a teacher providing corrective suggestions to a student writer" (Evans, in progress, p. 2).

Delimitation

This study is limited to examining the efficacy of DWCF only on L2 writing accuracy and therefore does not further investigate other important aspects of writing, such as fluency, complexity, or rhetorical conventions. The study by Hartshorn (2008) revealed that DWCF did not adversely affect these aspects of students' writing in the advanced-low proficiency level. The primary purpose of DWCF is to improve students' linguistic accuracy in their writing. Therefore, this study is intended to investigate the effectiveness of DWCF on intermediate-high students' writing accuracy solely in terms of proficiency level. How DWCF affects other aspects of writing is beyond the scope of this study.

Hyland and Hyland (2006) pointed out that existing longitudinal studies on EC rarely extend over more than one semester. By implementing this method at the intermediate proficiency level, the longitudinal efficacy of the method will be able to be examined by tracking the students who move to the next level, where they continue to receive DWCF at BYU's English Language Center (ELC). However, this study just

opens the possibility of tracking students' progress to study these longitudinal effects.

Despite the narrow focus of this study, its findings can provide a guideline for ongoing curriculum refinement at BYU's ELC, especially for intermediate proficiency levels, and it may also have extensive implications for L2 writing pedagogy in general.

CHAPTER 2: LITERATURE REVIEW

As stated in the previous chapter, the purpose of this thesis is to test the effects of dynamic written corrective feedback (DWCF) on intermediate-high ESL learners' writing accuracy and to further explore the subjects' perspectives and attitudes towards this unique method. This chapter will examine various relevant lines of literature. It will begin by addressing student perspectives of teacher feedback. Following this, students' perceptions of teachers' error correction and the importance of students' beliefs and attitudes will be discussed. It will further address the efficacy of error correction, the necessity of error treatment for L2 learners, and suggestions on how to respond to student errors and on limitations of the suggestions. Finally, it will discuss an innovative error correction strategy, DWCF, and present the research questions related to current studies on DWCF.

Student Perspectives on Teacher Feedback

After the advent of process-oriented instruction and its prevalence in L2 writing pedagogy, feedback has played an important role in students' revision process, and various methods of feedback have been explored to help students as they go through the revision process. Such feedback includes teacher feedback, peer feedback, teacher-student conferences, oral feedback, self-evaluation, electronic feedback, and so on. Of all these kinds of feedback, the teachers' response appears to be the most crucial to the development of students' writing (Hyland & Hyland, 2006). Despite the significance of the teachers' response, few studies have examined the impact of teacher feedback on student writing in an L2 setting (Conrad & Goldstein, 1999; Ferris, 1997; Ferris, Pezone, Tade, &Tinti, 1997; Hyland, 2003; Zamel, 1985).

Whereas studies assessing the effectiveness of teacher feedback on student writing in an L2 are scarce, a growing body of studies has been conducted to investigate student perceptions and reactions to teacher response in both L1 and L2 writing (Arndt, 1993; Cohen, 1987, 1991; Cohen & Cavalcanti, 1990; Enginarlar, 1993; Ferris, 1995; Hedgcock & Lefkowitz, 1994, 1996; Hyland, 1998; Lee, 2008; Leki, 1991; Radecki & Swales, 1988; Saito, 1994). Findings regarding student reaction to teacher response are well summarized by Ferris and Hedgcock (2005) as follows:

1. Students greatly appreciate and value teacher feedback, considering teacher commentary extremely important and helpful to their writing development.

2. Students see value in teacher feedback on a variety of issues, not just language errors.

3. Students are frustrated by teacher feedback when it is illegible, cryptic (e.g., consisting of symbols, circles, single-word questions, comments), or confusing (e.g., consisting of questions that are unclear, suggestions that are difficult to incorporate into emergent drafts).

4. Students value a mix of encouragement and constructive criticism and are generally not offended or hurt by thoughtful suggestions for improvement. (pp. 188-189)

As noted above, teacher feedback is perceived to be significantly valuable by students in helping them improve their writing. Furthermore, other research findings support the idea that ESL students overwhelmingly prefer teacher feedback over other types of feedback (Leki, 1991; Saito, 1994; Yang, Badger, &Yu, 2006; Zhang, 1995).

Student Perceptions of Teachers' Error Correction

One thing to note from the studies on student perceptions of teacher response is that overall the research findings suggest that students expect to receive error correction (EC) from their teachers, and there is abundant evidence that students have strong intuitions about the value of correction (Hedgcock & Lefkowitz, 1996; Hendrickson, 1978; Hyland, 1998; Komura, 1999 as cited in Lee, 2008; Lee, 2004, 2005; Leki, 1991; Oladejo, 1993; Radecki & Swales, 1988; Rennie, 2000 as cited in Lee, 2008; Saito, 1994; Schulz, 1996, 2001). To illustrate, Leki (1991) explored ESL student preferences and expectations in college-level second language writing classes. The results of her study, which surveyed 100 ESL freshman students, revealed that students believed that in order for writing to be considered good, it must be error-free. Thus, they expected all the errors in their writing to be corrected by their teachers, and 67% of the students wanted their teachers to show the location of their errors and give them a clue about how to correct them. Leki (1991) argues that ignoring students' expectations for EC will demotivate them; therefore, teachers should accommodate the students' perceived need. Oladejo (1993) supports Leki's findings. He attempted to examine the preferences and expectations of intermediate and advanced ESL students concerning EC. He reports that ESL learners not only want their errors corrected, but they also prefer comprehensive EC to selective EC in order to enhance accuracy as well as fluency in writing; furthermore, they wanted to receive EC more often and more thoroughly. These findings correspond with the results of Radecki and Swales (1988) which found that the students expected their teacher to correct all of their surface errors. This is also in harmony with the findings of Lee (2004) that both teacher and students preferred comprehensive feedback.

Moreover, Saito (1994) also endorses the findings that the majority of ESL learners consider teacher feedback most useful when it handles grammatical errors explicitly. This conclusion is further supported by Hedgcock and Lefkowitz's (1996) study on L2 students' awareness of the functions and influences of teacher input in their writing in that many L2 students, particularly those in EFL settings, perceive that they "learn the most" (p. 299) and can vastly improve their writing when their grammatical and mechanical mistakes are marked by their instructors.

The findings from these studies about students' reactions and preferences on EC show a consistent picture:

1. Students perceive that teacher feedback on errors is vital to help them improve their writing accuracy.

2. Students prefer comprehensive error feedback to selective error feedback.

Even though some scholars would speculate that L2 students possess negative feelings towards EC (Semke, 1984), the findings of empirical studies indicate that most students expect their teachers to correct their errors and consider EC very valuable and helpful in improving their writing accuracy and the quality of their writing. In addition, most students perceive EC as a teachers' primary responsibility (Lee, 2004, 2005). In summary, it is clear that most students believe in the value of EC.

The Importance of Students' Beliefs and Attitudes

Since most students possess a strong belief in the value of EC, it is essential to discuss how learners' beliefs impact their learning process. Beliefs broadly refer to "opinions and ideas that learners (and teachers) have about the task of learning a second/foreign language" (Kalaja & Barcelos, 2003, p. 1). Learners' beliefs are identified

as "one area of individual learner differences that may influence the process and outcomes of SLA," and L2 learner beliefs are significantly associated with learners' strategy use, anxiety, and autonomous learning (Kalaja & Barcelos, 2003, p. 1). A study by Mori (1999) indicated that learners' beliefs about language learning show a statistically significant correlation with achievement.

Studies with regard to learners' beliefs about the nature of language learning and the effectiveness of the strategies they use go back to the 1980s (Ely, 1988; Horwitz, 1987, 1988, 1989; Politzer, 1983; Wenden, 1986). Wenden (1986) investigated learner theories about their language learning and urged teachers to explore students' beliefs or knowledge about their language learning and apply them in class activities. Schulz (1996, 2001) reinforces Wenden's argument by stating that teachers should strive to discover students' beliefs about language learning and their instructional expectations and set up common ground for learner and teacher beliefs in order to increase pedagogical credibility and motivate students in their learning process.

Horwitz (1987) stimulated further studies on students' beliefs about language learning by developing the Beliefs About Language Learning Inventory questionnaire, which assesses student opinions regarding language learning (Erlenawati, 2002; Horwitz, 1988, 1989; Kern, 1995; Oh, 1996 as cited in Loewen et al., 2009; Park, 1995 as cited in Loewen et al., 2009; Truitt, 1995 as cited in Loewen et al., 2009; Yang, 1992, 1999 as cited in Loewen et al., 2009). Horwitz (1987, 1988) reported that students had definite preconceived notions about language learning, and that teachers should not ignore these beliefs so that their students can open themselves to particular teaching methods and get the most benefit from the methods. In addition, she argues that understanding learner

beliefs helps teachers foster more efficient learning methods for their students.

Along with students' beliefs about language learning, their attitudes towards the learning situation also exert a huge influence on their language development. Many scholars support Horiwitz's argument that L2 language learners hold a set of beliefs about the language learning and bring them into the language learning classroom (Erlenawati, 2002; Kern, 1995; Riley, 2009; Schulz, 2001; Wenden, 1986). This set of beliefs that L2 learners possess is referred to as attitudes. Ramirez (1995) defines attitudes as "a set of beliefs that a learner holds about the community and people who speak the target language, about the language, and the learning task itself" (p. 165). Nunan and Lamb (1996) argue that the learner's attitudes towards the learning situation and the roles that they are supposed to play within that learning situation will greatly affect the language learning process, and students' negative attitudes towards the classroom can impair the learning process. Moreover, attitude is closely associated with motivation (Nunan & Lamb, 1996).

To summarize, many scholars have pointed out that learners' beliefs and attitudes exert an enormous influence on the process and outcomes of their learning (Alexander & Dochy, 1995; Nunan & Lam, 1996; Williams & Burden; 1997).

However, despite the significance of learner beliefs in language learning, it seems highly contentious when it comes to student perceptions on EC. Truscott (1996) argues that even though copious amount of evidence indicates that students believe in EC, adopting students' beliefs into the classroom is not the teachers' obligation and teachers should educate students about their learning beliefs if they are false. This argument was also voiced by James (1998). He cautioned that students' preferences on EC should not be

put on a pedestal because students' preferences are not "necessarily more effective for being preferred" (p. 253). Of course, teachers' decision making should not be based only on students' perceptions and opinions. Nevertheless, students' needs should be considered in determining teachers' feedback and the decision-making process in order to reduce the conflict between teachers and students and also reduce student frustration, anxiety, lack of motivation, and in the worst case, ending of their language learning (Hong, 2004; Schumann, 1980). This controversy over whether or not we should treat errors was driven by ongoing, inconclusive debates on the efficacy of EC. The following section addresses the issue of the efficacy of EC.

Efficacy of Error Correction

As mentioned earlier, the polarizing debate on the effectiveness of EC was triggered by Truscott (1996). He reviewed previous studies that showed negative outcomes on EC (Cohen & Robbins, 1976; Kepner, 1991; Krashen, 1992; Leki, 1990; Robb, Ross, & Shortreed, 1986; Semke, 1984; Sheppard, 1992; VanPatten, 1986 a, 1986 b) and attempted to cast doubt on its efficacy. He took the strong stance that EC has no place in L2 writing because learners acquire grammar structures gradually and interlanguage development is a complex learning process. Furthermore, Truscott argued that not only was there no evidence for the effectiveness of grammar correction, but it was also harmful.

In contrast to Truscott's argument, there are a number of studies showing positive effects of EC (Ashwell, 2000; Bitchener, 2008; Bitchener & Knoch, 2008; Bitchener, Young, & Cameron, 2005; Chandler, 2003; Ellis, Sheen, Murakami, & Takashima, 2008; Evans et al., in press; Fathman & Whalley, 1990; Ferris, 1997, 1999, 2004, 2006; Ferris

& Roberts, 2001; Hartshorn, 2008; Hartshorn et al., in press; Lalande, 1982; Russell & Spada, 2006; Sheen, 2007). The results of these studies suggest that writing accuracy can be improved in limited contexts. These positive findings, however, are still inadequate evidence to conclude that error feedback is effective because of their inconsistent research designs (Bitchener, 2008; Ferris, 1999, 2004, 2006).

These design issues can be discussed in two categories: a control group issue and an issue of students' sustained accuracy gains in a new piece of writing. On the one hand, few studies (Ashwell, 2000; Ferris & Roberts, 2001; Lalande, 1982) have included a control group that did not receive any corrective feedback. As Truscott (2007) argues, studies without a control group cannot determine whether observed gains resulted from the treatment itself or from other factors. The other issue about research design for the evidence of the efficacy of EC relates to students' sustained accuracy gains in a new piece of writing. Very few previous studies have required students to write a new text to examine students' sustained accuracy gains, but instead used accuracy gains in text revisions to prove effectiveness. Editing texts from one draft to the next cannot prove sustained improvement in writing, which is considered more important when it comes to proving the efficacy of EC. Therefore, it is suggested that further well-designed studies are necessary to help us gain a better understanding of EC. Moreover, it is premature to draw any solid conclusions on the efficacy of EC in that the findings of the different studies do not agree, there are clear design differences in the studies, and there is currently insufficient existing data to resolve this question (Chandler, 2003; Ferris, 1999, 2002, 2003, 2004; Polio, 1997).

Necessity of Error Treatment for L2 Learners

Despite the ongoing debate over the appropriateness of EC in L2 writing, many scholars assert that error treatment is necessary for L2 learners. This section reviews their views on why error treatment should be provided for L2 students.

Ferris (2002) puts forth three reasons why teachers should continue giving error feedback and editing-strategy training to students: (a) there exist several studies demonstrating that error feedback can improve students' writing accuracy in the short term, (b) students believe in the value of EC and think that it improves their writing accuracy, and (c) teachers should help students become "independent self-editors" (p. 9) since their writing accuracy is a must in the real world.

Many scholars have emphasized the importance of writing accuracy, which is Ferris' third point. There is no doubt that formal accuracy of the written product matters to academic and professional audiences (Ashwell, 2000; Ferris, 2006; Ferris & Hedgcock, 1998; Johns, 1995). Furthermore, Truscott (1996) himself does not deny the value of grammatical accuracy.

Eskey (1983) reminded us of the significance of accuracy especially for advanced students "pursuing higher learning, businesspersons, diplomats, and most immigrants" (p.318). He argues that in the real world, "fluency in a language is no guarantee of formal accuracy…. the achievement of some level of communicative competence does not automatically entail the achievement of an equal grammatical competence" (p. 319). He asks how students can improve their writing accuracy without their errors being pointed out. Evans et al. (in press) also pointed out that "neither research nor common sense suggests that students will progress toward greater accuracy without feedback" (p. 5).

Another point demonstrating the necessity of error treatment relates to the differences in the learning needs between L1 and L2 learners. Many scholars claim that L2 writing pedagogy should be different from L1 (Goldstein & Conrad, 1990; Hinkel, 2004; Raimes, 1987; Silva, 1993; Zhang, 1995). A diagram presented by Hartshorn (2008) in Figure 1 effectively illustrates the theoretical similarities and differences experienced by L1 and L2 speakers as they attempt to become competent writers in English. The horizontal axis represents the effort of each writer, and vertical axes plot skill mastery, or rhetorical writing competence and linguistic writing competence.

This figure shows that unlike L1 learners, linguistic writing competence appears to be more difficult than rhetorical writing competence for L2 learners, and they tend to develop linguistic skills more slowly than rhetorical skills when each skill received equal effort. This figure also demonstrates that L2 writing pedagogy must address different needs from L1 writing pedagogy, which generally focuses more on rhetorical aspects than on linguistic aspects of writing. Finally, this figure suggests that L2 writing pedagogy should aim to improve students' use of linguistic conventions along with their use of rhetorical conventions. Since L2 students are still in the process of acquiring linguistic conventions such as morphological and syntactic systems, they need additional help in these areas, and teachers should assist them in developing strategies to find, correct, and avoid errors (Ferris, 2002).

Oladejo's (1993) claim best summarizes the necessity of error treatment: "Despite the change in attitudes toward errors, and despite the revolution brought about by communicative approaches to language teaching, error correction and the ESL/EFL classroom are inseparably married" (p. 72).

Strong support in favor of EC suggests that error correction is necessary for L2 learners, but the remaining issue is how error correction should be handled in order for it to contribute to L2 learners' language development.
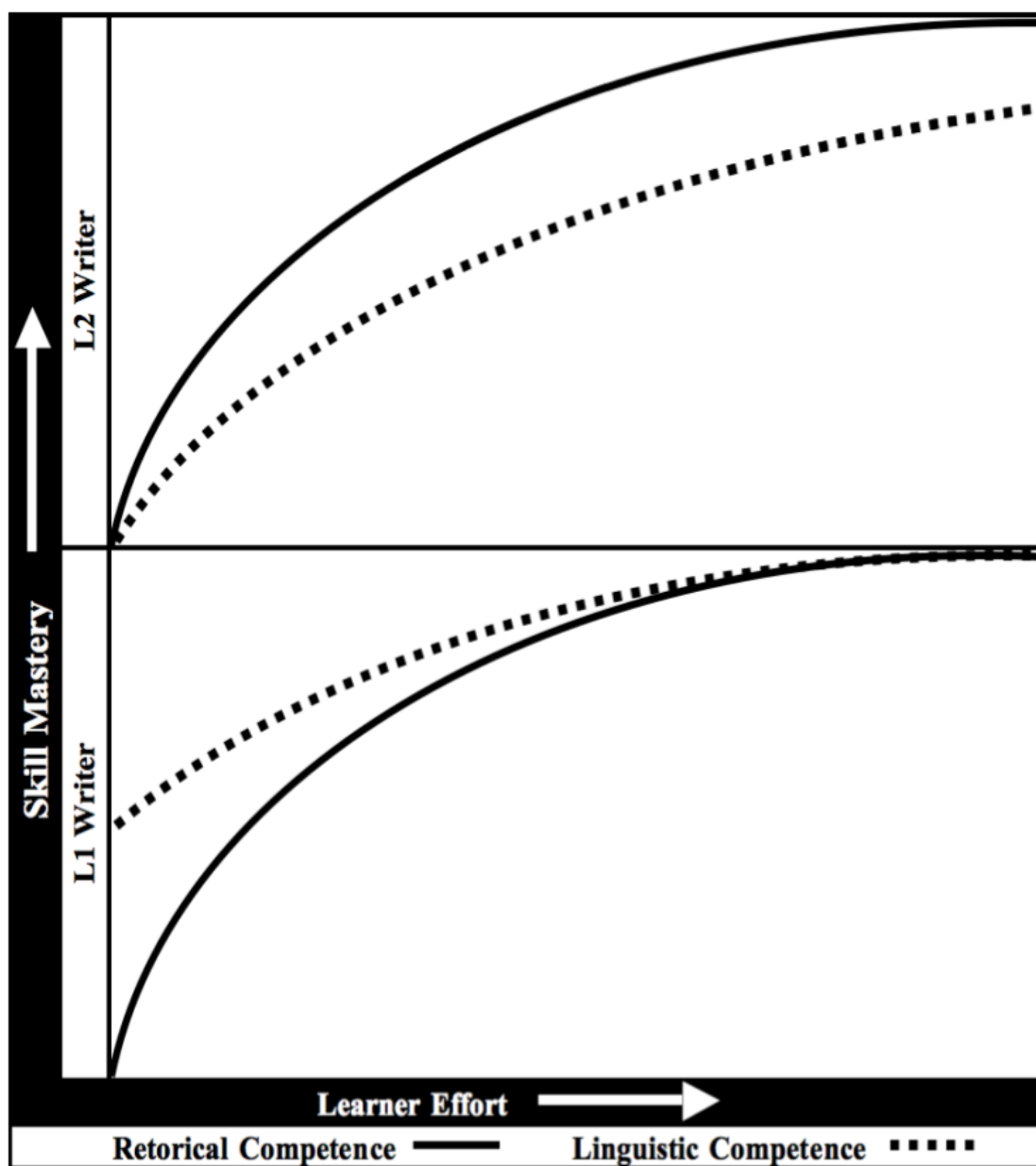
*Figure 1.*Effort and Skill Mastery Plotted for L1 and L2 Writers (Hartshorn, 2008, p. 7)

Suggestions on How to Respond to Student Errors and Limitations of the Suggestions

This section reviews current suggestions on how to respond to student errors and limitations of the suggestions. Ferris (2002) presented various practical issues regarding how to respond to student errors: which errors to mark, when to give error treatment, and how to give error treatment.

The first issue is concerned with choosing which errors to mark. Although most students prefer comprehensive EC to selective correction (Lee, 2004; Oladejo, 1993; Radecki & Swales, 1988), many proponents of EC suggest selective EC over comprehensive correction. Bitchener (2008) suggests not treating broad error categories but focusing on one or a few error categories intensively. Ferris (2002, 2006) advocates providing a small number of error categories by focusing on patterns of error so that both teachers and students can pay attention to major error types.

This preference for selective EC is due to the overwhelming workload which the comprehensive EC requires for both teachers and students. However, the remaining dilemma is that students have to deal with a variety of aspects and types of errors in authentic writing situations, and treating some categories of errors does not satisfy students' actual needs and can be considered impractical in this regard. Hartshorn et al. (in press) voiced concern that feedback that is too restricted may not maximize the potential for improvement of overall accuracy in students' writing.

A recent study by Ellis et al. (2008), however, revealed that written corrective feedback was equally effective in helping students correct their article usage whether it

was focused or unfocused in an EFL context. They argue that "clearly, if corrective feedback is effective when it addresses a number of different errors, it would be advantageous to adopt this approach" (p. 367). The finding by Ellis et al. is a positive signal for our endeavor to explore a more effective EC method in order to facilitate students' overall accuracy improvement.

The second issue is about the timing of providing EC. Since the process-oriented instruction became prevalent in L2 writing pedagogy, the process of writing has taken on greater emphasis. This has led to writing instruction which focuses on content through multiple drafts and leaves scrutinizing forms to the final draft. Both L1 and L2 composition theorists believe that a teacher's response to students' compositions is most effective when it is given on preliminary drafts rather than later ones (Krashen, 1984). It is also believed that early attention to errors may prevent students from composing and revising their content, especially for L2 writers (Zamel, 1985). However, there is still controversy over when EC should be given. Ashwell (2000) examined four different patterns of teacher feedback in an attempt to find the best way teachers can respond to students' compositions; one pattern involves providing feedback on content on the first draft followed by feedback on form on the second draft out of three drafts of a single writing (pattern A); the second pattern is the reverse pattern of the first pattern (pattern B); another pattern is mixed feedback on content and form in both the first and second drafts (pattern C); and the last pattern is zero feedback serving as a control group (pattern D). He found that there were no significant differences among pattern A, B, and C; however, pattern C, the mixed pattern, was preferable in that it obtained the most simple mean gains in accuracy rating and content scores. These research findings demonstrate that

students can benefit from the feedback provided simultaneously on both content and form on the same draft (Fathman & Whalley, 1990; Ferris, 1997). This, however, challenges Zamel's (1985) recommendation to give content-focused feedback prior to form-focused feedback.

The last issue regarding suggestions on how to respond to student errors deals with how teachers should provide error feedback. It starts with the issue of direct feedback versus indirect feedback. Even though the findings of some studies (Bitchener, 2008; Bitchener, Young, & Cameron, 2005; Chandler, 2003; Ferris, 2006) propose that direct feedback can lead students to accuracy improvement, indirect feedback has more potential to produce long-term improvement in students' ability to correct their own errors because it requires them to reflect and analyze their own errors (Ferris, 2002, 2006; Lalande, 1982). However, Ferris (2002) provides three distinct circumstances when direct feedback is more useful than indirect feedback: (a) when students' proficiency is at the beginning level because they do not possess linguistic competence to self-correct their errors, (b) when errors are *untreatable*, and (c) when the teacher wants students to pay attention to particular error patterns but not others.

Ferris (2002) describes *untreatable* errors as ones where "there is no rule to which students can turn to correct an error when it is pointed out to them" (p. 64), such as *word choice, word form* and *awkward or unidiomatic sentence structures*. Ferris (2006) also suggests that teachers should have varying feedback approaches for treatable or untreatable error types.

Teachers should make several decisions when it comes to providing feedback, one of which is to decide whether to identify the types of errors using codes or symbols or to

just locate the errors by underlining, circling, or highlighting them. Chandler (2003) found that simply underlining errors is significantly superior to underlining with marginal descriptions of error-type or marginal descriptions of type without locating the error, even though students judged underlined errors with descriptions of error-type to be the most helpful in improving their writing. This finding contradicts the finding by Ferris and Roberts (2001) in which they found no significant difference between identified and located feedback, but rather both kinds of feedback greatly helped students with their self-editing skills. However, ensuing research by Ferris (2006) suggested that we should just locate errors rather than identifying them using codes or symbols.

Although there are some remaining questions and limitations as to how to respond to student errors, Ferris (2004) provided six practical suggestions for error treatment drawn from existing research.

1. Error treatment, including error feedback by teachers, is a necessary component of L2 writing instruction. We must prepare ourselves to do it competently, we must plan for it carefully in designing our courses, and we must execute it faithfully and consistently.

2. In the majority of instances, teachers should provide indirect feedback that engages students in cognitive problem-solving as they attempt to self-edit based upon the feedback that they have received. (Exceptions may include students at lower levels of L2 proficiency, who may not possess the linguistic competence to self-correct.)

3. Different types of errors will likely require varying treatments. Students may be less capable, for instance, of self-editing some lexical errors and complex,

global problems with sentence structures than more discrete morphological

errors.

4. Students should be required to revise (or at least self-edit) their texts after

receiving feedback, ideally in class where they can consult with their peers

and instructor.

5. Supplemental grammar instruction (in class or through individualized self-

study materials recommended by the instructor) can facilitate progress in

accuracy if it is driven by student needs and integrated with other aspects of

error treatment (teacher feedback, charting, etc.)

6. The maintenance of error charts, ideally by the students themselves with

guidance from the instructor, can heighten student awareness of their

weaknesses and of their improvement. (pp. 59-60)

With these useful suggestions in mind, the next task is to identify and design a

suitable instructional EC method within the students' specific learning environment. We

should further test the designed method (Guénette, 2007). As Guénette reminds us, when

it comes to designing an EC method, it is important to consider contextual variables such

as "the classroom context, the types of errors students make, their proficiency level, the

type of writing they are asked to do, and a collection of other variables" (pp. 51-52).

An Innovative Error Correction Strategy: Dynamic Written Corrective Feedback

This section discusses an instructional EC method designed by Evans (Evans et al.

in press) targeting students in higher proficiency levels to help them improve their

linguistic accuracy in writing. He refers to this EC method as "dynamic written corrective

feedback" (DWCF). He created this method by considering contextual variables and

reflecting on the insights that recent studies about EC provide about how our teaching, learning, and research are affected by contextual factors (Ferris, 2004; Guénette, 2007). He isolated and categorized the three most important variables: learner variables, situational variables, and methodological variables that refer to the instructional methodology (Evans et al., in press).

DWCF is based on the premise that "error correction can be consequential when it is manageable, meaningful, timely, and constant" (Evan et al., in press, p. 11). The first principle, manageability, refers to the workload that both teachers and students can handle. When teachers are overwhelmed by the quantity of writing that they are supposed to give feedback on, and by extension, when students receive voluminous feedback that they can hardly process, it is not manageable. Therefore, some scholars suggest providing focused error correction on a few error categories as discussed earlier. However, Evans et al. (in press) suggest that instead of limiting error categories, manageability can be achieved by reducing the quantity of writing by having students write a ten-minute paragraph in every class session. Their rationale for ten-minute paragraphs is based on the assumption that "ten minutes is long enough to capture a representative sample of student writing while still short enough to keep the tasks and feedback manageable" (p. 15). In this way, teachers can have enough time to convey meaningful feedback to students, and students are also able to process, internalize, and apply teacher feedback.

Not only should feedback be manageable, but it should also be meaningful. Evans et al. (in press) describes meaningful feedback in three ways: first, feedback is meaningful when students understand the reason for the feedback given and how to use it; second, feedback is meaningful when it is not beyond a student's linguistic ability; and

lastly, feedback is meaningful when it helps students engage in a cognitive problem solving process while they are correcting their own errors, and ultimately, when it leads students to internalize the correct forms.

The third principle is that feedback should be timely. The longer it takes for a paper with teacher feedback to be returned to the student, the less likely it is that the student is going to have learning opportunities. Therefore, a minimal time gap between when a student writes a paper and when the teacher provides feedback on it is important to facilitate the student's learning process and opportunities.

The last principle is consistency. Constant feedback over time will be more effective than occasional feedback, and it can help students develop "habits of self analysis and self-correction" (Evans et al., in press, p. 15). Moreover, it can also help raise students' consciousness of their common errors. Ferris (2004) supports this principle of consistency by stating that error treatment must be executed "faithfully and consistently" (p. 59).

As discussed earlier, DWCF based on these four principles seems to have improved advanced-low ESL students' overall linguistic accuracy on new paragraph writing assignments (Evans et al., in press); however, this exploratory study did not include a control group.

Ensuing studies (Evans, Hartshorn, & Strong-Kraus, 2009; Hartshorn, 2008; Hartshorn et al., in press) examining the effects of DWCF on L2 writing included a control group that was taught using a traditional writing instruction approach and a treatment group that was taught with the instruction using DWCF. The subjects were advanced-low to advanced-mid ESL students. The students took pre and posttests, which

involved writing a 30-minute essay for each test from which the accuracy improvement was measured. The findings of these studies revealed that the treatment group improved in their overall linguistic accuracy. Hartshorn's (2008) study conducted at the advanced-low proficiency level showed that mechanical accuracy, lexical accuracy, and certain categories of grammatical accuracy were improved without harming fluency, complexity, or rhetorical conventions. These promising outcomes suggest that DWCF can facilitate the improvement of advanced-low and advanced-mid ESL students' overall linguistic accuracy even in a new, longer piece of writing.

The findings of the studies on DWCF suggest that:

1. Writing tasks and feedback that are manageable, meaningful, timely, and constant may be able to maximize L2 writing accuracy (Evans et al., in press).

2. Instruction targeting L2 writers' linguistic accuracy should be handled differently from methods of writing instruction that are designed to teach the rhetorical conventions of writing (Hartshorn et al., in press).

Hartshorn et al. (in press) provided suggestions for further research on DWCF. One of the suggestions is to look at "whether dynamic WCF could be equally useful for students at lower proficiency levels such as intermediate-high or intermediate-low" (p. 23). The issue of how learner proficiency level affects corrective feedback was raised by Lin and Hedgcock (1996). They reported that learners in different proficiency levels showed dramatic differences in detecting ungrammaticality and negative feedback incorporation, suggesting that internalizing negative feedback may rely on learners' multilingual receptivity. Hyland (2003) also argued that the learner proficiency level was an important variable in learners' ability to self-correct.

As Hartshorn et al. (in press) suggest, the next necessary step for further research on DWCF is examining proficiency level variables. Under the assumption that intermediate-high learners possess the needed linguistic competence to self-correct and based on the positive efficacy of DWCF for advanced-low and advanced-mid learners, this research is intended to examine the efficacy of DWCF for intermediate-high ESL students. Moreover, since learner beliefs and attitudes towards an instructional method are an important factor to consider in that they can significantly influence the effectiveness of the method, this study further examines participants' perspectives and attitudes towards this unique method.

It is believed that advanced learners are likely to have more need for writing accuracy and be able to benefit more from WCF than learners with lower proficiency levels. The level of proficiency at which learners can receive the most benefit from WCF and at which we should start providing WCF to help their language development are unknown questions. These queries can be answered by exploring the efficacy of WCF at different levels. Hence, it is a logical step to examine the effectiveness of WCF among students with an intermediate-high proficiency level after conducting studies at advanced proficiency levels. The findings of this study will provide useful guidance for further studies related to these queries. Furthermore, they can contribute to ongoing curriculum refinement and development certainly at BYU's ELC and possibly other institutions.

CHAPTER 3: METHODOLOGY

This chapter presents the research methodology utilized to answer this study's research questions. The first section describes the participants of the research: the students, the teachers, and the raters. It further discusses the research design, data analysis, and instruments used to perform the research. In addition, this chapter presents a description of the instructional method in both the control and treatment groups and the elicitation procedures used to collect the data. Finally, it restates and operationalizes this study's research questions.

Participants

The students. There were two sets of students who participated in this study: the participants for the main research question and the participants for the supplemental research question. First, a total number of 53 ESL students participated in answering the main research question, which investigated the efficacy of dynamic written corrective feedback (DWCF) on intermediate-high ESL students' writing accuracy. All of these participants were Level 4 students enrolled at the Brigham Young University (BYU) English Language Center (ELC) in Provo, Utah. Students at BYU's ELC fell into five different levels. Level 5 represented the highest proficiency, and Level 4 was one level below that. A Level 4 proficiency student at the ELC was estimated to range from intermediate-mid to intermediate-high according to the guidelines established by the American Council of Foreign Language Teachers (Breiner-Sanders, Swender, & Terry, 2001).

Of the 53 students, 35 participated in the treatment group, and 18 participated in the control group. The control group received instruction during the 13-week summer semester, which met between May and August of 2008. The participants in the control group were selected from Level 4 students who had moved up from Level 3, the previous semester, without taking any breaks in between. These students took the Level Achievement Tests (LATs) in both Level 3 and 4. These tests served as the pre and posttests respectively. There were 18 students who took both the pre and posttests. Even though this control group provided only an 18-student sample, it was logically selected in an attempt to maintain similar contexts for both the control and the treatment group. This control group was composed of the most current students who were completing Level 4 at the time the research was conducted. Since the ELC began using a new grammar textbook in winter 2007, it was important that the participants for the control group be selected from among the students who had previously used the same textbook as the treatment group; it should be noted that the researcher did not consider other possible control groups from the old textbook training. The attempt to maintain the most similar contexts for the control and treatment groups resulted in only 18 students in the control group. In short, this control group incorporated the highest number of the students possible while maintaining the most similar context for both the treatment group and the control group when compared with other possible control groups of students.

The treatment group was selected from the 13-week fall semester, which met between September and December of 2008. This semester occurred immediately following the semester during which the control group samples were taken. The Applied Grammar (AG) course using DWCF was implemented in Level 4 for the first time during

that semester, and as a result, all 72 students enrolled in Level 4 that semester received this treatment. Limitation of both time and funding for the research did not allow for analyzing all of the Level 4 students enrolled; however, a sample consisting of 60% was judged to reasonably represent each class. Thus, of the 72 students enrolled, 60% of the students in each class were randomly selected using a program located at random.com. Those students who had less than 80 % attendance were dropped from the treatment group pool before the random selection because participation was considered one of the essential factors to improving writing accuracy with this strategy; however, this 80% attendance standard was not applied to the control group. This resulted in a treatment group of 35 students, ranging in age from 19 to 41, with a mean of approximately 26 years. The age range of the 18 students in the control group was from 20 to 43, with a mean of approximately 27 years. It should be noted that the ranges and means of the ages between the control and the treatment group showed little disparity. Table 1 summarizes the composition of the control and treatment groups in terms of native language and gender.

It should also be recognized that the males outnumbered the females in the control group, while the reverse pattern was shown in the treatment group. The ratio of male students to female students in the control group was 2.6: 1, and the ratio of female students to male students in the treatment group was 2.5: 1. Although both the control and treatment groups contained disproportionate numbers of females and males with regard to gender, it was assumed that gender would have little influence on student performance based on Hartshorn's (2008) study investigating the effectiveness of DWCF at BYU's ELC in which females outnumbered males in the control group. His analysis of the effect

of gender using a repeated measures ANOVA showed that there was no significant

difference between the mean accuracy scores of males and females ($p =. 96$).

Table 1

Control and Treatment Groups by Native Language and Gender

Native Language	Control Group			Treatment Group		
	Male	Female	Total	Male	Female	Total
Spanish	4	2	6	2	5	7
Korean	4	2	6	6	6	12
Mandarin	1	1	2	0	4	4
Portuguese	1	0	1	2	5	7
French	2	0	2	0	1	1
Madagascan	1	0	1	0	0	0
Japanese	0	0	0	0	1	1
Russian	0	0	0	0	1	1
Romanian	0	0	0	0	1	1
German	0	0	0	0	1	1
Totals	13	5	18	10	25	35

Along with this discussion of gender, it may be useful to discuss the potential

effect of language distance on this study. Many believe a new language is much easier for

students whose L1 is closely related to the new language; for instance, English-speaking

students consider European languages such as French less difficult to learn than Asian

languages such as Korean because of the similarities between English and French (Odlin,

1989).

It should be noted that there was little disparity in the proportion of the students in

the control and treatment groups regarding language distance. In this study, the

percentages of native speakers of western European languages in the control and

treatment groups were 50 % and 49 % respectively, whereas the percentages of native

speakers of Asian languages were 44 % and 49 % respectively. There were also other

languages that did not fit into either of the two categories, such as Madagascan and

Russian. Furthermore, each group included a balanced portion of students when divided

into western-European and Asian language groups, even though the control group

contained a slightly larger portion of students using western European languages. These

portions are presented in Table 2.

Table 2

Western European and Asian languages in Experimental groups

	Western European Languages	Asian Languages
Control group	50 %	44%
Treatment group	49 %	49%

In addition, Hartshorn (2008) assumed that there would be minimal influence of

language distance on student performance in his study because his research subjects were

advanced-level adult learners, and they were engaged in writing tasks using substantial

monitoring. This assumption was based on the suggestions from Ringbom (1987) that the

influence of language distance on student performance is likely to be high for young low

-proficiency learners in highly communicative tasks, whereas in Hartshorn's study, the

students were adult learners in the intermediate-high level, engaged in writing tasks.

The subjects described above were those involved in the data collection for the

main research question being investigated in this study. The secondary research question

involved much wider samples of 128 subjects who were surveyed using a questionnaire

designed to investigate the students' perspectives and attitudes toward DWCF. As

mentioned earlier, the Applied Grammar (AG) course using DWCF was first

implemented in Level 4 at the BYU ELC in Fall 2008, and the ELC continued using

DWCF in Level 4 the following semester, Winter 2009. Level 4 students from both

semesters completed the attitudinal survey. Sixty-two students participated in the survey

in Fall 2008, and 66 students participated in Winter 2009.

The teachers. It was not possible to control for teacher differences in the control

group since this study dealt with intact classes, and the control group was selected

because it was the group which provided the most subjects from the past semester.

However, the teachers in the treatment group were carefully selected for those who

possessed solid English grammar knowledge. They had experience teaching English

grammar classes or had taught an AG class using DWCF in Level 5, where DWCF had

already been the method of instruction for a few years at the ELC. Before providing

information about each teacher, it should be mentioned that the main researcher (teacher

A) taught a class in the control group and a class in the treatment group as well. However,

the three other teachers were different individuals.

There were four sections of Level 4 in the control group. Two separate teachers

(teacher A and teacher B) taught two sections each. Both of them were novice teachers

who had less than a year teaching experience in an ESL setting. Teacher A was the main

researcher, a Korean graduate student in the TESOL master's program at BYU. She had

taught English grammar for approximately 10 years in Korea and had tutored ESL

students for one and a half years at the ELC. However, it was her first time teaching a

regular class on her own in an ESL setting. Teacher B was an American graduate student

in the TESOL certificate program at BYU. She had approximately eight months of

experience teaching English, and it was her second time teaching a Level 4 grammar

class.

There were three teachers (teachers A, C, and D) in the treatment group. Teacher C had taught an AG class in Level 5 twice previously, but teachers A and D did not have any experience in teaching an AG class. All of the teachers possessed a TESOL graduate certificate degree. Teachers C and D were native speakers of English, and both had master's degrees: teacher C in TESOL and teacher D in Applied Linguistics. Further information regarding the number of students by teacher and their experience level is presented in Table 3.

Table 3

Students in the Experimental Groups by Teacher and Teachers Experience

Experimental Groups	Teacher	Experience Level	Number of Students
Control (Summer, 2008)	A	Novice in ESL Experienced in EFL	8
	B	Novice	10
	Total		18
Treatment (Fall, 2008)	A	Novice in ESL Experienced in EFL	6
	C	Experienced	12
	D	Experienced	17
	Total		35

Note. Experience levels for teachers: "novice": five or fewer years; "experienced": six to ten years; "veteran": eleven or more years (Hartshorn, 2008).

The raters. The students' writing accuracy scores were measured using error-free clause ratios. Measuring error-free clause ratios involved two separate rating processes: first, counting the total number of clauses in each student's 30-minute essays and second, counting the total number of error-free clauses in the students' 30-minute essays. As a result, multiple raters were used in the analysis of the data gathered in this study.

Altogether, there were four raters involved; two were assigned to count the total number of clauses (one of which was the principal researcher) and the other two were

assigned to count the total number of error-free clauses (for detailed explanations of how the data were analyzed, see the *data analysis* section). In order to maintain reliability, only native speakers of English were selected to count error-free clauses. These two raters both held master's degrees either in TESOL or Applied Linguistics and were experienced ESL teachers working at the BYU ELC. Of the raters involved in counting total clauses, one was not a native speaker of English (the main researcher); however, both possessed solid English grammar knowledge and TESOL graduate certificate degrees. One has also served as a research assistant for previous studies on DWCF and analyzed most of the data for those studies.

Research Design

The research design for this study sought to replicate the research design used by Hartshorn (2008) in his study of advanced-low students. A nonequivalent control group pretest-posttest was used in this study; *N* sizes in the control and treatment groups were different. This design is illustrated in Table 4.

Table 4

Pretest, Posttest Nonequivalent Control Group Design

Group	Pretest	Treatment	Posttest
Treatment (*n*=35)	X1	T	X2
Control (*n*=18)	X1	O	X2

Note. X1=pretest, X2=posttest, T=treatment, O= No treatment

A mixed model, repeated measures Analysis of Variance (ANOVA), was utilized to compare the mean performances between and within subjects: the mean performance of students in the control group versus the mean performance of students in the treatment

group (between subjects) and the mean performance of students on pretest measures versus the mean performance of students on posttest measures (within subjects). The Statistical Package for Social Sciences (SPSS) was used to compute the mixed model ANOVA. A significance level was set at .05. *Group* stands for the between subjects factor, and it had two levels: the control and treatment groups. *Time* stands for the within subject factor which included two levels: pre and posttests.

Data Analysis

Several methods have been developed regarding the analysis of the accuracy of a second language writer. One approach is to focus on whether a structural unit such as sentences, T-units, or clauses is error-free or not. Typical measures are "the number of error-free T-units per T-unit (EFT/T) or the number of error-free clauses per clause (EFC/C)" (Wolfe-Quintero et al., 1998, p. 35). Hartshorn (2008) utilized error-free T-unit ratios in his study. However, this study utilized error-free clause (EFC) ratios to analyze the data in order to obtain more precise accuracy scores. The term *T-units* usually refers to "an independent clause with any subordinate clauses," (Evans et al. in press, p. 21). It is obvious that writing contains a greater number of clauses than it does T-units. Wigglesworth (2008) claims that an EFC ratio is currently the most precise method for measuring writing accuracy. By utilizing EFC in this study, the researcher expected to obtain greater discriminating power than by using T-units.

As previously mentioned, the calculation of measuring error-free clause ratios required two separate rating processes, both of which required human analysis: counting the total number of clauses and counting the total number of error-free clauses in each students' pre and posttests. In order to increase the reliability of these measures, all essays

were double-rated. Two raters (R1 and R2) independently identified the clauses in each essay to determine the total number of clauses, after which the other two raters (R3 and R4) scrutinized the identified clauses to determine which ones they considered to be error-free. There were some discrepancies in the number of error-free clauses as counted by R3 and R4; thus, R3 and R4 reviewed the essays jointly and negotiated their ratings for the essays where discrepancies of more than four-clauses occurred. However, R1 and R2 did not discuss their ratings together because they already showed high correlations (R=.99). R1 and R2 counted the total number of clauses independent of each other. In order to maintain consistency in counting EFC, only R1's counted clauses were given to R3 and R4 for counting EFC. Since R1 and R2 showed very high correlations in their ratings, it was therefore assumed that R1's counted clauses were almost the same as R 2's. In order to establish error-free clause ratios, the total number of EFC was divided by the total number of clauses.

Before rating commenced, the researcher created rubrics for counting both total clauses and error-free clauses (see the rubrics in Appendix A & B), and she provided training for the raters for each of these processes. It should be noted that one of the raters for error-free clauses was the teacher who taught two AG classes in the treatment group pool. However, student names were erased from the writing samples in order to allow the raters to perform blind ratings.

Instrument

This section describes the instruments used to answer the research questions for this study, which included 30-minute essay writing given as the pre and posttests, rubrics

for counting total clauses and error-free clauses to analyze the data, and the questionnaire used to investigate students' perspectives and attitudes towards DWCF.

30-minute essay. Thirty-minute essay writing was used to test the students' writing accuracy. As mentioned previously, in the treatment group, the writing diagnostics that students took at the beginning of the semester served as the pretest, and writing level achievement tests (LATs) at the end of the semester were used as the posttest. The subjects in the control group took both the Level 3 and 4 writing LATs. The Level 3 writing LATs served as the pre-test, which was the same as the treatment group's writing diagnostics. The Level 4 writing LATs were used as the posttest, which was the same posttest given to the treatment group. These diagnostics and the level achievement tests required the students to write a 30-minute essay on a specified topic. Table 5 shows the prompts that were used in the pre and posttests for both groups.

Table 5

Pretest and Posttest Prompts

Test	Prompt
Pretest	Some people prefer to spend time with one or two close friends. Others choose to spend time with a large number of friends. Compare the advantages of each choice. Which of these two ways of spending time do you prefer? Use specific reasons to support your answer.
Posttest	Do you agree or disagree with the following statement? High schools should allow students to study the courses that students want to study. Use specific reasons and examples to support your opinion

Rubrics for counting total clauses and error-free clauses. The students' linguistic accuracy in their 30-minute pre and posttest essays was determined by calculating error-free clause ratios. As discussed earlier in the data analysis section, calculating error-free clause ratios was done by counting the total number of clauses and

counting the total number of error-free clauses and using these numbers to determine the ratio of error-free clauses to total clause. To facilitate this process, the principal researcher created rubrics both for determining total clauses and for determining error-fee clauses (see the rubrics in Appendix A & B).

The first step in the process of making a rubric for counting clauses involved clearly defining what constitutes a clause. To determine this, the researcher used *Longman grammar of spoken and written English* by Biber, Johansson, Leech, Conrad, and Finegan (1999). A description of what a clause is was included at the beginning of the rubric and was followed by descriptions of the basic cases a rater would need to be aware of when identifying total clauses in a passage. Despite great effort to make the definitions of clauses as clear as possible, judging a clause is a complicated process, especially when handling ESL students' papers containing many errors. Therefore, before creating the rubric for counting clauses, the researcher examined the ESL students' writing for ambiguous cases that might create difficulty for raters. She then provided directions for how raters should deal with those cases. However, there were still instances where the raters had to rely on their own judgment when determining what constitutes a clause. For example, they needed to make judgments regarding whether a verb phrase connected to the preceding verb phrase with a coordinator carried a significantly different idea, and should therefore be considered a separate clause or not.

The researcher also created a rubric for counting error-free clauses in order to clarify some of the unclear cases in determining when an error had occurred and in what clause it should be counted. However, because there are an infinite number of error-types that could be present in a student's writing, the rubric could not present all possible cases

of errors that the raters might encounter. Instead the rubric begins by providing a holistic procedure regarding the counting of error-free clauses and then lists seven cases which raters should consider when making their ultimate determination. For instance, when two words are correct but do not have a space between them (e.g., themto), the rubric instructs the raters that this should not be considered an error. Other possible errors addressed in the rubric include those relating to items such as determiners, verb forms, and verb tenses, and so forth. Most of the example sentences in both rubrics were obtained from authentic pieces of ESL students' writing.

Questionnaire. A questionnaire was designed to investigate student perspectives and attitudes towards the Applied Grammar course within which DWCF was implemented. It is necessary to clarify the term "Applied Grammar (AG) instruction" as it is used in the questionnaire. The term refers to the grammar instruction students received through their enrollment in the Applied Grammar course at the ELC which utilized DWCF as its primary mode of instruction. The Applied Grammar used at the ELC has been developed and refined for over the course of 15 years. Since the time of this study, the name for referring to the strategy has also been refined, and a more descriptive title, dynamic written corrective feedback, has replaced the term *AG instruction*. Because this change took place after the survey was conducted, the term *AG instruction* was used in the survey rather than DWCF.

The questionnaire contained six questions: three multiple-choice questions, two questions containing two options where students had to explain the reason for their choice, and one open-ended question for students to write any additional comments that they might have on the AG course. The three multiple-choice questions had 5-point scales

using the Likert format (Very well, Well, Somewhat well, Not very well, Not at all).

These questions asked students to rate their satisfaction with the AG course and how well

it had helped them improve their writing accuracy and learn English grammar. The two

dichotomous question items asked them to select between the AG instruction and

traditional grammar instruction in terms of which way they thought helped them learn

and understand the English grammar rules better, and which way they would choose if

they were learning English grammar in Level 4 again. In addition, students were required

to write down the reasons for their choices. (See the survey form in Appendix C).

Instructional Methods

This section describes two different instructional methods, one used in the control

group and one used in the treatment group.

At the time of this study, Level 4 coursework at BYU's ELC consisted of four 65-

minute class periods per day from Monday through Thursday. These classes were divided

into listening/speaking, grammar, reading, and writing skill areas. Therefore, students

who participated in this study received lessons on other skill areas as well as grammar

during the course of this study. It should be noted that the students in both the control and

treatment groups received traditional process writing instruction, where they produced

three major papers with multiple drafts, and they received feedback from their writing

teachers on rhetorical conventions as well as linguistic accuracy.

The 18 students in the control group were taught using a traditional grammar

instruction approach. In the traditional grammar instruction approach, teachers explained

target grammar rules in either deductive or inductive ways and had students practice

using the rules in a variety of activities. The textbook used was *Grammar Dimensions 3*

by Diane Larsen Freeman. Most of the lessons were scheduled either following the order given in the table of the contents in the textbook or with slight modifications to that order. Since BYU's ELC did not provide explicit guidelines for teachers on how to teach their grammar classes, the method of class instruction was left to the teachers' discretion.

The 35 students that participated in the treatment group were taught in the AG course using DWCF, which replaced the previous traditional grammar course. DWCF used in the AG class consisted of a six-step process. To start with, at the beginning of almost every class session (four sessions per week), the students were asked to write a 10-minute paragraph on a fairly general topic. The students were not informed about the topic in advance. The researcher created a pool of paragraph prompts which contained both required and elective prompts (see Appendix D for the prompts). Teachers were told to use the three required prompts and to select a fourth prompt from the pool of elective topics each week.

Next, after each 10-minute paragraph students wrote, the teachers collected them and marked them for linguistic accuracy using a specified set of error symbols (see Appendix E). The symbols indentified error types; for example, the symbol *VT* referred to an error concerning verb tenses. Appendix F explains how these error symbols were used in context. In general, the teachers gave indirect feedback using error symbols under or above the place where the error occurred. The students were asked to identify the types of errors based on the error symbols given by the teacher and to fix the problems by themselves.

In limited cases, the teachers also gave direct feedback by providing the error symbol and the correct form concurrently. Examples of this could include cases where

students produced errors that were hard to treat, such as prepositions, word choices, and awkward or unidiomatic sentence structures, or when they made errors which were judged by the teacher to be beyond the students' linguistic ability to interpret or correct. By providing direct feedback in these cases, the students could receive tailored treatment depending on their language development, and they could improve their linguistic competence.

After the teachers marked students' papers with error symbols, they then assigned a score in terms of lexical/syntactic accuracy and content, using a holistic rubric (see Appendix G for the holistic rubric). Scores were weighted 75 % for lexical/syntactic accuracy and 25 % for content. It was believed that the scores based on these percentages would reasonably represent the student's achievement in this course because although DWCF specifically aims to improve linguistic accuracy, content in writing is an important factor which cannot be ignored. This holistic score was given to the students to enable both the teachers and the students to get a sense for students' improvement as the semester progressed and to motivate students to continue to improve their scores. It should be noted that the holistic score is not an absolute, precise measurement of the students' writing ability.

Once students had written their paragraphs and teachers had provided the initial feedback, students' papers were returned to them during the next class period, and the students then had several tasks to complete as homework. The primary task was to edit their paper on their own according to the teacher feedback they received and to then submit a revised, typed draft of the paragraph to their teacher. Because the main focus of this course was on improving linguistic accuracy, students were not expected to add any

additional ideas to the paragraph but simply to correct the linguistic errors. Along with editing their papers, they also had other tasks to complete.

First, they kept a tally of their errors listed by error type. This Error Tally Sheet showed the students, as well as the teacher, what types of errors and how many errors by type the students had made on each of their paragraphs. This sheet helped the students become aware of their most frequent error types. Appendix H illustrates a sample of the Error Tally Sheet. In addition to maintaining an Error Tally Sheet, the students tracked their progress using an Edit Log (see Appendix I). In the Edit Log, the students tracked how many times they had to edit each of their paragraphs before eliminating all errors.

Their last task was to make a list of all errors in context. This list recorded every clause or phrase containing errors by error type. The students typed these clauses or phrases exactly as they had originally been written (see Appendix J for a sample of Error List). This list was used by the students and the teacher to review their most frequent mistakes.

Once these tasks were completed, the fourth step in the process commenced in which the teachers provided a second round of feedback if the revised drafts still contained errors, and the papers were returned to the students for correction. The students continued to edit their paper according to their teacher's feedback, and the process was repeated in the fifth and sixth steps until the paper become error-free. However, students were only required to update their Error Tally Sheet and Error List for their original draft, not for subsequent drafts of the same paragraph. The final goals of this process were to have an error-free paragraph with the aim of helping the students produce more accurate writing in the future and better apply English grammar rules in context.

The students were supposed to finish these six steps within one week so that feedback could be timely and manageable. This one-week deadline allowed students four opportunities to edit their paragraphs and make them error-free. Usually, most of the students made their paragraphs error-free within one or two edits. Because students composed a new paragraph during each class session and had to rewrite their paragraphs whenever their subsequent drafts contained remaining errors, they were usually in the process of editing several drafts of different paragraphs at the same time. Figure 2 provides an overview of this six-step process.
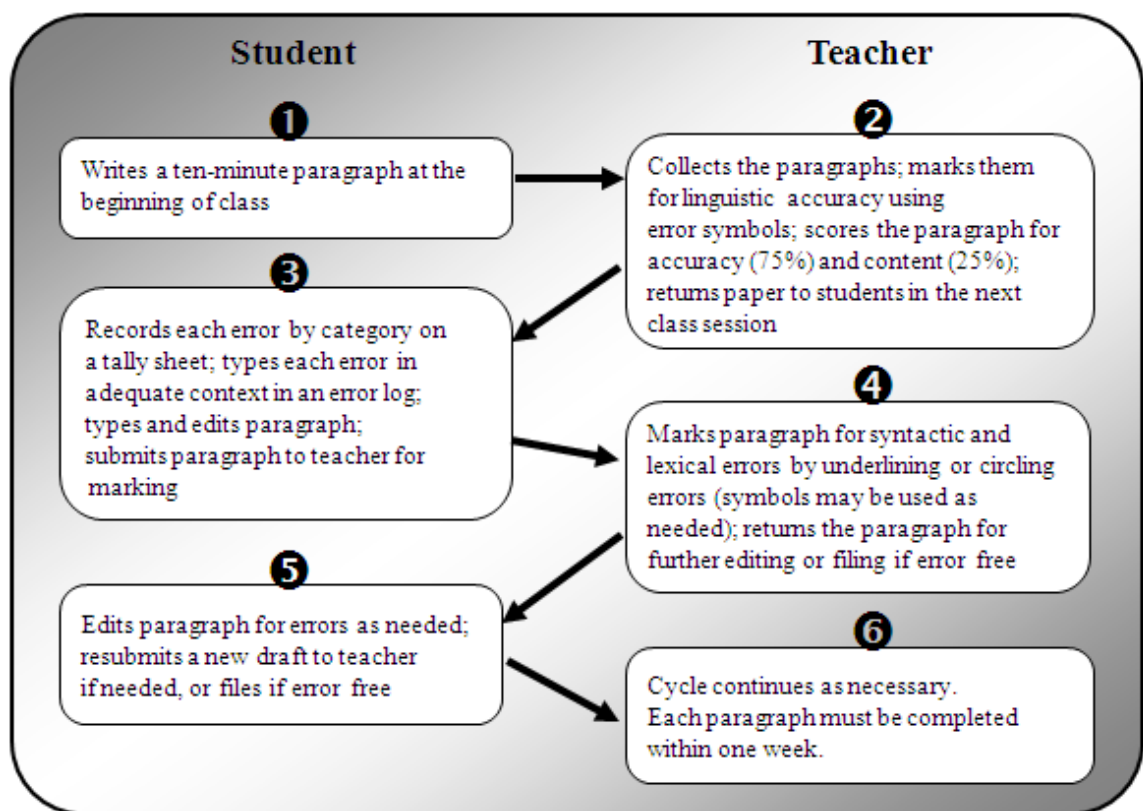
Figure 2. Overview of Error Correction Strategy (Evans et al., in press, p. 31)

After the 10-minute paragraph writing was completed at the beginning of each class session, the rest of the class time was allotted to providing grammar lessons based

on students' most problematic grammatical structures as demonstrated in their paragraphs.

Teachers could easily judge what the students' most critical needs were by looking

through the students' Error Tally Sheets and Error Lists. Daily classroom instruction was

often organized by helping the students analyze their errors from the paragraphs written

in the previous class session. Therefore, the syllabus for this course was flexible and

dynamic.

Teachers also held student conferences with each student five times during the

semester. The conferences lasted 10 to 15 minutes each, and during this time teachers

helped their students individually with their most problematic errors as demonstrated in

their Error Tally Sheets and Error List.

Elicitation Procedures

The students in both the control and treatment groups took their pre and posttests

in the ELC's computer lab. As mentioned previously, the pre and posttests in the control

group were elicited from the Level 3 writing Level Achievement Tests (LATs) and Level

4 writing LATs, respectively. These LATs were conducted during the last week of each

semester. It should be noted that BYU's ELC takes a three-week break between each

semester and one semester is a 13-week course; therefore, the control group's posttest

occurred approximately16 weeks after the students took their pretest. In the treatment

group, the writing diagnostic test at the beginning of the semester served as the pretest,

and the Level 4 writing LATs at the end of the semester served as the posttest. As a result,

students in the treatment group took their pretest during the first week of the semester and

their posttest during the last week of the semester, approximately 13 weeks after the

pretest was administered. Therefore, the control group had three weeks longer than the treatment group between the time they took the pretest and when they took the posttest.

All of the students were required to type their responses to the writing LATs in the ELC computer lab during the regular final exam (LATs) period under secure testing conditions. For the writing diagnostic test which served as the pretest for the treatment group, the researcher arranged the test in the computer lab using the same computer application as used in the writing LATs. The writing teachers in each class took their students to the computer lab, and the test was conducted under the writing teachers' supervision.

In-house computer software was used for the pre and posttests under time conditions. After the students entered their identification numbers, the writing prompt was given at the top of the screen, with the remaining time being displayed at the bottom of the screen. The only word processing tools provided by the software were the *cut, copy* and *paste* functions. As soon as the allotted time for the task had passed, the software blocked the students from continuing to type.

After collecting the essays, the researcher labeled each essay with a specific code so that there were no names attached to the essays the raters received. These codes started with either *C* or *T*, which represented the control and the treatment groups, respectively. The following letters were either *PR* or *PO*; *PR* represented the pretests and *PO* stood for the posttests. The last part of the codes consisted of two numbers, which indicated the specific student. Figure 3 illustrates this coding system.

With regard to the supplemental research question about the students' perspectives and attitudes towards DWCF, the researcher created a questionnaire to elicit student

feedback. The survey was paper-based and was administered under the supervision of each teacher during the last week of Fall 2008 and Winter 2009 semesters, in each Level 4 AG classroom. The students spent approximately 10 to 15 minutes filling out the questionnaire and were asked not to write their names in order to collect more honest, reliable opinions.
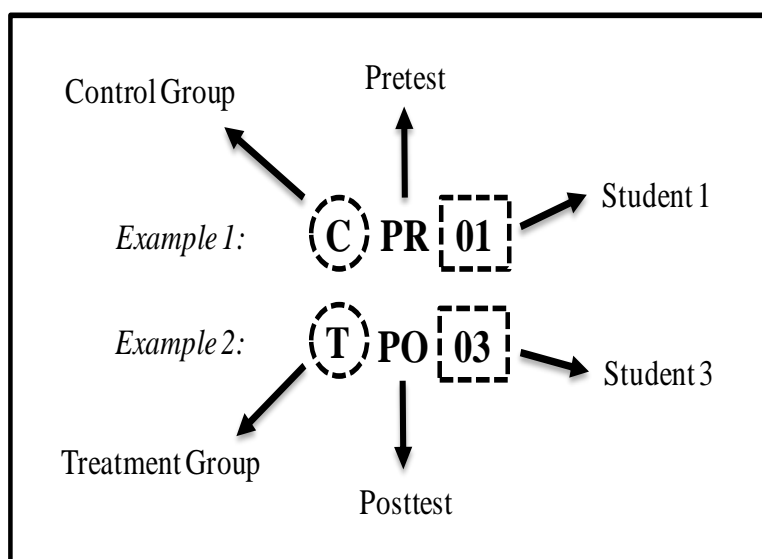
Figure 3. Researcher's Essay Coding System

Research Questions Operationalized

Now that we have discussed all the procedures and methods used in this research, the research questions will be operationalized.

The main research question is "to what extent does dynamic written corrective feedback improve intermediate-high ESL learners' linguistic accuracy in their 30-minute essay writing when compared to a traditional grammar instruction method?" This question can be operationally stated, "Will the improvement of linguistic accuracy in the treatment group be significantly greater than that of the control group?"

The supplemental research question addressed along with the main research question is a qualitative question which examines intermediate-high ESL students' perspectives and attitudes towards DWCF.

CHAPTER 4: RESULTS

The purpose of this chapter is threefold. First, the chapter reports the Pearson correlation coefficients estimated to establish the reliability between two raters in each process of rating: counting total clauses and counting error-free clauses. Second, the chapter presents the results of the repeated measures ANOVA computed to answer the main research question. Finally, in order to answer the supplemental research question, the chapter presents the results of the survey measuring the students' perspectives and attitudes towards dynamic written corrective feedback (DWCF).

Reliability Estimates

It is first necessary to present the reliability of measurements used in this study before discussing the results from the statistical tests. As mentioned earlier, all essays were double-rated for each rating. Two raters (R1 and R2) independently counted the total number of clauses. Two other raters (R3 and R4) counted the total number of error-free clauses independently. R3 and R4 had some discrepancies in the number of error-free clauses they counted. Therefore, R3 and R4 met together to negotiate their ratings for the essays where discrepancies of more than four-clauses occurred. Time constrains were imposed on these negotiation sessions due to the limited funding available for this study, and as a result R3 and R4 were hindered from reaching total agreement. On the other hand, R1 and R2 did not discuss their ratings together because they already showed high correlations. In both cases, Pearson correlation coefficients were generated for each individual rating. These are presented in Table 6 and show very high correlation coefficients in both ratings.

Table 6

Pearson Correlation Coefficients in Each Set of Ratings

Rating Types	Raters	*R*
Total clauses	Rater 1 vs. Rater 2	.99
Error-free clauses	Rater 3 vs. Rater 4	.98

Effect Size

It may be helpful to discuss how this study addresses the issue of effect size. Tests of statistical significance only provide "the quantified strength of evidence (attained *p* level) that a null hypothesis is wrong" (Grissom & Kim, 2005, p. 4), whereas an effect size measures the degree to which a null hypothesis is wrong. The typical null hypothesis implies that "there is no effect or no relationship between variables" (Grissom & Kim, 2005, p. 4). Therefore, an effect size is used to estimate the magnitude of the treatment effect. In addition, tests of statistical significance are greatly influenced by sample size. Therefore, a strong effect can fail to be statistically significant if a sample size is too small, and a weak effect can attain statistical significance if a sample size is very large (Cortina & Nouri, 2000). Because of this limitation of statistical tests, statisticians have urged researchers to report effect sizes (Grissom & Kim, 2005). Furthermore, the sixth edition of the Publication Manual of the American Psychological Association (2009) encouraged researchers to report effect sizes even with nonsignificant results.

There are a variety of effect size measures. An appropriate effect size measure should be used depending on at least these three factors: (a) how variables are scaled (categorically, ordinally, or continuously), (b) certain characteristics of the sampling method, and (c) the research design and purpose (Grissom & Kim, 2005). This study

utilized the partial eta squared statistic (η_p^2) to establish the magnitude of the effect.

Bakeman and Robinson (2005) recommend using η_p^2 "as a magnitude of effect statistic

in the context of repeated-measure designs" (p. 239) because η_p^2 allows "comparison

within and across studies" (p. 239). Furthermore, η_p^2 successfully isolates the effect of a

specific variable (Bakeman & Robinson, 2005).

ANOVA Test Results

Before presenting the results from the statistical tests of the repeated measures

ANOVA, it should be mentioned that the mean of the pretest in the control group and the

mean of the pretest in the treatment group showed disparity: 0.18 in the control group and

0.24 in the treatment group. A mean of 0.24 indicates that 24% of the clauses in the

students' writing were error-free. To determine whether or not there was any statistical

difference between these two means, a *t* test was used. The *t*-test result ($p = .085$)

indicated that the two groups were not statistically different on the accuracy scores in

their pretests. Table 7 presents the means and standard deviations for the pretest accuracy

scores measured by error-free clause ratios in each group, and Table 8 presents the

summary of the *t* test.

Table 7

Group Statistics of the Pretests

Group	N	Mean	Std. Deviation	Std. Error Mean
Control group	18	.1792	.10313	.02431
Treatment group	35	.2423	.13277	.02244

Table 8

T-test Summary Table for Pretest Scores

	F	*Sig.*	*T*	*df*	*Sig.*(2-tailed)
Equal variances assumed	1.638	.206	-1.759	51	.085

A repeated measures ANOVA test was used to answer the main research question, "To what extent does dynamic written corrective feedback improve intermediate-high ESL learners' linguistic accuracy in their 30-minute essay writing when compared to a traditional grammar instruction method?" This question was operationally defined as: "Will the improvement of linguistic accuracy in the treatment group be significantly greater than that of the control group?" As discussed in the data analysis section of Chapter 3, students' linguistic accuracy was measured through an error free clause to total clause ratio. Table 9 presents the means and standard deviations for accuracy scores measured by error-free clause ratios in the control and treatment groups. It may be helpful to clarify the means which are presented in Table 9. For instance, the mean of the posttest in the treatment group (0. 3689) implies that approximately 37 % of the clauses in the students' writing were error-free and approximately 63 % of the clauses contained errors.

The ANOVA summary is presented in Table 10. Figure 4 shows the interaction effect within and between subjects. The ANOVA summary in Table 10 demonstrates an interaction effect between time and group ($p = .333$) showing that the improvement in accuracy for the treatment group was not significantly greater than the control group. However, the effect size of this interaction ($\eta_p^2 = .018$) suggests that the treatment had a

small effect size; the effect size standard by Huck (2008) indicates that .01, .06, and .14

represent small, medium, and large effect sizes respectively. This suggests that the

treatment had at least some practical significance.

Table 9

Descriptive Statistics for Accuracy Scores

Group		Pretest	Posttest	Means
Control (*n*=18)	Mean	.1792	.2682	.2237
	SD	.10313	.12195	.11254
Treatment (*n*=35)	Mean	.2423	.3689	.3056
	SD	.13277	.16078	.14678
Total (*N*=53)	Mean	. 2209	.3347	.2778
	SD	.12615	.15519	.14067

Table 10

Mixed ANOVA Summary Table for Accuracy Scores

Source	*SS*	*df*	*MS*	*F*	*p*	η_p^2
Between Subjects		52				
Group	.160	1	.160	5.560	.022	.098
Error	1.463	51	.029			
Within Subject		53				
Time	.276	1	.276	31.416	.000	.381
Time x Group	.008	1	.008	.956	.333	.018
Error	.449	51	.009			
Total	2.356	105				
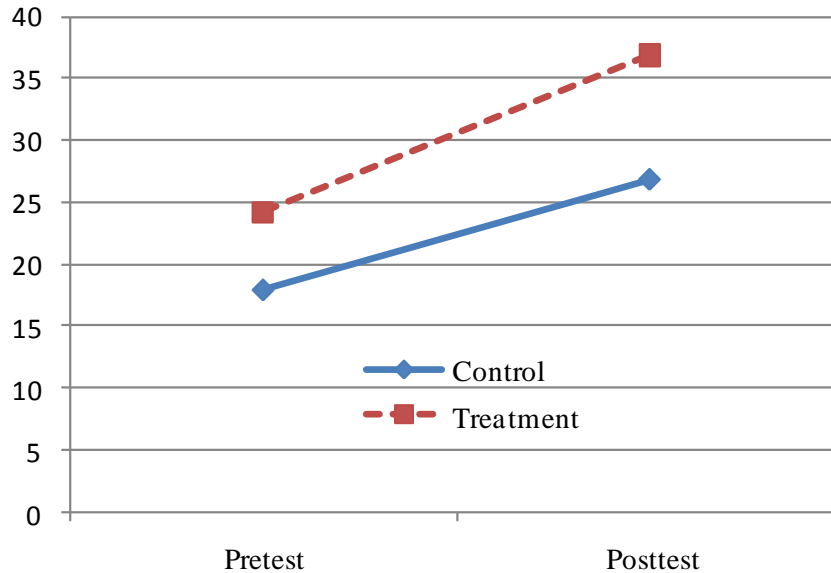
*Figure 4.*Pretest and Posttest means for Accuracy Scores

In addition, Table 10 demonstrates a significant main effect for the "time" factor (p = .000). Since this ANOVA summary indicates only the presence or absence of an effect of the independent variable (Shaughnessy & Zechmeister, 1994), the simple main effects were measured in an attempt to examine if the improvement in each group was statistically significant. Table 11 presents the simple main effects of the interaction between the pre and posttests in each experimental group. *P* values in both groups (p< .000) indicate that each group made significant improvement independently.

Table 11

Simple Main Effects for Accuracy Score Improvement in Experimental Groups

Source	SS	df	MS	F	P
Control Group	39.61	1	39.61	50.81	<.000
Treatment Group	80.14	1	80.14	102.81	< .000
Error	40.53	52	.78		

Questionnaire

A questionnaire was designed to investigate student perspectives and attitudes towards DWCF. The questionnaire contained six questions to elicit data. As discussed earlier in Chapter 3, it should be noted that the more descriptive title, dynamic written corrective feedback, has replaced the Applied Grammar (AG) instruction. This change took place after the survey was conducted. Therefore, the term *Applied Grammar instruction* as used in the survey means the same as DWCF.

Questions 1 through 3 were multiple-choice questions using a 5-point Likert scale. Question 1 explored the students' satisfaction with the AG instruction. When asked how satisfied they were with the Level 4 AG instruction they received at BYU's ELC, 72% of the students answered either *very well* or *well*. Only 6% of the students had negative feelings towards the AG instruction, selecting either *not very well* or *not at all*. Questions 2 and 3 examined the students' opinions about how well the AG class helped them improve their writing accuracy and learn English grammar rules. In answer to Question 2 about writing accuracy, 76 % of the students felt the AG instruction was helping them improve their writing accuracy and only 3% chose *Not very well*. Question 3 about learning English grammar rules showed a similar pattern to Question 2; 70 % of the students indicated that the AG class was helpful for learning English grammar rules, and 4 % expressed negative feelings. The percentages of the students' choices for each multiple-choice option are presented in Tables 12, 13, and 14.

Table 12

Survey Question 1 and Percentages of the Students' Choices

Q1. How satisfied are you with the Level 4 Applied Grammar instruction at BYU ELC?				
N	Evaluation	Percentage (%)	Likert Scale	Percentage (%)
128	Positive	72	Very Well	27
			Well	45
	Neutral	21	Somewhat well	21
	Negative	6	Not very well	5
			Not at all	1
		1	No response	

Table 13

Survey Question 2 and Percentages of the Students' Choices

Q2. How well do you think that the Applied Grammar class is helping you improve your writing accuracy?				
N	Evaluation	Percentage (%)	Likert Scale	Percentage (%)
128	Positive	76	Very Well	32
			Well	44
	Neutral	20	Somewhat well	20
	Negative	3	Not very well	3
			Not at all	0
		1	No response	

Table 14

Survey Question 3 and Percentages of the Students' Choices

Q3. How well do you think that the Applied Grammar class is helping you learn English Grammar rules?				
N	Evaluation	Percentage (%)	Likert Scale	Percentage (%)
128	Positive	70	Very Well	22
			Well	48
	Neutral	25	Somewhat well	25
	Negative	4	Not very well	4
			Not at all	0
		1	No response	

Questions 4 and 5 were dichotomous question items, containing two options for students to select. Students were then asked to explain the reason for their choice. Question 4 asked the students to select between the AG instruction and the traditional grammar instruction in terms of which they thought was more helpful for them to learn and understand the English grammar rules. The majority of the students (73%) thought the AG instruction was more helpful than the traditional approach in helping them learn grammar rules. The students' reasons for their choice were grouped by frequency. The most salient reasons given by students who selected AG instruction are presented in Table 15.

Notwithstanding the strong response in favor of the AG instruction, it should be noted that 17 % of the students surveyed preferred the traditional grammar instruction. The most salient reasons for this choice were: first, they thought they needed to learn more grammar rules before applying the rules, and second, they felt that the traditional instruction was more familiar to them. It should be noted that some students wanted to

combine both methods. In addition, there were some ambiguous and irrelevant answers given, such as "I can talk with native speakers." All responses to questions 4 and 5 can be found in Appendix K.

Table 15

The Most Salient Reasons for Students' Preferences for AG (Question 4)

Frequency	Reasons
25	I can apply my grammar knowledge in writing and learn grammar rules from my own mistakes.
13	It helps me recognize and identify my common grammar mistakes, and I can fix them.
11	Writing a 10-minute paragraph daily and fixing our errors helps me improve my writing skills and use grammar rules more correctly in writing.
11	I can apply grammar rules in real situations.

Question 5 asked the students whether they would choose the AG instruction or traditional grammar instruction if they were learning English grammar in Level 4 again. The answers followed very similar patterns to the students' choices in Question 4: 73 % would choose the AG instruction again, while 19 % would select traditional grammar instruction. Many students did not write the reasons for their choices. Most reasons that were provided were similar to the reasons provided in Question 4. (See Appendix K for the reasons). Tables 16 and 17 present the percentages of the students' choices in Questions 4 and 5 respectively.

Table 16

Survey Question 4 and the Percentages of the Students' Choices

Q4. Which way do you think helps you learn and understand the English grammar rules better? Traditional grammar instruction ↔ Applied Grammar instruction		
N	Student choices	Percentage (%)
	Applied Grammar instruction	73
128	Traditional grammar instruction	17
	Others (both or none)	10

Table 17

Survey Question 5 and the Percentages of the Students' Choices

Q5. Which way would you choose if you were learning the English Grammar in Level 4 again? Traditional grammar instruction ↔ Applied Grammar instruction		
N	Student choices	Percentage (%)
	Applied Grammar instruction	73
128	Traditional grammar instruction	19
	Others (both or none)	8

Question 6 was an open-ended question asking the students to write any additional comments they had about the AG course. Eighty-four students left the space blank, and the remaining students expressed various opinions. Many students wrote that it was a good method and they liked it. Some students complained about the textbook, and some expressed their gratitude towards their teacher. All comments provided by the students are presented exactly as submitted in Appendix K.

CHAPTER 5: DISCUSSION AND CONCLUSION

The purpose of this chapter is to discuss the research findings described in Chapter 4 in terms of the research questions. This will be followed by a discussion of a number of limitations to this study. This chapter will also address some pedagogical implications of the study and finally will provide suggestions for further research.

Discussion

The current study investigated the efficacy of dynamic written corrective feedback (DWCF) on intermediate-high ESL learners' linguistic accuracy in their 30-minute essay writing, and it further examined the students' perspectives and attitudes towards DWCF. The main research question on the efficacy of DWCF was raised as a result of positive effects of DWCF found in previous research which examined the advanced-low and advanced-mid proficiency levels (Evans et al., in press; Evans, Hartshorn, & Strong-Krause, 2009; Hartshorn, 2008; Hartshorn et al., in press). This study attempted to examine the effectiveness of DWCF in terms of the proficiency level variable.

To answer the research question on the efficacy of DWCF, the students' writing accuracy scores in their 30-minute essays were measured using error-free clause ratios. Then, a mixed model, repeated measures ANOVA, was performed to compare the mean performances between and within subjects; *between subjects* refers to the mean performance of students in the control group versus the mean performance of students in the treatment group, and *within subjects* refers to the mean performance of students on pretest measures versus the mean performance of students on posttest measures. The result of the ANOVA indicated that the improvement in accuracy of the treatment group

was not significantly greater than that of the control group. However, the simple main effects of the interaction between the pre and posttests in each experimental group suggested that both groups made significant improvement independently. Moreover, the effect size of the interaction between and within subjects indicated that the treatment had a small effect size. These findings suggest that neither method harmed students' linguistic accuracy; both methods were in fact effective in improving the students' linguistic accuracy. Though the effect of the treatment was rather small, this small effect should not be ignored, especially when considering the difficulty and time-consuming work of improving writing accuracy. Hence, DWCF is preferable to traditional grammar instruction for intermediate-high ESL students when it comes to improving their linguistic accuracy. This is reinforced by the findings of the survey on the students' perspectives and attitudes towards DWCF. The majority of the students perceived that DWCF was effective in helping them improve their writing accuracy. Furthermore, most of the students strongly preferred the Applied Grammar instruction using DWCF to traditional grammar instruction. As discussed earlier in Chapter 2, students' perceptions exert a significant impact on their learning process and outcomes (Alexander & Dochy, 1995; Nunan & Lam, 1996; Williams & Burden, 1997). The students' strong preference for DWCF may carry a better long-term prognosis that would not be measured by the limited time given in this study. Therefore, if students strongly prefer DWCF, and DWCF is slightly more effective than the traditional grammar instruction, why should we hesitate to implement a strategy using DWCF with students at an intermediate-high proficiency level?

In addition, the findings of this study provide further insights. It should be noted that the interaction effects within and between subjects in this study showed a different

pattern from the interaction pattern of advanced-low proficiency level found in

Hartshorn's (2008) study. Prior to discussing these patterns, there are several points to

mention regarding the differences between the current study and the study by Hartshorn,

conducted with students at a different proficiency level than the current study. First of all,

the two studies employed different methods for measuring the accuracy scores. The

current study conducted with the intermediate-high proficiency level students utilized

error-free clause ratios, while Hartshorn's (2008) study used error-free T-units ratios.

Since writing naturally contains more clauses than T-units, much higher mean accuracy

scores are assumed than if the scores had been measured by error-free clause ratios as in

Hartshorn's study. Secondly, different control groups were used in the two studies. The

current study compared the students' linguistic accuracy between a group who received

DWCF and a group who received a traditional grammar instruction method, whereas

Hartshorn's study used a traditional writing instruction approach as a control group.

Keeping the disparities in the two studies' methodologies in mind, the following

discusses possible explanations for disparate interaction patterns in the intermediate-high

and advanced-low proficiency levels. Figure 5 depicts these patterns in two different

proficiency levels.

First of all, it can be assumed that the proficiency level variable might affect the

efficacy of DWCF. Because of the different methodologies, it is not possible to compare

the statistical difference of the efficacy of DWCF on the two different proficiency levels.

However, it might be assumed that more proficient students can benefit more from

DWCF. At advanced proficiency levels, the linguistic accuracy of the control group fell

slightly, whereas the treatment group who received DWCF made significant

improvement. On the other hand, the intermediate-high proficiency level students

improved their writing accuracy when taught either with the instruction using DWCF or

with a traditional grammar instruction method. Second, the fact that a traditional

approach to grammar instruction also improved intermediate-high students' writing

accuracy, even when they were taught by novice teachers, suggests that traditional

grammar instruction has a place in an intermediate-high proficiency level in terms of

improving students' writing accuracy. Further research is needed to examine how these

two methods can be best utilized in different contexts, such as in less intensive English

programs or EFL settings.
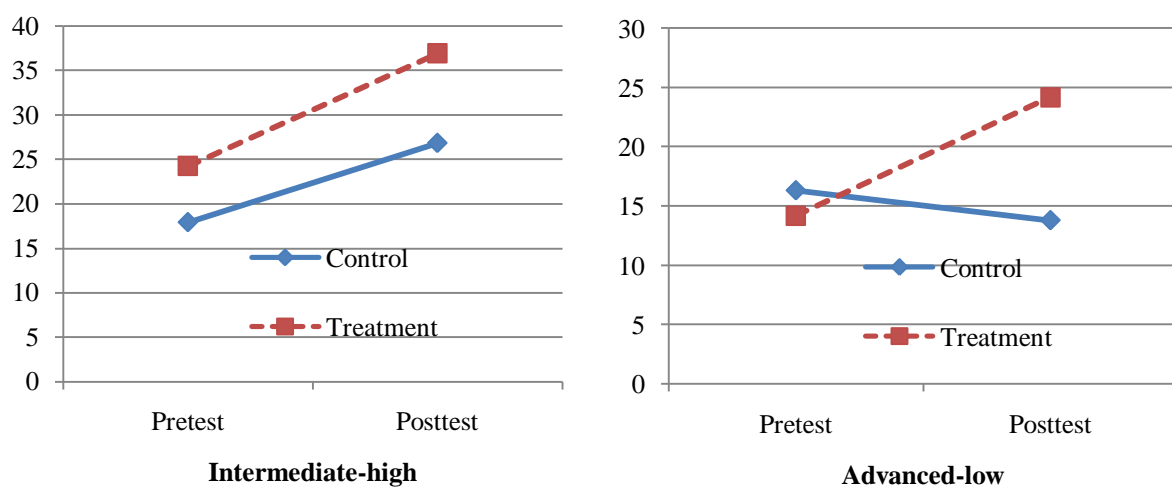
Figure 5. Pretest and Posttest Means for Accuracy Scores in the Intermediate-high and
Advanced-low Levels

Limitations

There are a number of limitations in this study. First, this study took place in an

intensive English program, and the experimental groups were generated from intact

classes. The study encountered several limitations as a result. One limitation is related to

the process of selecting subjects. The subjects in this study were not randomly selected

from a broad population of ESL learners, nor were group assignments random. However,

classes were assigned completely arbitrarily after careful placement testing in an attempt

to balance similar proficiency levels. Second, the number of the subjects in the control

group was rather small. As discussed earlier, the control group was selected from the

groups that used the same textbook as the treatment group and had the most similar

learning context to the treatment group. The attempt to find the largest number of

students that fulfilled these conditions resulted in only 18 students in the control group.

Moreover, it was not possible to control for the teacher effect. Although one of the

teachers who taught a class in the control group also taught a class in the treatment group,

the other three teachers were different individuals who had different levels of teaching

experience. Two teachers taught the control group classes. Both of them were novice

teachers who had less than a year of teaching experience in an ESL setting. On the other

hand, there were three teachers in the treatment group. One was a novice teacher, and the

other two were experienced teachers who had six to eight years of teaching experience.

These varying levels of teaching experience of the teachers may have affected the results

of the study.

Pedagogical Implications

Previous studies on the efficacy of DWCF conducted in the advanced-low and

advanced-mid proficiency levels revealed that DWCF, a systematic corrective feedback

approach, had a positive effect on L2 writing accuracy (Evans et al., in press; Evans,

Hartshorn, & Strong-Krause, 2009; Hartshorn, 2008; Hartshorn et al., in press). This

suggests that students' writing accuracy can be improved when error feedback is

manageable, meaningful, timely, and constant by using this multifaceted feedback method. The current study conducted with intermediate-high students reinforced the efficacy of DWCF found in previous studies. As Hartshorn (2008) suggests, the four principles, *manageable, meaningful, timely,* and *constant*, may provide useful guidelines for L2 writing pedagogy where improving linguistic accuracy takes priority.

Moreover, the results of the survey in this study showed that intermediate-high students deemed DWCF preferable to the traditional grammar instruction in terms of helping them understand English grammar rules. They considered the instruction using DWCF to be a very effective method because (a) they could learn English grammar rules from their own mistakes by applying their grammar knowledge in writing, (b) they could become aware of their common mistakes through the teacher's constant error feedback and reduce those errors, and (c) fixing their own errors in their daily 10-minute paragraphs helped them improve their writing skills and accuracy. There were only 3 students out of 128 who commented that they still needed to learn more grammar rules before applying them. Clearly, the vast majority of the students favored DWCF over traditional grammar instruction in that they could actually apply their grammar knowledge in their writing. These findings might serve as an important indicator for L2 grammar classes where students possess enough grammar knowledge to produce a fair paragraph in 10 minutes and the linguistic competence to self-correct. This suggests that the four principles of DWCF (*manageable, meaningful, timely,* and *constant*) can be successfully applied into different contexts.

Suggestions for Further Research

The findings of this study suggest a number of areas for further research. One

suggestion is to examine the longitudinal effect of DWCF. Even though the students in the treatment group made a significant improvement in their writing accuracy on their posttests compared to their pretests, the mean accuracy score on the posttest measured by error-free clause ratios (0.37) indicates that there is still a strong need to improve their linguistic accuracy; the mean accuracy score of 0.37 indicates that 63 % of the clauses in the students' writing still contained errors. If these students were to continue receiving DWCF in the following semester, would the longitudinal treatment exert greater impact on reducing students' errors, or would the students reach a plateau? Would the writing accuracy improvement during the second semester be significantly greater than the improvement during the first semester or vice versa?

Another area for further investigation is whether or not DWCF affects other important aspects of writing such as fluency, complexity, and rhetorical conventions. The study conducted by Hartshorn (2008) in the advanced-low proficiency level revealed that DWCF did not adversely affect these aspects of students' writing. The current study conducted with intermediate-high students did not examine these aspects of student writing. Further research is needed to investigate these factors. As Hartshorn (2008) argues, students' linguistic accuracy improvement will be most meaningful when the treatment does not disadvantage other important aspects of writing development.

Along with exploring the impact of DWCF on other aspects of writing at the intermediate-high proficiency level, examining the effect of DWCF on different dimensions of accuracy, such as semantic, numeric, determiner, lexical accuracy, and so forth, is also suggested for further research. The findings of Hartshorn's (2008) study revealed that the impact of DWCF was noteworthy on semantics, determiners, and verb

accuracy in the advanced-low proficiency level. The current study only examined the overall linguistic accuracy improvement at the intermediate-high proficiency level. Investigating the efficacy of DWCF on different dimensions of accuracy at different proficiency levels might allow us to identify students' grammatical development at learners' different language development stages.

Moreover, a study scoring errors by weighting error levels, such as no errors, minor errors and serious errors, is suggested. Wigglesworth (2008) argues that the impact of error on meaning varies depending on the level of the error. For example, minor errors (Level 1) such as morphosyntactic errors do not obscure the intended meaning, whereas more serious errors (Level 2 and 3) can make the intended meaning difficult to discover or ambiguous. Wigglesworth (2008) proposed a way to weight these levels of errors (No error: 1.0, Level 1: 0.8, Level 2: 0.5, and Level 3: 0.1). In this way, it is possible to create a more precise picture of the accuracy of a piece of writing, rather than dividing errors simply into *error-free* or *not error-free.* This methodology measuring accuracy scores would provide substantially more accurate scores than using error-free clause ratios.

The final suggestion for further research is currently in progress at BYU's ELC. This study investigates the efficacy of DWCF at intermediate-mid to intermediate-low proficiency levels. The findings of the current study revealed that traditional grammar instruction also improved intermediate-high students' overall writing accuracy. Based on the finding of the current study, the study in progress will examine the efficacy of traditional grammar instruction on intermediate-mid or -low students' writing accuracy improvement by having it as a control group. After the data are collected, the students' writing accuracy improvement through traditional grammar instruction will be compared to the efficacy of DWCF. These results will have useful implications regarding

appropriate grammar instruction in those proficiency levels.

Conclusion

This study explored the efficacy of DWCF on intermediate-high students' writing accuracy when compared to a traditional grammar instruction method. The supplemental research question further investigated students' perspectives and attitudes towards DWCF. The findings of this study have shown that the instruction utilizing DWCF is preferable to traditional grammar instruction when it comes to improving intermediate-high students' linguistic accuracy in writing and helping them understand English grammar rules more easily. Moreover, the students strongly preferred the DWCF approach over traditional grammar instruction. The positive effects of DWCF found in this study intensify the findings of previous studies which examined the efficacy of DWCF at advanced proficiency levels. These findings indicate that ESL learners benefit from manageable, meaningful, timely, and constant error feedback in improving their linguistic accuracy in writing. Furthermore, this study opens the possibility for using DWCF in L2 grammar classes at an intermediate-high proficiency level, as well as in L2 writing classes, in terms of facilitating and motivating students to do much more than learn grammar rules but to apply them to their writing.

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Appendix A: Rubric for Counting Clauses

Note. Most of the provided examples in this rubric are ESL students' authentic sentences; therefore, they contain grammatical mistakes. The number in the parenthesis next to each example sentence represents the number of clauses, and a slash (/) signifies the end of each clause. The rubric was created based on *Longman grammar of spoken and written English* by Biber, Johansson, Conrad, and Finegan.

What are clauses?

The core of a clause is composed of two main parts: **the subject** and **the predicate**. The predicate can be broken down into **a verb phrase** and **complements.** Complements are also broke down into **objects, predicative,** and **adverbials.** Figure 1, 2 and 3 illustrate a hierarchy relationship of the clause components.

```
                    Clause
          ┌───────────┴───────────┐
       Subject                 Predicate
          │              ┌──────────┴──────────┐
          │          Verb phrase        Direct object
          │              │                    │
        They           follow          their friends (1)
```
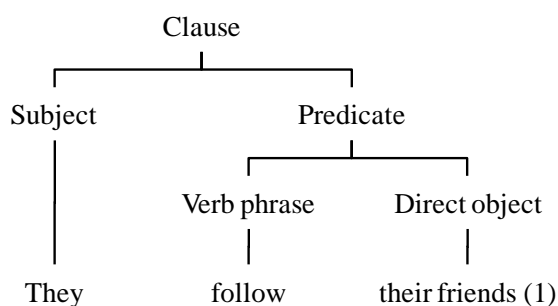
*Figure 1.*Clause with Direct Object

```
                       Clause
            ┌─────────────┴─────────────┐
         Subject                     Predicate
            │                 ┌──────────┴──────────┐
            │             Verb phrase         Predicative
            │                 │                    │
 Some courses at high school are not          necessary (1)
```
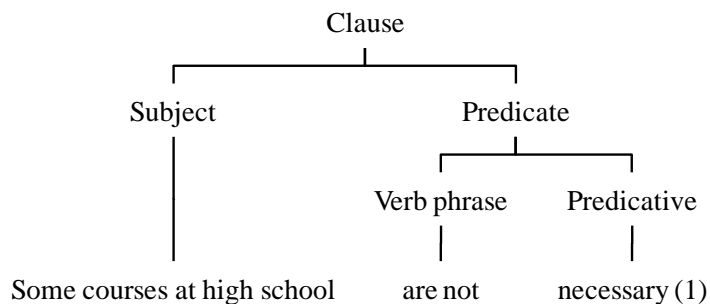
*Figure 2.*Clause with Predicative
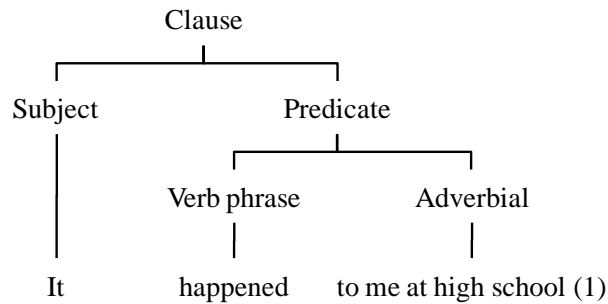
Figure 3. Clause with Adverbial

Clauses can be divided into finite and non-finite clauses. A finite clause refers to a clause that contains a verb phrase that is marked for tense and a subject except under conditions of ellipsis. On the other hand, a non-finite clause contains a verb usually unmarked for tense, and it frequently lacks an explicit subject; infinitives and gerunds exemplify this category.

Finite independent clauses

Note. Coordinators: *and, but, or, so, nor, for,* and *yet.*

1. When two independent clauses are connected with a coordinator, they are counted as two clauses.

- We can clone ourselves,/ but I don't want my copies./ (2)

2. When more than three independent clauses are connected with appropriate coordinators, each clause is counted as one clause.

- When a person is young,/ they usually have good examples to follow/ but many times they follow their friends/ and this could affect the academic life of your children./ (4)

3. When a coordinator is connecting two or more than two verb phrases and the phrases

carry significant separate ideas, each phrase is **<u>Counted</u>** as a clause.

- Students <u>can get</u> minimum of all kind of knowledge,/ <u>find</u> their interests through necessary studying in high school,/ and <u>understand</u> what is happening in the world./ (3)

- By allowing students to study the courses/ that they want,**/** they<u> will have </u>the opportunity to avoid the topic**/** that they dislike,/<u>will focus</u> on just the topic**/** they want to study**/** and their successes will be easier.**/** (7)

Cf. When a coordinator is connecting two or more than two verb phrases and the verb phrases do not carry significantly separate ideas, they are **<u>NOT</u>** counted as clauses.

- Through it, we <u>learn</u> something and <u>apply</u> it to our lives./ (1)

- Leadership is basically the skill/ that <u>communicates and leads a group of people</u>./ (2)

- They <u>will study hard and will love that topic</u>./ (1)

When a coordinator is connecting two or more than two adjective, nominal, and adverbial phrases, they are **<u>NOT </u>**counted as clauses.

- Science brings us <u>not only very convenient thing but also dangerous things</u>./ (1)

- There are some reasons for the topic: <u>preventing low quality of knowledge, teacher's guidance, and right to know.</u>/ (1)

Finite dependent clauses

1. Adverbial clauses

When a dependent clause is connected to the main clause with a subordinator, it is counted as a clause.

Note. Subordinators: *because, when, after, before, as, if, though, although, even though, even if,* and so on,

- In our daily life, we must do many things/ <u>even though we don't want to</u>./ (2)

- <u>When I was a child,</u>/ I wanted to study Biology/ <u>because I loved animals</u>./ (3)

- <u>Now that I am taking Biology here at the ELC,</u>/ I realize /that I love it very much./(3)

2. Adjective clauses

When a dependent clause is connected to the main clause with a relative pronoun, it is counted as a clause.

Note. Relative pronouns: *who, whom, that, which, whose, where, when, why,* and *how*

- Even though cloning copies us,/ we are the only one /<u>who lives this life</u>./ (3)

- I was looking for information about some universities/ <u>where I could study Biology</u>./ (2)

- This is a bad habit /<u>that many people need to change and work hard to avoid</u>./(2)

3. Nominal clauses

When a dependent clause is connected to the main clause with a nominal conjunction, it is counted as a clause.

Note. Nominal conjunctions: *whether (if), that, wh-*words, and so on.

- Afterwards this student could realize /that it is /<u>what he wants to study</u>./ (3)

- I believe/ <u>that is very important for high school students attending many different courses </u>in order to help them for the future./(2)

- Second reason is /<u>that high school students know</u>/ which class they prefer./ (3)

- Then I think about/ <u>how I can deal with the matter</u>./ (2)

- I wonder/ <u>if they really make money</u>./(2)

- This is/ <u>because many people are more interested in the material things than the

spiritual./ (2)

4. Comparative clause

When a dependent clause is connected to the main clause with a comparative conjunction, it is counted as a clause.

Note. Comparative conjunctions: *as, than,* and so on

- The more I like the class, /the more I enjoyed it./ (2)

- Maybe Henry would realize/ she was not as nice /as she pretended to be./ (3)

  [From Longman Grammar of spoken and written English]

- She fled these Sunday afternoons earlier /than she should have./(2)

  [From Longman Grammar of spoken and written English]

- Most of them are not able to choose their carrier so young/ as they are./ (2)

Non-finite clauses

1. Infinitive clauses

An infinitive is **NOT** counted as a clause**.**

- We can encourage them to find good courses./(1)

- The purpose of school is to gain knowledge and learn about how to live after our school./ (1)

- Therefore, many people set a deadline to evaluate their works or other people's work./ (1)

> **Cf.** when an infinitive has a subject, although the subject is functioning as an object in the sentence, it is counted as a clause.
>
> - By allowing **students to study the courses/** that they want,/ they will have the opportunity to avoid the topic/ that they dislike./(4)

2. Gerund clauses

A gerund is **<u>NOT</u>** counted as a clause**.**

- I feel like/ <u>taking these classes</u> is a waste of time./(2)

- <u>Without making mistake</u>, people would not know how success is fruitful to them./ (1)

- The concept of business in the past was <u>seeing, buying or trading products</u> with the others./ (1)

3. Verbless clauses (if so, if possible, if not, when in difficulty, and so on)

A non-finite verbless clause is **<u>NOT</u>** counted as a clause**.**

- <u>If so</u>, what are the characteristics of successful businesses in the 21st century?/ (1)

4. Reduced adverbial clauses

A reduced adverbial clause is **<u>NOT</u>** counted as a clause.

- By using reliable result, <u>when intaking those medical</u>, there are less chances to cause problem./ (1)

- You will look further rather than being shortsighted when <u>doing investment./</u> (1)

- For example, <u>taking history class</u>, you can learn from the ancient and look at the world now, and think /what do the government want to do./ (2)

Appendix B: Rubric for Counting Error-free Clauses

Note. All provided examples in this rubric are from ESL students' authentic writing. Students typed their answers using a computer when they took the pre and posttests.

General Procedure

Raters will read through the essays and identify whether each identified clause contains errors in it or not. Raters will not need to mark the errors but highlight error-free clauses. Possible errors are: determiners, subject/verb agreement, verb forms, run-on sentences, incomplete sentences, verb tenses, spellings, word forms, word choices, singular/ plural nouns, count/non-count nouns, unclear meanings, awkward wording, word orders, capitalizations, punctuations, unnecessary wording, and missing words. Below are some cases that raters need to consider.

1. When two correct words are not spaced, it is **NOT** considered an error.

   ▪ If we do not allow **themto** study the courses they want to study…

2. When a word is misspelled, but you assume that the writer knows how to spell it because it is correctly spelled in another spot of the writing, it is still considered **an error**.

   ▪ If we do not allow them to <u>study</u> the courses they want to <u>study</u>, they become lazy and find the class boring….. I was mad and I did not want to **stduty** anymore.

3. When the word *the* is misspelled as *teh*, it is **NOT** considered as an error.

4. With regard to punctuation errors, the punctuation goes with the preceding clause.

   ▪ <u>If you do not allow them</u> they are going to be confused. (underlined clause is an error)

5. When a subordinate clause stands independently (ends with a period) and the main clause stands alone (starts with capitalization), only the subordinate clause is considered as an error, and the main clause is **not** an error.

   ▪ <u>If students just choose the courses that they want to</u>. Some students may not like

math. (underlined clause is an error)

6. When a clause itself is error-free, but the tense in the clause does not agree with the preceding clauses, it **<u>is considered</u>** as an error.

▪ Bosses at work give us too much work, so we cannot complete the work. As consequence, we <u>got</u> stress.

7. Some clauses may be grammatically correct when considered in isolation. However, a clause must be evaluated in the full context of the sentence of which it is a part. Therefore, as in the example that follows, if the second clause is correct in isolation but it is incorrect when evaluated in the full context of the sentence, it must therefore be considered as **incorrect**.

▪ However, the other my friends who do not like math, <u>they</u> could choose the other subjects instead of math.

Appendix C: Level 4 Applied Grammar Survey

Directions: Please answer the questions below. Your sincere answers will be appreciated, and they are very important for the survey to help and facilitate your grammar study at the BYU English Language Center.

1. How satisfied are you with the Level 4 Applied Grammar instruction at the BYU ELC?

    Very well   Well   Somewhat well   Not very well   Not at all

2. How well do you think that the Applied Grammar class is helping you improve your writing accuracy?

    Very well   Well   Somewhat well   Not very well   Not at all

3. How well do you think that the Applied Grammar class is helping you learn English Grammar?

    Very well   Well   Somewhat well   Not very well   Not at all

4. Which way do you think helps you learn and understand the English grammar rules better? (Circle one and write the reason for your choice)

        Traditional grammar instruction ↔ Applied Grammar instruction

Why? _____

_____

_____

5. Which way would you choose if you were learning the English Grammar in Level 4 again?

    (Circle one and write the reason for your choice)

        Traditional grammar instruction ↔ Applied Grammar instruction

Why? _____

_____

_____

6. Use the back to write down any of your comments about the Applied Grammar course.
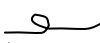
Appendix D: Paragraph Prompts in Level 4 Applied Grammar Course

-Modified from *The Techniques of Writing* by Paul Kinsella-

The teachers are required to use the required prompts and select one prompt from the elective prompts pool in each week.

	Required prompts	Elective prompts pool
1st week	Diagnostic test (1st day) Writing a 30-minute essay (2nd day) ▪ The importance of having goals in life	▪ An outstanding speaker ▪ Learning away from school ▪ Young people and their music ▪ Attending a local college
2nd week	▪ Learning a new language ▪ Giving advice ▪ Choosing a college	▪ Attending an out-of-town college ▪ A humorous incident
3rd week	▪ Being the oldest child ▪ Making an important decision ▪ Succeeding in college	▪ An outstanding movie ▪ A scary incident ▪ Never again
4th week	▪ Unhealthy diets ▪ Work pressures ▪ Qualities of a best friend	▪ A business venture ▪ Ambition ▪ Jury duty
5th week	▪ Leisure time ▪ Changing Fashions ▪ The importance of having a job	▪ Camping ▪ Giving a party ▪ An unforgettable experience
6th week	▪ Obstacles in life ▪ An outstanding teacher ▪ Sporting Events	▪ Having good friends ▪ Being a twin ▪ Living in urban or rural areas
7th week	Mid-terms ▪ Benefits of television ▪ Admirable personality traits	▪ Group activities in a society ▪ Politics and economy ▪ Gaining a sense of identity
8th week	▪ Honesty ▪ Safe driving ▪ Heroes	▪ Spring in the air ▪ Choosing a car ▪ Stress and shopping (or Stress and eating)
9th week	▪ Computers in a classroom ▪ Telling a lie ▪ Cloning	▪ Education and success ▪ Falling in love ▪ Finding true love
10th week	▪ Work pleasures ▪ The need for self-confidence ▪ The difference between high school and college	▪ Having a family ▪ What makes good parents ▪ Christmas
11th week	▪ Ideal work environment ▪ Religion ▪ The importance of newspapers	▪ Thanksgiving Day ▪ Halloween ▪ Death penalty
12th week	▪ Being the youngest child ▪ Receiving advice ▪ Holidays	▪ How to make a goal ▪ Gun control ▪ Medicine disease
13th week	▪ Pollution ▪ Success and money ▪ A problem facing young people	▪ An embarrassing moment ▪ Problems in modern society ▪ If I were a millionaire

Appendix E: Indirect Coding Symbols Used to Mark L2 Student Writing

1.	D	=	Determiner	11.	S/PL	=	Singular/Plural
2.	SV	=	Subject Verb Agreement	12.	C/NC	=	Count/Noncount
3.	VF	=	Verb Form	13.	?	=	Meaning is not clear
4.	ro	=	Run-on Sentence	14.	AWK	=	Awkward Wording
5.	inc	=	Incomplete sentence	15.	⌒	=	Word Order
6.	VT	=	Verb Tense	16.	C	=	Capitalization
7.	PP	=	Preposition	17.	P	=	Punctuation
8.	SPG	=	Spelling	18.	⌒	=	Omit
9.	WF	=	Word Form	19.	ʌ	=	Something is missing
10.	WC	=	Word Choice	20.	¶	=	New Paragraph

Appendix F: Error Symbols Used in Context

Error Samples	Correction
1. The climber slowly ascended to top. ^D	*A determiner is needed before* top.
2. She think he will win the race. ^SV	*She thinks he will win the race.*
3. Eat pizza at parties is fun for us. ^VF	*Eating pizza at parties is fun for us.*
4. He bought pizza she came by they ate it. ^ro	*These independent clauses need to be separated or combined properly.*
5. Because inflation had risen so sharply. ^inc	*An independent clause is required.*
6. Yesterday she dive to Provo. ^VT	*Yesterday she drove to Provo.*
7. He was always studying in 7:00 AM. ^PP	*He was always studying at 7:00 AM*
8. She was exceptional at mathomatics. ^SPG	*She was exceptional at mathematics.*
9. He truly was a very diligence student. ^WF	*He truly was a very diligent student.*
10. She typed the paper on her calculator. ^WC	*She typed the paper on her computer.*
11. He bought five apple with the money. ^S/P	*He bought five apples…*
12. She breathed in the fresh airs. ^C/NC	*She breathed in the fresh air.*
13. The desk walked to the eat door. ^?	*(requires clarification)*

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(AWK) 14. My family has 1 bother and 1 sister.	*I have one brother and one sister.*
15. She ran two times the marathon	*She ran the marathon two times.*
C C C 16. then mr. white came home.	*Then Mr. White came home*
P P 17. She said I am so happy	*She said, "I am so happy."*
18. I will very study very hard.	*I will study very hard.*
19. After class did all my homework.	*After class I did all my homework.*

Appendix G: Holistic Rubric

Applied Grammar10-Minute Paragraph   Scoring Rubric

Score	Descriptor	Syntactic/Lexical Accuracy (75%)	Content (25%)
Level 6 writers are "**Clearly Competent**" **Vocabulary**: sophisticated, effective word/idiom choice and usage, appropriate register. **Grammar**: uses effective complex construction, few errors of agreement, number, tense, word order. Meaning is never obscured at this level			
6+ 6.5-6.9	**University ready without question**	• Very <u>few if any</u> syntactic and or lexical errors. Any errors that may occur will be minor, and local in nature. • Sentences demonstrate ease of language use and show no signs of grammatical avoidance.	A paragraph in this category is extremely well developed. Content development is sophisticated and extensive.
6 6.0 - 6.4	**Likely university ready**	• Syntactic and lexical errors <u>will occur</u> at this level. They are, however, generally <u>local and infrequent</u>. Meaning is never obscured by errors. • Sentences are well written and demonstrate strong command of grammar. Few if any signs of grammatical avoidance. Writing is adequate, for university entry-level work.	Content is strong, insightful, interesting.
Level 5 writers "**Demonstrate Competence**" **Vocabulary**: demonstrates variety and range of vocabulary **Grammar**: Displays facility in the use of language; demonstrates syntactic variety and range; errors are typically local; some global errors may occasionally occur; local errors may be frequent; sentence variety and complexity are generally quite good; shows little sign of avoidance.			
5+ 5.7 - 5.9	**Top of level 5 writing**		Content is generally good; there is support for the topic but it may be somewhat lacking
5 5.4 – 5.6	**Solid, typical level 5 writing**		
5- 5.0 – 5.3	**Entry level 5 writing**		

Applied Grammar 10-Minute Paragraph   Scoring Rubric

Score	Descriptor	Syntactic/Lexical Accuracy (75%)	Content (25%)

Level 4 writers "**Demonstrate General Competence**"
Vocabulary: adequate range, occasional errors of word/idiom choice and usage, but   meaning is usually not obscured
Grammar: effective but generally simple constructions, adequate but possibly inconsistent facility with syntax and usage;
         minor problems with complex   constructions; errors of   number,   agreement, tense, word order do occur;
         meaning can sometimes be confused or obscure; avoidance is often apparent.			

4+ *4.7 – 4.9*	**Top of level 4 writing**		While the message is generally understandable, the support, examples, and details, are limited. Writing lacks depth, and general interest. These features are often indicated by the short length of the paragraph
4 *4.4- 4.6*	**Solid, typical level 4 writing**		
4- *4.0 – 4.3*	**Entry level 4 writing**		

Level 3 writers "**Demonstrate Minimal Competence**"
Vocabulary: limited range, frequent errors of word/idiom, choice, usage; meaning may be confused or obscured; noticeably   inappropriate choice of words
Grammar: major problems in simple/complex construction; an accumulation of errors in sentences, structure and
         usage; frequent   errors of negation, agreement, tense, number, word order. Fragments, run-ons, deletions, articles;
         meaning may often be confused or obscure.			

3+ *3.7 – 3.9*	**Top of level 3 writing**		The message is generally understandable; the support, examples, and details, are very limited. Writing lacks depth, and general interest. These features are often indicated by the very short length of the paragraph
3 *3.4 – 3.6*	**Solid, typical level 3 writing**		
3- *3.0 – 3.3*	**Entry level 3 writing**		

Appendix H: Error Tally Sheet

	Making Goals	Language	Giving Advice	Choosing a College						Total
D	3	4	1	1						
SV	1	2	1	2						
VF			3							
SS ro	2		1							
SS inc		1								
VT	1									
PP	2	1	1	1						
SPG	4	5	2	7						
WF	3	2	1	3						
WC	3	4	3	2						
S/PL	2	2	1	1						
C/NC										
?	3		2							
AWK										
W O										
C	7	1		2						
P	1		1							
omit	2	1	1	2						
^	2	4	3	2						
¶										
score	4.0	4.1	4.2	4.4						

Appendix I: Edit Log

Ten-Minute Paragraph Edit Log

	Topics	Edits				
1	*Making Goals*	→	→	→	✓	
2	*Language*	→	→	→	→	✓
3	*Giving Advice*	→	→	✓		
4	*Choosing a College*	→	→			
5						
6						
7						

Appendix J: Error List

Error List

Error List Determinates (D)

1. For example, it is unsafe when **car** drives too fast on urban roads.
2. Too much going on at **a** same time can cause some stress.
3. Actually**, internet** is being used by more and more people around the world.

Subject Verb Agreement (SV)

1. It always **need** to be for at least one hour.
2. It also **increase** the student's ability to learn.
3. My sunglasses **was** my most expensive purchase.

Verb Form (VF)

1. All of the assignments **were been** completed by the end of the day.
2. People should always be willing **to working** together.
3. You must believe in yourself so you do not **would be failed**.

(Hartshorn, 2008)

Appendix K: Frequency Distribution of the Students' Responses to Survey

Questions

Note. In the case where a student provided several reasons for his choice, the reasons were separated and grouped in different categories. For purposes of grouping, the researcher had to edit the students' responses; however, they were edited as close to the students' original writing as possible. Unedited student responses are specified. AG and TG stand for the Applied Grammar instruction and traditional grammar instruction, respectively.

Q 4: Which way do you think helps you learn and understand the English grammar rules better? Traditional grammar instruction ↔ Applied Grammar instruction	
Applied Grammar Instruction	
Reasons	Frequency
1. I can apply my grammar knowledge in writing and learn grammar rules from my own mistakes.	25
2. It helps me recognize and identify my common grammar mistakes, and I can fix them.	13
3. Writing a 10-minute paragraph daily and fixing our errors helps us improve our writing skills and use grammar rules more correctly in writing.	11
4. I can apply grammar rules in real situations.	11
5. No responses given	7
6. It is useful, or it is helpful.	3
7. It helps me improve my writing accuracy.	3
8. I can check if I know the usage of grammar rules through using them in my writing and getting feedback from the teacher.	2
9. It helps me understand grammar rules easily and clearly.	2
10. I have learned a lot through this method.	2
11. I can write faster and more.	2
12. It really helps me how to use grammar rules.	1

Reasons	Frequency
13. I learned a lot of things with this method than traditional grammar instruction.	1
14. It focuses on students' needs.	1
15. I can learn better when I see my own mistakes.	1
16. I already know enough grammar rules, so I need to know how to use them correctly in real situations.	1
17. It helps me to be better prepared to study in college.	1
18. Through the AG class, I could understand what are good sentences and paragraphs.	1
19. It reviews important grammar rules.	1
20. It provides better explanations about grammar rules.	1
Traditional Grammar Instruction	
Reasons	Frequency
1. I need to learn more grammar rules before applying them.	3
2. No responses given	2
3. It is more familiar.	2
4. It is more organized.	1
5. Even though the AG instruction is good, I didn't understand the system well. I think it did not help me a lot.	1
6. I can learn all the rules in the textbook in the traditional grammar instruction. Repeating learning the same rules about our mistakes in the AG class does not help me.	1
7. I can review the rules often.	1
8. I can learn more grammar rules.	1
9. It is the most common way to learn English grammar.	1
10. Combining grammar and writing was confusing to me. I couldn't concentrate neither on grammar nor on writing.	1
11. The AG instruction should be more organized. It was so stressful.	1
Both or No selections	
Reasons	Frequency

1. I need to learn grammar rules and apply the rules; therefore, a good combination of the two methods will be the best.	6
2. Both methods have advantages and disadvantages.	1
3. I was not here last semester, so I can't compare.	1
4. I like both methods.	1
5. No responses given	1

Ambiguous and Irrelevant Answers (17 students)

Responses (unedited student responses)

1. It is better to try various ways such as a journal. (AG)

2. We can improve common vocabulary and how to use them in speaking. (AG)

3. I can apply my writing and reading. (AG)

4. We can improve our skills. (AG)

5. We can learn correct grammar. (AG)

6. I can remember easily what we said. (AG)

7. It is easier to keep it in my mind. (AG)

8. I like grammar. It's my favorite class. (AG)

9. When the teacher explain the grammar rules and after we check what the book says about it. (AG)

10. It's always good to see examples. (AG)

11. Because we learn many hardest ways to learn grammar with writing paragraph. (AG)

12. Because this grammar is developed during class and the practices are guided. (AG)

13. It is good, but when we use grammar, it is very restricted. (AG)

14. Because we need all kinds of tools to learn grammar rules. (AG)

15. Sometimes I didn't understand why I needed to do these kinds. Some parts are just common sense. I didn't need my grammar skill. (TG)

16. We need a better textbook. (TG)

17. Not much times. (TG)

Q 5: Which way would you choose if you were learning the English Grammar in Level 4 again? Traditional grammar instruction ↔ Applied Grammar instruction	
Applied Grammar Instruction	
Reasons	Frequency
1. No responses given	15
2. I can apply grammar rules in writing.	12
3. It is more useful and helpful than other methods.	9
4. Through this method, my writing improved a lot.	6
5. I can directly focus on my mistakes.	6
6. It helps me realize, understand, and find my grammar errors.	6
7. Through this method, I was able to reduce my grammar mistakes.	5
8. It is practical.	5
9. It is an easy, helpful way to learn grammar.	4
10. Teacher feedback helps understand grammar rules well.	3
11. I like it.	3
12. It works for me.	3
13. It helps us better prepared to go to a university.	3
14. I can apply grammar rules in real situations.	3
15. I learned a lot through this method.	2
16. It is helpful.	2
17. It is an effective way to improve my grammar.	2
18. It is the best way to learn grammar.	2
19. It is not boring, or it is less boring.	2
20. I can talk more correctly through this method.	1
21. I like this method.	1
22. It helped me write faster.	1
23. Writing a 10-minute paragraph was very helpful to me.	1
24. This class gave me more motivation to study English.	1

Reasons	Frequency
25. Because I have already experienced the traditional method in my country.	1
26. It helps me write any topics in English.	1
27. It's more fun.	1
28. Practicing using grammar rules in writing is a very effective way.	1
29. I don't need the traditional grammar instruction.	1
30. We have already learned enough grammar rules.	1
31. It helps me improve my English skills.	1
Traditional Grammar Instruction	
Reasons	Frequency
1. No responses given	5
2. I need to learn more basic grammar rules before applying them.	4
3. I can learn more detailed grammar rules.	2
4. Because I have already experienced the AG instruction, I want to have a different method.	1
5. The AG class made me confused.	1
6. It is more familiar method.	1
7. It works better for me.	1
8. The AG course is not organized because it jumps one topic to a very different topic suddenly.	1
9. I can use the textbook more often with this method. I paid a lot of money for the textbook.	1
10. I do not plan to go to a university; therefore, I want to more focus on speaking.	1
11. I can learn more structures.	1
12. This method is clearer to me.	1
13. I have a writing class. Things are discussed in the AG class can be covered in the writing class.	1
Both or No selections	
Reasons	Frequency
1. Both are useful.	4

2. Combination of the two methods will be the best.	3
3. No responses given	2
4. I cannot compare the two methods.	1
5. I have no idea.	1
Ambiguous and Irrelevant Answers (4 students)	
Responses (unedited student responses)	
1. Level grammar is useful for conversation or academic writing. (AG)	
2. Applied Grammar helps you to understand. (AG)	
3. Because I can talk with native speakers. (AG)	
4. It is easier to understand. (TG)	

Q6. Use the back to write down any of your comments about the Applied Grammar course.
No responses: 84
Individual Response (unedited student responses)
1. Sometimes, topic is just really difficult.
2. Mix with reading.
3. I'm very happy because I have been learning a lot of helpful things and Mr. Mower is an excellent teacher.
4. I want know about what is wrong or how to use well.
5. We learn many grammars but we forget soon. That's problem.
6. Please give me many good examples like now.
7. It was very helpful.
8. I want to make many new sentences, but if I make a new sentences, I get a low grade on my essay.
9. I would like to Applied Grammar course.
10. Sometimes it too short to learn grammar and writing 10 min. paragraph.
11. We should change the daily paragraphs for weekly essays.
12. Is good to know what are my mistakes.
13. It was pretty good class.

14. Thank you!

15. It's very efficient study method except error list!

16. Through applied grammar, I was able to identify my weakness and I learned how to improve.

17. Again we need a better book that could be more useful. This book is difficult to follow.

18. I don't want to flatter my teacher but I think my. Mower is the best grammar teacher I have had. If I didn't learn something, that was because I did not study.

19. It's very helpful to speak and write correctly.

20. Great teacher! Only I feel that we need more time because the themes are complicate and there are more themes that I would like to study.

21. Wonderful.

22. I think it was good. I learned many academic words and my writing became better.

23. Honestly, I think going paragraphs was time of westiny(?) time.

24. I just feel the need for something more dinamic so I can increase my attention.

25. We need more material to increase our vocabulary.

26. I like ELC.

27. I think that it is more helpful; we can easily find more doubts. So, our teachers can help us to modify our mistakes and improve our writing skills.

28. When we write 10 minute essay, I would like to how good sentence before writing.

29. I do like the grammar teacher!

30. I helps a lot.

31. I guess it's OK.

32. Applied Grammar is excellent, however I believe that it is more useful in level five, especially because this grammar class is like a review.

33. It is good to practice but we can have still more focus in structures about the new rules and content.

34. It is very good exercise, but you have not to forgot about traditional grammar instruction, because many of us do not know all grammar rules.

35. Applied Grammar is more active. It has examples from the real life that we really need. We need to apply grammar, and use the grammar that we really need. I don't

think its important to know, or learn the words that in England they use, because I will never go there. We need more grammar rules, but also understand them and them apply them to prove if we really did understand them.

36. There must be included a space of time to explain these old English structures which crate certain confusion with the contemporary English.

37. It's a good class. It's enough helpful we as student's sometimes get confused and stupid and we don't understand the English grammar. They just need to force us to study.

38. I'm very happy to learn grammar this way, but I don't understand why they make us buy a book of $70.

39. Grammar is hard. So.. . I can't understand sometimes. But a important problem is I am not sure how can I use…. Sorry~…

40. I would like to mix the traditional grammar instruction and applied grammar instruction. I was study in level 3 last semester. I used the traditional grammar instruction. It helped me to learn the detail and the use clearly. In the other hand, I use the applied grammar instruction while I study in level 4. I like to write paragraph. It is very helpful. But I don't like to do the error list.

41. I think is good, just you need to put more effor in order to learn from your mistake. Don't do it again.

42. I think that sometime we could skipe some important things with this way to learn grammar.

43. I really like it! The teacher makes me change my mind about grammar class. She always cheers me up! It's a nice class….

44. Too much homework is bad, but some exercises as homework never are harmful!