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Error Correction in an Email Exchange

David B. Laframboise

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by

David B. Laframboise

B.B.A., Lakehead University, Ontario, Canada, 1978

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Chairperson

Dean
School of Graduate Studies

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In this experimental study, students in a first year, second semester, mandatory University English class, participated in an existing Email exchange with their NS teacher, to determine if targeted errors would decrease in succeeding Email exchanges. I had used an Email exchange for 6 semesters prior to this study and wanted to establish if the students benefited from the method used to correct errors, namely recasts. Although not possible to draw general conclusions or make any generalities due to the sample size (n = 9), it was possible to contextualize perceptions and reflections of this study. Devoid of substantial evidence to draw any generalities or definitive conclusions, this study does kindle interest in student developmental readiness and the use of recasts as an error correction method.

Keywords: Email, noticing, recasts, grammar correction.

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Introduction

Many EFL (English as a Foreign Language) teachers feel frustrated with students that make the same errors repeatedly, even after a multitude of corrections. These teachers are then tempted to view their students as inattentive or lazy rather than draw the conclusion that error correction is not effective (Truscott, 1996). Since Truscott made the claim that grammar (error)[1] correction is a waste of time and could even be "harmful" (p. 331), he and Ferris (1999) have debated whether correction is warranted in students' writings.

Ferris (1999) believes that indirect error correction (identification) is preferable to direct correction (teacher correction) but states there is no "one size fits all" (p. 6). Considerable thought should always be a prerequisite to any feedback provided. In her response to Truscott, Ferris (1999) claims that there are flaws in his research review and argues that to not correct may frustrate students even more.

In the majority of research that both Ferris and Truscott refer to, the students were involved in a writing class (Robb, Ross, & Shortreed, 1986; Semke, 1984). In a

[1] Truscott made the claim he was talking about grammar correction not error correction, however in this paper grammar correction and error correction will be used interchangeably.

study involving learners of Japanese as a foreign language, Stockwell and Harrington (2003), concluded that Emails between students and Native Speakers (NSs) of the target language (TL) "can lead to observable improvement in discrete measures of L2 knowledge" (p. 353). In their study, the Japanese NSs (partners) were instructed not to provide explicit feedback concerning any errors, although they did provide implicit feedback in the form of recasts (an implicit type of corrective feedback that reformulates or expands an ill-formed or incomplete utterance in an unobtrusive way: Brown, 2007, p. 388). In Stockwell and Harrington's (2003) study they found that their learners showed steady improvement in both text features and proficiency ratings following an initial 'fall-off' after the first message ("first message effect" will be discussed later).

In a similar study Van Handle and Corl (1998) found an Email exchange improved their students' speaking and writing in German. Emails allow the learner more time to focus on linguistic clues, giving them more time to comprehend the message. This, coupled with relatively less anxiety involved in an Email exchange compared to a face-to-face (FtF) encounter, allows students to feel comfortable urging them to attempt more complex structures in the TL, which helps facilitate learning (Stockwell & Harrington, 2003).

I contend that it is the interactional nature of Emails that aids in this process. The "Interaction Hypothesis suggests that negotiated interaction can facilitate SLA and that one reason for this could be that, during interaction, learners may receive feedback on their utterances" (Mackey, Gass, & McDonough, 2000, p. 471). The

majority of Emails in the exchange represented in this study are continuous threads, with a continuum of turns.

In this study I will explore if recasts of students' errors in a teacher-student Email exchange were beneficial in producing less grammatical errors over a duration of one semester (13 weeks). "Current research indicates that indirect feedback options have a greater effect than direct feedback on accuracy performance" (Bitchener, Young, & Cameron, 2005, p. 202). However recasts have had mixed reviews: Leeman (2003) states studies have documented significant advantages for learners exposed to recasts, but Lyster (1998) argues that recasts are ambiguous and can be misinterpreted by the learner.

I had an existing Email exchange in place and had used recasts in the past as a form of implicit error correction; however no attempt was ever made to establish if the recasts helped reduce future errors. This study is a personal attempt to answer something many EFL teachers ponder–"Do their methods produce desired results?" Researchers (Doherty & Mayer, 2003) have explored the positive uses of Emails in Second Language Acquisition (SLA) and others (Leeman, 2003) have presented recasts in a positive light in second language development. This paper will explore if the combination of the two will have a positive effect on grammatical errors.

Chapter II

LITERATURE REVIEW

Emails

Literature (DuBartell, 1995; Maynor, 1994) describes Email as a hybrid of oral and written features (Briesenbach-Lucas & Weasenforth, 2001). Emails are a hybrid genre that combines written and oral discourse, containing a unique politeness code, register, and netiquette codes (Massi, 2001). Green and Bigum (1993) state that, students of this generation accept technology as a natural and desirable aspect of their everyday environment (Doherty & Mayer, 2003). These qualities of Emails: a bridge between oral and written discourse; the ease of how students accept electronic technology; and how the vernacular resembles, to a certain degree, the way individuals speak, make Emails unique in the study of SLA.

Recent research into L2 electronic interactions indicate an increase in student communication skills, linguistic communication skills, motivation, participation, and aid in the reduction of anxiety compared to face-to-face (FtF) interactions. Barson, Frummer and Schwartz (1993) point to development of French through authentic communication in the target language; Olivia and Pallastrini (1995) reported an improvement in writing, listening, and speaking skills of Italian; Van Handle and Corl (1998) found an improvement in accuracy and expansion of vocabulary in their

German language class; and Liaw (1998) found an increase in motivation, interaction and authentic language between her Taiwanese (NNSs-NNSs) students (cited in Phillips & Pinsky, 2004). Gonglewski, Meloni, and Brant (2001) rationalize their use of Emails stating: a) it extends language learning time and place; b) combines real-world communication and authentic interaction; c) expands topics beyond classroom based ones; d) promotes student-centered language learning; e) encourages equal opportunity participation; and f) connects speakers quickly and cheaply (McDonald, 2009).

Greenfield (2005), citing a number of researchers, maintains that computer-mediated communication (CMC) helps language learning in several ways: in facilitating communication (Cooper & Selfe, 1990); in reducing anxiety (Kern, 1995); increasing oral discussion (Pratt & Sullivan, 1994); in developing the writing/ thinking connection (Warschauer, Turbee, & Roberts, 1996); in promoting egalitarian class structures (Cooper & Selfe, 1990); in enhancing student motivation (Warschauer, 1996) and in improving writing skills (Cohen & Riel, 1989). Peyton (1993) indicates that the major drawback for Emails is the time required to read and respond to them; however this is offset by gaining knowledge of students' interests and problems. Emails can also aid in planning future lessons.

Warschaurer (1996) claims that, CMC has been shown to increase EFL/ESL student motivation. Abrams (2003) states that CMC has been recognized for creating a more positive collaborative learning environment. It is essential to create a friendly and relaxed atmosphere, to create an environment that students feel comfortable in to

make mistakes (Kavaliauskiene, 2003). Dornyei and Csizer (1998) indicate one factor in motivating learners is to develop a relationship; this forms the basis for effective teaching. Samuel (2001) found that with her Korean first-year students, Emails motivated her students to learn and practice English more than any other means did. Campbell (2007) found that when students saw their contributions were accepted and valued, their confidence level was boosted and they participated more.

Online discussions allow the student time to think about the message (Biesenbach-Lucas, 2003) without the pressure of an immediate response (Campbell, 2007). Larrotta (2009) found that Emails gave one student (Flora), an opportunity to "talk" as much as she wanted, and time to reflect and to experiment, something she was too shy to do in class. "CMC promotes equal participation among language learners (Chun, 1994), improves participation by learners who may feel marginalized in face-to-face conversations (Warschauer, 1996) and increases student motivation (Beauvois, 1995)" (Abrams, 2003, p. 165).

Citing Hansen (2001) and Pennington (2004), Chen (2005) asserts that online media communication is less stressful and more face-saving than face-to-face communication and students are more willing to express a personal opinion. Emails create a level playing field where every class member has an equal chance to practice the TL–"learners who are shy, slow, or afraid of making errors may choose to speak less in the classroom" (Chen, 2005, p. 4). Emails can be used to compensate for this deficiency of interaction.

An Email exchange allows the teacher-student dynamic to evolve. Semke and College (1984) declare that, "one of the most important benefits of the Tagebuch (dairy/ journal)[2] is the opportunity it affords the teacher to know the students as persons" (p. 202).

Peyton (1993) uses dialogue journals (Emails) to learn about students' backgrounds, interests, and needs; to share information; and to follow her students' learning. Makauchuk (2010) announced that students enjoy sharing opinions and beliefs with their instructor, they also enjoy having another form to discuss their progress and work in class. How students perceive course content is a key component of pedagogy (Alverez & Bushy, 2002). With Emails students can write freely, without teacher constraints and curriculum-established topics; they can write about topics that are important to them.

According to Davis and Brewer (1997) electronic mail assumes the functions and formal features associated with spoken language as well as formal writing (Biesenbach-Lucas & Weasenforth, 2001). A "moral panic" (Thurlow, 2006) arose that instant messaging, texting, and CMC (Emails) would erode one's ability to write standard English texts. However, Jacobs (2008) found, no empirical evidence for this in her cross-disciplinary research into instant messaging. She states that, any literacy practice can provide insight into an individual's development if tendencies to dichotomize (old/new, traditional/untraditional) literacy practices are ignored.

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[2] Literature (Hahn & Jiang, 2006) has compared Emails to diary/ journals and for this purpose will reflect similar benefits.

Writing is a difficult skill to master and can be mastered through exposure to good examples, practice, feedback and instruction (Pinker, 1994, cited in Koffi, 2010). Wells (1992) points out that, a written text serves as a "cognitive amplifier" and Bruner (1972) states that the writer can critically examine, reconsider, and reflect on what they wrote for further constructions (Warschauer, 1995). According to Zamel (1992) a deeper cognitive process is at work when students struggle to write down their thoughts for an authentic audience, which leads to more learning (Kol & Schcolnik, 2008).

With Email exchanges the teacher's input may be slightly beyond the student's proficiency level (McGrail, 1991) but is comprehensible because it relates to the student's prose (Peyton, 1993). Maynor (1994) states that, Emails represent a convergence of both oral and written modalities and lack of capitalization and punctuation are some features that mark Emails more like speech. Syntactic simplification or "reduced register" has also been observed in Email discourse (Gonzalez-Bueno, 1998).

Email discourse is informal and democratic as apposed to classroom discourse which tends to be teacher dominated, structured, and topic chosen. Students can introduce new topics that reflect their own opinions, expertise, and experiences. This helps to blur the distinction between teacher and student status (Doherty & Mayer, 2003). Lund (1998) states that Emails allow a personal voice; Yates and Orlikowski (1993) found that the register of Emails takes on the informality of oral conversation; Weasenforth and Lucas (1997) commented on the shorter length of Emails; and Nagel

(1998) claimed that Emails stimulated dialogue by requesting responses from the receiver (Hohn & Jiang, 2006). Informal registers[3] are suitable for Emails and are rule-governed just the same (Clouse, 2007, cited in Koffi, 2010).

Written communication (Emails) allows more opportunity for noticing input and planning output (Warschauer, 1995). Krashen's Input Hypothesis claims that "second language learning (acquisition) is almost wholly dependent on the amount of comprehensible input one receives" (Warschauer, 1995, p. 2). Output allows learners to test their hypothesis, receive feedback, and develop automaticity (Gass, 1997, cited in Stockwell & Harrington, 2003). Sauvignon (1983) claims that learners must practice meaningful output to improve their oral communication competence; the more they practice the better (Abrams, 2003).

The rationale behind using Emails is to engage learners in authentic–like meaningful communications that require thoughtful negotiations. The goal is to increase input and generate more output; something the Communicative Language Teaching (CLT) approach advocates (Huang & Liu, 2000, cited in Chen, 2005). The asynchronous nature of Emails allows time for reflection, labeled the "ripple effect" (Bernath & Rubin, 1999), leads to the deep thinking necessary to integrate old and new information (Kol & Schcolnik, 2008). CMC has reduced immediacy compared with face-to-face interactions therefore students have more processing time and extended learner talk time which improves learner interlanguage (Abrams, 2003).

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[3] Has also been referred to as "colloquial register" or "casual register."

Vygotsky's (1962) "zone of proximal development" stresses collaborative learning (between student and teacher) and illuminates the role of social interaction in learning a language or about language (Warschauer, 1995). Learning a second language is a social process. Learners engage in social interaction before internalizing language structures and use (Vygotsky's Socio-Cultural Perspective, cited in Nimmannit, 2010). The goal of online discussions is to promote constructive thinking and maximize interactions between instructors and students (Tu & Corry, 2003).

Interaction

According to Kearsley (2000) CMC is one of the most important tools in enhancing interaction between students and instructors. By minimizing structure and increasing dialogue (Mason, 1998), it has been suggested that online interaction will increase, and when the structure is too rigid, dialogue and interactions are ineffectual (Tu & Corry, 2003). Interaction acts as a "priming device" (Gass, 1997) that allows learners to focus on areas they are working on (Mackey et al., 2000). One of the benefits of interaction (Gass, 1997) is that it can help learners make more efficient use of their attentional resources; another is that it provides opportunities for output (Swain, 1995)–the value of output is that learners may recognize what they can not express which leads them to attend to those forms in subsequent input (Leeman, 2003). By focusing attention on a limited amount of data (controlled) at any given time learners are able to manage the input (Mackey et al., 2000).

Communication is most effective if a high level of interactivity between participants is involved. Interactivity, according to Rafaeli (1988), and Walter, Gay,

and Handcock (2005), occurs if there are three turns (or more) related to the first turn (Koolstra & Bos, 2009). The first time a topic is mentioned is referred to as an action; the second turn or reply mentioning the same topic is a reaction; the third turn/ reaction to the reaction results in the process called interactivity (see Appendix A for example of interaction).

The Interaction Hypothesis (Gass, 1997; Long, 1996; Pica, 1994) suggests that negotiated interaction can facilitate SLA; it is the feedback that learners receive on their utterances that facilitates acquisition (Mackey et al., 2000). Long's Interaction Hypothesis (1996) is an extension of Hatch's (1978) "importance of conversation" and Krashen's (1985) "comprehensible input"; conversational and linguistic modifications that occur in the interaction of conversation provide learners' with the necessary input they need for SLA (Mackey & Philp, 1998). The Interaction Hypothesis highlights two conditional categories: the "task" which should provide opportunity to engage in meaningful interactions and "psycholinguistic" conditions which allows intake to be processed as learner uptake (refers to different types of student responses immediately following feedback: Lyster & Ranta, 1997, cited in Stockwell & Harrington, 2003). Chen (2005) states that "when learners are involved in two-way meaningful communications requiring information exchange, they tend to produce more negotiated language modification" (p. 3).

The purposeful communications involved in Emails allow learners a chance to modify their language usage and it is this negotiation (Pica, 1991) that is necessary to internalize knowledge into interlanguage development (Stockwell & Harrington,

2003). Warschauer (1997) claims that CMC aids language learners to communicate by negotiating meaning. Hahn and Jiang (2006) found that, similar to oral dialogue, there was a great deal of topic negotiation in their Email exchange and that Korean interlocutors cooperated in developing topics.

Yau (1991) states we should not cripple interaction in writing by subjecting students to undue stress or grammatical corrections (Myles, 2002). Ellis, Tanaka, and Yamazaki (1994) suggest that "interaction allows learners to comprehend items in the TL and that comprehended input is important for SLA" (Mackey & Philp, 1998, p. 340). CMC and in particular Emails (Kearsley, 2000; Mason, 1998; Pica, 1991; Warschauer, 1997) allow students to interact with their teacher (or other students) in the target language, which in turn helps them negotiate, which allows learners to modify their language usage and helps develop SLA.

Recasts

According to Kim (2006) the term recast seems to have first been used by Nelson, Carskaddon, and Bonvillian in 1973. Long (1996) defines recasts as "utterances that rephrase a child's utterance by changing one or more sentence components while still referring to its central meaning" (p. 434), which is consistent with Lyster and Ranta's (1997) definition "the teacher's reformulation of all or part of a student's utterance, minus the error" (p. 46) (cited in Nicholas, Lightbown, & Spada, 2001, p. 733). Long's (2006) and Nicholas's et al. (2001) studies have assisted in the understanding that the efficacy of recasts relies on interaction with the learner and internal factors (developmental readiness and working memory capacity) (Kim, 2006).

Philp (2003) declares that unfamiliar input, multiple corrections, complex changes, long utterances, and the level of the learner (less accessible to low-level) all effect how recasts are noticed (p. 119). Recasts can benefit learners' acquisition of forms depending on the learners' readiness to acquire the form (Mackey & Philp, 1998). Long (1996) notes that recasts have four properties: a) they are a reformulation of an ill formed utterance; b) they expand the utterance; c) the central meaning of the utterance is retained; and d) the recast follows the ill-formed utterance (Mackey & Philp, 1998, p. 341).

According to Leeman (2003) nativists (Beck, Schwartz, & Eubank, 1995) argue that "positive evidence is the primary catalyst, if not the sole catalyst, of change in adult L2 competence" (p. 40). There are however, multiple opinions on the role of negative evidence: Oliver (1995) suggests evidence for effectiveness of recasts; Mackey et al. (2000) found that learners recognized recasts as feedback on phonology lexis but were unlikely to recognize it as feedback on morphosyntax; Doughty (1994) claimed that recasts were most likely to lead to learner repetition; and Ohta (2000) found that recasts were more salient, more obvious, to other members of the class, than the recipient of the recast. However, Lyster and Ranta (1997) found that recasts lead to the least amount of uptake, which was later confirmed by Havranek (1999), Panova (1999), and Lochtman (2000) (cited in Nicholas et al., 2001). Experimental studies of recasts usually show they are capable of promoting SLA, where descriptive studies[4] show a low rate of learner uptake (Han, 2002).

[4] Describes existing conditions without analyzing relationships among variables (Fraenkel & Wallen, 2008, p. G-2).

Han (2002) states that, recasts have a positive yet selective impact on learning and cities: a) some learners are more receptive (Mackey & Philp, 1998) and b) some structures are more amenable (Long, Inagaki, & Ortega, 1998). Leeman's (2000) laboratory experimental study showed that salience accounts for success rather than implicit negative evidence and Doughty and Verela's (1998) classroom study using recasts on past-tense forms found that recasts are effective if accompanied by some additional cue (repetition of the incorrect form before the corrected form)–this is more explicit than simple conversational recasts (Nicholas et al., 2001).

In Ammar's (2003) classroom study, which reflected similar results as Lin and Hedcock (1996), Mackey and Philp (1998), and Netten (1991), she revealed that prompts were superior to recasts with low-proficiency learners, where higher proficiency learners benefited from both recasts and prompts (Lyster, 2004). Other researchers who have found fault in recasts include: Allwright and Bailey (1991) who found that recasts are useless unless learners could perceive the difference between the erroneous form and the correct form ("notice the gap"); and Calvé (1992) who described recasts as remnants of audiolingualism because they minimize the value of the student's utterances. Lyster (1998) citing Corder (1967) states that, providing the learner with a corrected form is not the most effective method of error correction.

According to Bot (1996) and Swain (1985) learners develop connections in memory when they are "pushed" because of the retrieval and subsequent production process (Panova & Lyster, 2002). As an example of Swain's (1985) call for teachers to "push" their students for more accurate output, Lyster (2004) suggests that: a)

clarification requests; b) verbatim repetitions with rising intonation where the error is located; c) metalinguistic clues; and d) elicitation, are all superior methods to recasts and offer learners an opportunity to self-repair. Some researchers (Doughty, 2000; Long & Robinson, 1998) argue that recasts provide the learner with an ideal opportunity to "notice the gap" as meaning is constant so the learner is freed up to focus on form. However, in Lyster's (2004, p. 403) study he provides a specific example using "Le guimauve" and "La guimauve" (marshmallow) to claim that there is nothing that incites the learner to notice the correction or that Le guimauve is ungrammatical.

Mackey and Philp (1998) disagree with Lyster and Ranta's (1997) suggestion that "uptake" is the crucial factor in determining usage of recasts (developmental usage) and suggest that appropriateness of level (developmental level of the learner and/or the recast), regardless of immediate response, maybe the predictor whether the learner will eventual use the recast. Lightbown (1994) also suggests that timing is an important issue–recasts that do not elicit an immediate response may affect the learner in the long term (Mackey & Philp, 1998). In Han's (2002) study she found that recasts heighten learners' awareness and led to considerable improvement in both oral and written tense consistency. She identified four conditions that may be necessary for recasts to facilitate learning: individualized attention, developmental readiness, consistent focus, and intensity. She goes on to explain that perhaps this is why corrective feedback seldom generates positive feedback (Lyster, 1998; Muranoi, 2000),

because in real classrooms, students rarely get individualized attention and, corrective feedback usually covers a wide range of errors (Han, 2002).

In another case Long et al. (1998) found that, implicit negative feedback (recasts) were more effective than preemptive positive input (models) in previously unknown L2 structures at least in the short-term. Saxton, Kulcsar, Marshall, and Rupra (1998) discovered that exposure to recasts were more effective than exposure to models when learning irregular English past tense forms (Leeman, 2003). Philp (2003) found that implicit feedback in a primed context provided through interaction was noticed. In Philp's 1999 study she found that 70% of recasts were accurately recalled. She suggests three factors that may constrain noticing of recasts: a) limited capacity of S-T memory; b) learner's prior familiarity with the input; and c) processing constraints that may bias the learner's apperception (Mackey et al., 2000, p. 476).

Nicholas et al. (2001) warn that when interpreting research on recasts, it is important to note if the research was conducted in a laboratory or classroom, structure-focused or context focused, observational or naturally occurring, focused on specific linguistic features or on feedback types. It is difficult for learners to identify recasts as feedback except perhaps in foreign language classrooms where the focus is more consistently on the language itself (Nicholas et al., 2001). The literature on recasts is contradictory, in one camp Lyster and company (Lyster & Panova, 2002; Lyster & Ranta, 1997) find that recasts are not as efficacious as other forms of correction and in the other: Han (2002), Kim (2006), and Philp (2003) all find recasts beneficial.

Regardless of whether one promotes recasts or one does not promote recasts, the one issue that researchers do agree on is that corrective feedback must be noticed.

Noticing

Noticing (Tomlin & Villa, 1994) is the part of the attentional system that involves detection and recognition of input in memory (Philp, 2003). "Noticing has been defined as the detection and registration of stimuli in S-T memory. In some models of SLA (Gass, 1997), noticing is the condition under which input becomes intake" (Mackey et al., 2000, p. 474). According to Tomlin and Villa (1994) attention/noticing encompasses: a) alertness; b) selection; c) orientation; and d) detection (Mackey et al., 2000).

While the concept of intake is crucial to second language learning theory, Schmidt (1999) states that, there is no consensus on its definition and offers: "intake is that part of input the learner notices" (p. 139). It makes no difference whether the learner was deliberately or inadvertently attending to form, if noticed it becomes intake (Schmidt, 1990). According to Schmidt's Noticing Hypothesis (1990) it is only the input the learner notices that holds potential for intake[5]–detection, processing and storage (Philp, 2003). In Schmidt's Noticing Hypothesis (2001) the learner must recognize and understand the nature of the correction for the error correction to be effective (Kim, 2006).

Perceptual salience as defined in Dulay, Burt, and Krashen (1982, p. 33) is "particular characteristics that seem to make an item more visually or auditorily

[5] Williams (2005) has completed research suggesting form-meaning connections without awareness, which is beyond the scope of this paper.

prominent than another" (Leeman, 2003, p. 41). Current thinking is that highly salient forms will be acquired first, before nonsalient forms, which is consistent with the role of attention. A point of agreement among models of memory is that anything that is not processed in the S-T memory is "forever consigned to oblivion" (Kihlstrom, 1984, p. 165) and once in S-T memory if the information is not encoded into L-T memory it is also lost.

Attention is the filter that prevents us from being overwhelmed (Posner & Klien, 1973) by the complexity of input (Schmidt, 1990). Attention, according to Posner and Snyder (1975), "assumes some kind of consciousness in that the learner is either aware of the process or the product of attention" (p. 28). Learners do not have an unlimited supply of attention, so doing similar mental processing at the same time is difficult (Wickens, 1984, cited in Van Patten, 1994). Han (2002) found that when learners' attention is on meaning, attention to form is limited, which is consistent with Van Patten's (1990) findings (Kim, 2006).

Many writers (Batlista, 1978; Bowers, 1984) recognize that there are degrees of awareness: the one Schmidt (1990) calls noticing is: what Atkinson and Shiffrin (1968) call focal awareness; what Allport (1989) calls "episodic awareness"; and what Gass (1988) calls apperceived input. What all these constructs have in common is that they identify the level which stimuli are subjectively experienced (Schmidt, 1990, p. 132). In an updated version of the Interaction Hypothesis (Long, 1996), contributions to acquisition are mediated by "selective attention" and if the learner is developmentally ready. Negotiation for meaning elicits negative feedback (recasts),

which draws attention to mismatches between input and output (Long et al., 1998). The relationship between awareness and attention is essential in studying individual learners' differences. Schmidt (1990) claims that subliminal language learning occurs if the task focuses attention on the relevant features in input.

Studies (Hulstijn, Hollander, & Greidanes, 1996; Schmidt, 1999) have provided evidence which supports the notion that learners only acquire a small portion of input, therefore linguistic characteristics of the TL need to be salient for learners to incorporate these features into their interlanguage[6] (Stockwell & Harrington, 2003). In order for input to become intake (Harley, 1994), noticing must occur, and what gets noticed (Gass, 1998; Schmidt, 1990) depends on prior knowledge and skill, task demands, frequency, and perceptual salience (cited in Lyster, 1998). Schmidt (1990) lists some constraints that may affect noticing: a) instruction may have a priming effect; b) frequency (Larsen-Freeman, 1976); c) perceptual salience (Slobin, 1985); d) learner's skill level (Kihstrom, 1984; Mandler, 1979); and e) task demands (Kahneman, 1973).

Truscott (1998) argues that (referring to Noticing Hypothesis) associations between consciousness and attention are assumptions not based on empirical findings. Schmidt (1990) states that, conscious experience is subjective and therefore external observation (Lyons, 1986; Seliger, 1983) is impossible. Truscott (1998) continuing with his critique of the Noticing Hypothesis claims that, there is no consensus among researchers that equates awareness with attention (Logan, 1988; Shiffrin, 1988). There

[6] Coined by Selinker (1972) is the systematic knowledge of an L2 which is independent of both the learner's L1 and the target language (Ellis, 1994, p. 710).

are also difficulties distinguishing between implicit learning and subliminal learning. Foundations of the Noticing Hypothesis in cognitive psychology are weak and the hypothesis would be better reformulated to claim that "noticing is necessary for acquisition of metalinguistic knowledge but not competence" (Truscott, 1998, p. 103). To clarify that attention and explicit rule knowledge are not equally relevant, Van Patten (1994) points to three studies (Cadierno, 1992; Van Patten & Cadierno, 1993; Van Patten & Sanz, 1995) to illustrate that attention to input can be more helpful than explicit instruction for some grammatical forms. Van Patten (1994) quotes Hulstijin (1989, p. 49) stating "implicit learning, although not involving reflection on grammatical rules, still requires that the learner pay attention to the formal features of the language" (p. 33). Schmidt (1990), referring to Hulstijin and Hulstijin's (1984) studies in selective listening, claims that, it is possible to direct attention to one source while ignoring another. Although noticing depends initially on available attention, a myriad of other factors have been suggested: readiness (Pienemann, 1989); frequency and saliency in the input (Gass, 1997); L1 influence (Zobl, 1979); prior knowledge (Ellis, 1994); familiarity and novelty of input (Ellis, 1994); linguistic content of the input (Mackey et al., 2000); degree to which the discourse is understood (Van Patten, 1990); and degree of automaticity (Robinson, 1995) (cited in Philp, 2003).

Although a difficult skill to master for second language learners, writing allows learners to raise their awareness of knowledge gaps (Warschauer, 2010). Jourdenais, Ota, Stauffer, Boyson, and Doughty (1995), and Loew (1997) have compared enhanced printed input to unenhanced printed input and have found that

enhancement promotes greater noticing. Enhanced salience can promote development in at least two ways: a) it leads to learner comparisons and b) it promotes learner noticing (Leeman, 2003). 'Noticing the gap' "may result in learner-generated attention to certain forms (Williams, 2001), which may lead learners to actively search for information they need in input" (Kim, 2006, p. 17). "Noticing the gap has been considered an essential step for reconstructuring learner interlanguage toward more target-like norms (Ellis, 1991; Gass, 1997; Schmidt & Frota, 1986)." (p. 21).

Error Correction

Errors are evidence that learners' are attempting to use the TL beyond what they have been taught and are expected to go through developmental stages (Nicholas et al., 2001). Many overseas language schools expect foreign teachers to correct grammar errors and consider not correcting errors to be unprofessional (Gray, 2004). Error correction and feedback include many factors such as: learners' age, personality, level of performance, task at hand, focus of the activity and modality in which the task is accomplished (oral or written). There are also different types of errors: interlingual transfer; intralingual transfer; transfer of training; communicative strategies; cognitive and affective factors; and learner differences: belief, attitude, learning styles and learning preferences (Wei, 2008). Thereby, error correction is a very complicated process.

The traditional assumption is that meticulous correction of errors will become ingrained, however the immediate feedback a teacher receives is frequently negative and papers end up in waste baskets after a cursory glance (Marzano & Arthur, 1977,

cited in Semke & College, 1984). Murphy (1997) completed a study in Hong Kong with a small first year EFL class. One week after correcting his students' papers he had them rate his corrections for usefulness. None of his students found his final comments, errors indicated but not corrected, or the final grade useful. Although not an objective measurement of usefulness, this study does illustrate some students' viewpoint towards corrections. To be of some use, according to his students, the error had to be teacher corrected (Murphy, 1997).

Teacher instruction, direct or indirect techniques, full or selective error correction, or delayed effects have not affected writing ability or error correction according to Wei (2008). In their study, Semke and College (1984) found that, "student progress is enhanced by writing practice alone. Corrections do not increase writing accuracy, writing fluency, or general proficiency" (p. 195). Truscott (1998) lists a multitude of studies that have failed to find any benefits of corrections either in writing or speech: Cohen and Robbins (1976); Hendrickson (1981); Kepner (1991); Lightbown (1983).[7]

However, Myles (2002) states that improvement in the writing process will not take place without individual attention and sufficient feedback on errors. Wardhaugh (2002) claims mistakes related to irregular inflectional morphology should be attended to early because non-native speakers may fossilize these mistakes (Koffi, 2010). Contradicting Krashen (1984) and Zamel (1985), Ferris' (1993) study, which conforms with Leki's (1991) and Radecki and Swales' (1988) earlier findings,

[7] For a complete list see Truscott, 1998, p. 123.

suggests that students both attend to and appreciate teachers pointing out their grammar problems.

In Radecki and Swales (1988), the majority of students had a positive or neutral reaction to a heavily marked paper and felt satisfied that their teacher had marked their paper. The study found: a) most of the students appreciated comments, but still expected the instructor to correct all their surface errors; b) nearly all the students reviewed their corrected work before a test or examination; c) there was no consensus as to which was more important, content or linguistic errors; d) more than half the students felt reluctance or hostility towards revision and that there was no redeeming value in rewriting. In a more recent study Kavaliauskiene (2003) found 79% of her respondents claimed teacher correction was necessary, and 84% thought it was effective. The two major combatants in error correction have been Truscott and Ferris.

Truscott–Ferris Debate

The belief that error correction works is intuitively strong; students, teachers and researchers have a great deal of difficulty believing it does not work. Truscott (1996), citing Long (1977 & 1991) states that the acquisition of a grammatical structure is a gradual process and can not therefore be a transference of knowledge (here is your error, this is the correction, problem solved). Continuing with his argument, Truscott (1996) states that syntactic, morphological and lexical knowledge are acquired in different manners (Schwartz, 1993), which suggests that one error correction method will not be sufficient. "To be effective, correction must address

these processes, not just pass information from teacher to learner" (Truscott, 1996, p. 344).

Ferris (1999) agrees with the statement that syntactic, morphological and lexical knowledge are acquired differently, but suggests that if students are taught to focus on editing, shown some methods to identify frequent and serious errors, and given explicit knowledge of rules when needed, students can successfully self-edit their own texts. Truscott (1996) counters that, teachers and researchers are unclear about the exact sequence that L2 grammatical learning follows and therefore may not be following the natural order of acquisition, thereby offering correction on a point the student is not ready for. When and what point a student is ready for is a complex issue, that can not be realistically determined as yet, and without this knowledge correction will not be helpful (Truscott, 1996).

Commenting on selective error correction (Bartram & Walton, 1991) Truscott (1996) states that: error correction must be consistent with learners' developmental stages; errors do not always fit into one category; and teachers must find all the relevant errors, identify them correctly and avoid over inclusion. Teachers fail to notice errors, are unclear why the error occurred, provide a complex explanation or just do not have the time or patience, which affects the quality of their comments (Cohen & Robbins, 1976; Zamel, 1985): Whereas students tend to only make a mental note of the corrections, feel they are being punished if asked to rewrite, or are overwhelmed by the quantity (Truscott, 1996). To combat teachers' inconsistencies and unwillingness to correct errors Ferris advocates preparation, practice and

prioritizing: teachers need thorough grounding in linguistic/syntactic theory; they need ample opportunity to practice error correction; and they need to prioritize the type of feedback they are giving to students. She states that, Truscott's argument about selective error correction is based on dated research and therefore does not reflect current practices (Ferris, 1999).

Ferris argues that some English-speaking university faculties are less tolerant of "typical" ESL errors and students should become self-sufficient in editing their own writing. She continues saying to not correct may frustrate students even more (Ferris, 1999). Truscott (1996) disagrees with this and states, "when students hold a demonstrably false belief about learning, the proper response is not to encourage that belief, but to show them it is false" (p. 359). Ferris (1999) claims teachers must listen to their students about when, how and how much feedback should be given, and Truscott (1999) states that students' beliefs are circular, because they have been corrected, they are encouraged to believe they need it, therefore ask for it.

Truscott's (1996) claim is that error correction has no value as it is "typically done in terms of isolated points without reference either to the process by which the linguistic system develops or to the learner's current developmental stage" (p. 347) and therefore is superficial. To illustrate this claim Truscott (1996) alludes to: (Lightbown, 1985) pseudoacquisition–apparent success that turns out to be only apparent; (Krashen, 1987) learning versus acquisition; and (Schwartz, 1986) learned linguistic knowledge versus competence–each refers to the student's knowledge of rules, however the inability to properly use them in practice. Ferris (1997) indicates

that error correction comes in many forms, poorly done correction will not aid students and may even mislead them, but stresses that effective correction (selection, prioritized and clear) can help some students. In response that some students may benefit, Truscott (1996) argues that there are too many variables: gender, age, educational background, aptitude, field-independency, and tolerance for ambiguity, anxiety and countless others (p. 336).

In Sheppard's (1992) study using response to errors and response to context, it revealed there was no advantage for the error-correction group and actually suggested that students' fear of making mistakes led them to limit the complexity of their writing (Truscott, 1996). Truscott further argues, citing Gardner and MacIntyre (1993), that language learning anxiety has a negative effect on learners. However, Brown (2007) distinguishes between foreign language anxiety, debilitative anxiety and facilitative anxiety, where the latter is a "helpful" anxiety.

Truscott (1996) actually states that grammar correction has harmful effects. In Knoblauch and Brannon's (1981) study, students wrote more because of positive attitude towards their writing, which was attributed to less error correction. The time students and teachers waste could be better spent looking at organizational and logical components of the students' writing. Learning is most successful when it involves a limited amount of stress (Truscott, 1996). Ferris (1999) agrees that error correction is a time consuming and exhausting job but states that, she is opposed to paying attention to every error or the neglection of linguistic accuracy. She suggests that any further research into error correction must be in accordance with three crucial factors outlined

in Ferris and Hedgcock (1998, p. 202): a) grammar feedback and instruction must be carried out selectively, systematically and accurately; b) individual student differences must be accounted for; and c) studies must be designed and executed appropriately (Ferris, 1999).

For error correction to be valued by students in must be administered consistently. Santos (1988) found that the older the (NS) professor the less irritated they were about student errors, and NNS professors were more critical about students' errors than NS professors. Kavaliauskiene (2003), citing Bartram and Walton (1991), offers that, you never correct a mistake you always correct the person. As an alternative to correction, Rosen (1987) advocates using the student's error to analyze (error analysis–Kroll & Schater, 1978) what patterns of errors the students are producing to aid in planning future lessons. Students are more likely to grow if teachers respond to content, however if the teacher is going to combine content and corrections Rosen (1987) suggests selecting one or two types of errors. Wei (2008, pp. 28-29) lists several ways to deal with student errors: a) be tolerant because errors are a natural part of learning; b) become familiar with and master as many error correction strategies as possible; c) focus on global rather than local errors-those that are of high frequency and stigmatize; d) indirect and delayed is preferred to direct and immediate especially in conversation; e) lexical correction is preferred to grammatical correction in writing (Morris, 1999); f) give priority to meaning and meaning related problems (Semke, 1984); and g) combine teacher-evaluation, peer-evaluation, and self-evaluation (Hedgcock & Lefkowitz, 1992). Grammar correction rarely works and is

retrospective–it looks back at something students have already learned and reminds them they have not got it right yet (Wei, 2008).

Research Questions

This study will involve grammar correction, Emails, noticing, and interactions. Specifically the study will examine: Do recasts in an interactive Email exchange between a NS teacher and students of an EFL program help reduce targeted errors in future exchanges?

A second question: Does bolding recasts result in fewer errors being made in future exchanges will also be addressed.

Chapter III

METHOD

Participants

Twenty-seven[8] first year, second semester, EFL students at a 4-year university in Korea, were selected (convenience sample) to participate in this experimental study. First semester students receive a University delivered English pretest (Level Test) before being admitted and are placed in classes according to their rankings. At the end of each semester and before the beginning of the subsequent semester, students are again categorized based on their final grade achievement from the previous semester and another freshman final Achievement (Level Test) Test. This procedure is instituted so students placed in groups (classes) are approximately at the same level of proficiency in English.

All of the students are Koreans in their early twenties attending a 4-year university in a midsized city in the central part of Korea. At this university English classes are mandatory for all students for the first 2 years, and therefore none of the students have elected this course nor are English majors. All of the participants have received at least 6 years of formal English instruction in their respective high and

[8] Originally 28 students were enrolled however one student never attended and therefore was never part of the study.

middle schools as mandated by the National Curriculum of Education (2007).[9] Each of the participants was eligible to participate voluntarily in an Email exchange with their NS English teacher.

Design

The students were divided into three groups according to the number of Emails they sent to their instructor during the first 2 weeks of the semester. Errors were tabulated during this period but recasts were not used as an error treatment. Therefore, error correction was delayed for the first 2 weeks. The students were ranked in descending order and placed into alternating groups: the first student was placed in Group One; the second student in Group Two; the third student in Group Three; the fourth student in Group One…until all the students were in one of the three groups (see Appendix B). The rational was to assure that each group had the same number of active participants (stratified sampling: Fraenkel & Wallen, p. 476).

One group received bolded recasts of the targeted errors (this group will be referred to as Bolded Recast Group). The goal in grammar correction is for students to become aware of the gaps (noticing the gap) in their grammar and the target grammar (Truscott, 1998). The second group received recasts of targeted errors without the bold font (referred to as Recast Group in this paper) and the third group received no feedback for the targeted errors (referred to as Control Group). To satisfy ethical requirements all students were given some feedback on a selected number of errors. All feedback was in the form of recasts with no explicit comments or explanations. It

[9] The original Korean National Curriculum was used and therefore had to be translated into English by a Korean graduate of a TESOL-MALL master's program in the same city.

was not possible to control for any help students may have initiated on their own outside of class time in production or input practice. Also, a follow-up questionnaire was used to tease out some additional information, which was not part of the original design; it was administered after the semester was completed. The questionnaire consists of five questions written in both English and Korean (see Appendix C for questions and answers to the questionnaire).

Targeted Errors

Four errors were selected for corrective feedback (recasts): past tense verbs, articles, prepositions, and personal pronouns (including personal adjectives) (see Appendix D for some feedback examples of the daily email exchanges). All groups received feedback in at least two of these errors. Two errors (past tense and articles) were chosen by the researcher to be targeted. Focus on feedback needs to be limited, which is supported by Doughty and Varela (1998), Doughty (2001), Han (2002), and Kim (2006).

Past tense and articles were selected as they were identified as the most frequently occurring errors in a previous study (Bitchener et al., 2005).[10] The other two errors (prepositions and personal pronouns) were corrected in the control group. Santos (1988) found articles to be the most prevalent error for the Korean student he studied and pronouns were second. All the students received formal instruction in simple past tense during week 7 of the semester as part of the curriculum. Present

[10] In the original study prepositions occurred more frequently but were not chosen for target errors as they were deemed too difficult for the level of this class.

simple tense and future tense were also part of the curriculum and therefore past tense could not be overlooked. Even though past tense was taught as part of the curriculum it was consistent across all groups and for each individual.

Procedure

Participation in the exchange was voluntary and the Emails were not graded. Fergeau (1999) found that grading errors promoted resistance to use new language structures. However, the more Emails a student sent the more "English Money" they received and English Money was the sole criteria in determining their participation/ homework grade.[11] Students could send as many Emails as they wished but they only received English Money for one Email in any 24-hour period, therefore limiting the number of Emails received from each student at any given time. This deters students from sending a "batch" of Emails during one sitting and also assures an evenly spread span of data collection over the course of the semester, which better represents the students' language development over time.

The primary reason for the Email program is to enable students to use and produce English outside of the classroom, something most EFL students do not have an opportunity to do. EFL learners do not have adequate access to the target language (Campbell, 2004) and return to their mother tongue as soon as they leave the classroom (cited in Chen, 2005). So that each student felt comfortable within their own level of performance, no limit was placed on the length or topic selection of the

[11] 'tokens' are received for many things including: homework assignments, projects, speaking English in class, office visit.

Emails. The only restriction was that students must use sentences, which was consistent with the type of answers they had to give orally in class. To help facilitate a casual and informal setting grammar rules dealing with punctuation and capitals were not strictly enforced. Rosen (1987) states writing should not be seen as a test, to produce perfect prose, but a chance for the learner to develop their present language capabilities. The students are not usually required to write much in these types of classes as the focus is on conversational English. Emails were chosen as a mode of conversing because they are easy to administer, the teacher has some control over the direction the Emails traverse, and Emails have some commonalities with oral communication.

Data Collection

The students were also invited to participate in three "special assignments" through out the semester. There were other assignments assigned as well (i.e., posters) so students would not be too suspicious with these assignments. The instructions for the three special assignments were that students were to log-in to their email account at a predetermined time and e-mail back their answer to a question posed to them by their instructor (see Appendix E for a complete list of prompts). They had a limited amount of time (10 minutes) to complete the assignment. These special assignments were in fact, the pretest and posttests to be analyzed in this study. They were administered at the end of week 2, week 7, and week 13. Again students were requested to answer in full sentences. To keep consistent with the Email exchange and

not to raise too many suspicions, English Money was offered as a motivator to participate.

Analysis

The original focus of this paper was to compare each group's daily Email error rate reduction over a period of 13 weeks; also using a pretest, an intermediate-test and a posttest, make inter-group and intra-group comparisons. However, due to a high mortality rate (n = 9 reduced from n = 27), which would prevent any generalizations; the original design was modified post hoc. According to Fraenkel and Wallen (2009), "of all the threats to internal validity, mortality is perhaps the most difficult to control" (p. 168). The data presented in this study were obtained from participants who sent 70 or more Emails over the course of the 13 week period and are therefore a subset of the original 27 EFL students who were invited to participate in the student-teacher Email exchange.

For each participant the total number of obligatory occasions was calculated for each Email. Obligatory occurrences were used instead of T–units because this study focuses on grammatical accuracy of two specific linguistic features. Mackey and Gass (2005) refer to this as "suppliance in obligatory contexts (SOC)" (p. 232). Obligatory occasions are the aggregate of attempts (either a correct or an incorrect usage) and omissions of a targeted word/token selected for corrective feedback (see Appendix F for examples of errors and obligatory omissions). The number of errors (incorrect usage plus omissions) was then divided by the amount calculated in obtaining obligatory occasions to produce an error rate. Error rate was used as apposed

to accuracy performance as this paper's main concern is error correction. The total number of errors and the total number of obligatory occasions for a period of 1 week were then used to calculate a weekly error rate for each participant. A separate calculation was used for each targeted error (articles and past tense).

The weekly error rates were then used to obtain a mean and a standard deviation for each participant. Using this SD a perimeter was graphed on a line chart (M + 1 SD; M – 1 SD or z+1; z-1) for each targeted error, and for each participant (see Appendixes G and H for each participants line graphs). Using this graph outliers were identified and will become the focus of the analysis. An outlier in this paper will be any result (error rate) on, above the upper, or below the lower boundaries of the perimeter established by ± one SD (z+1; z-1).

Two colleagues assisted with inter-rater reliability calculations. Each rater was provided with Emails from a different and specific time period. Rater One was provided with Emails from the first 2 weeks and Rater Two was provided with Emails from week eight to rate my calculations in those weeks. The results were 93% and 95% compatibility, respectively. The differences were attributed to different interpretations of what the students were expressing. For any sentence there are a variety of possible reconstructions depending on: a) what the reader senses the writer meant and b) the reader's ability to predict how the student writes (Bartholomae, 1980). The primary concern is consistency which was strictly adhered to by writing down every unique situation so they could be dealt with in the same manner in future Emails (see Appendix I for notes on how I treated errors).

Chapter IV

RESULTS

In experimental studies, normally the mean and standard deviations for the pretests and posttests, as well as the results of the ANOVA, would be presented first. However as explained in the previous section, in this study, due to a high rate of participant mortality, the primary focus will be altered to an intra-group/individual participant approach. Additional information concerning this decision will be further explored in the discussion section.

The research question "Do recasts in an interactive Email exchange between a NS teacher and students of an EFL program help reduce targeted errors in future exchanges" must however be addressed.

Table 1 shows each group's aggregate error rate* for the period.

Table 1

Article Intergroup Error Rate % Descriptive Statistics for the Sample (n = 9)

Group/wk	2	3	4	5	6	7	8	9	10	11	12	13
BRC	38	70	42	33	69	48	59	54	50	61	71	68
RC	57	63	30	83	65	63	80	84	67	94	64	67
CG	46	62	40	48	70	69	62	50	72	86	66	80

**Note.* The percentages were calculated as the total errors divided by the total obligatory occasions for the group not by averaging the weekly % of each member of the group

Figure 1 shows a negatively skewed distribution/ polygon, if the error rate was decreasing over time the distribution would be positively skewed.

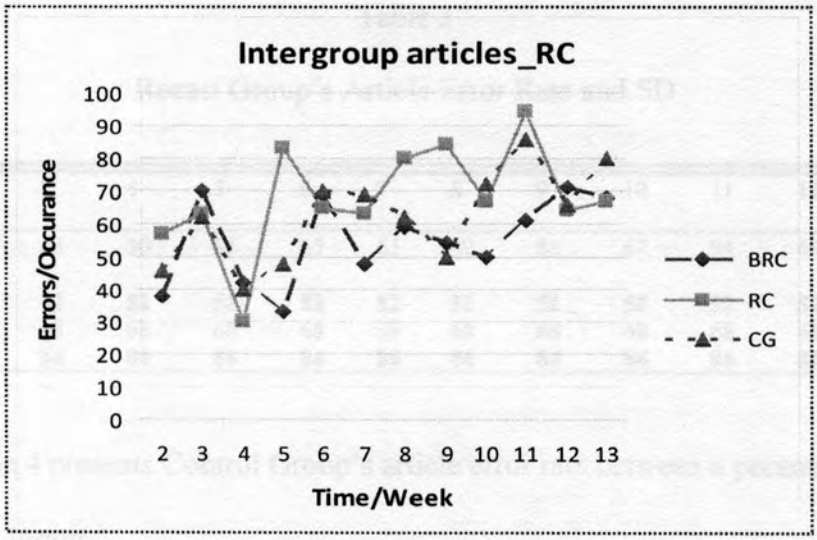

Figure 1

Intergroup Error Rate for Articles

Table 2 presents Bold Recast Group's article error rate between a perimeter (z+1; z-1) for that group.

Table 2

Bold Recast Group's Article Error Rate and SD

Wk	2	3	4	5	6	7	8	9	10	11	12	13
Error rate	38	70	42	33	69	48	59	54	50	61	71	68
SD	**42**	**42**	**42**	**42**	**42**	**42**	**42**	**42**	**42**	**42**	**42**	**42**
Mean	55	55	55	55	55	55	55	55	55	55	55	55
SD	**68**	**68**	**68**	**68**	**68**	**68**	**68**	**68**	**68**	**68**	**68**	**68**

Table 3 presents Recast Group's article error rate between a perimeter (z+1; z-1) for that group.

Table 3

Recast Group's Article Error Rate and SD

Wk	2	3	4	5	6	7	8	9	10	11	12	13
Error rate	57	63	30	83	65	63	80	84	67	94	64	67
SD	**52**	**52**	**52**	**52**	**52**	**52**	**52**	**52**	**52**	**52**	**52**	**52**
Mean	68	68	68	68	68	68	68	68	68	68	68	68
SD	**84**	**84**	**84**	**84**	**84**	**84**	**84**	**84**	**84**	**84**	**84**	**84**

Table 4 presents Control Group's article error rate between a perimeter (z+1; z-1) for that group.

Table 4

Control Group's Article Error Rate and SD

Wk	2	3	4	5	6	7	8	9	10	11	12	13
Error rate	46	62	40	48	70	69	62	50	72	86	66	80
SD	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**	**48**
Mean	63	63	63	63	63	63	63	63	63	63	63	63
SD	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**	**77**

Figure 2 presents the Bold Recast Group's article error rate imprinted on a perimeter (z+1;z-1) for that group.

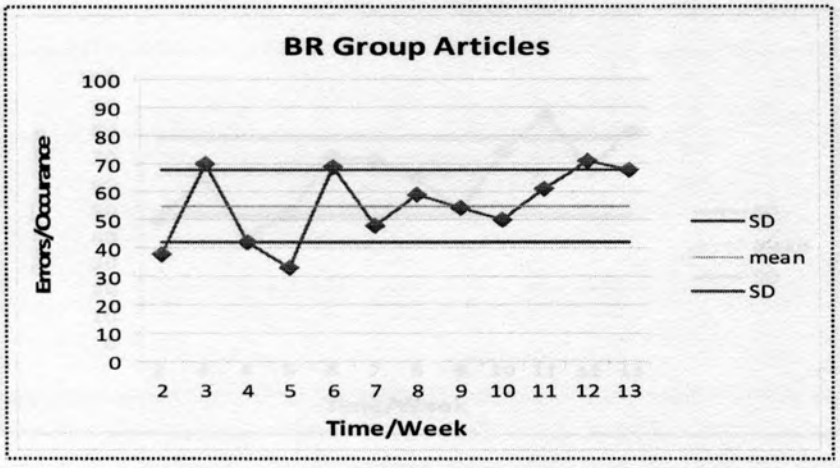

Figure 2

Bold Recast Group's Article Error Rate

Figure 3 presents the Recast Group's article error rate imprinted on a perimeter (z+1;z-1) for that group.

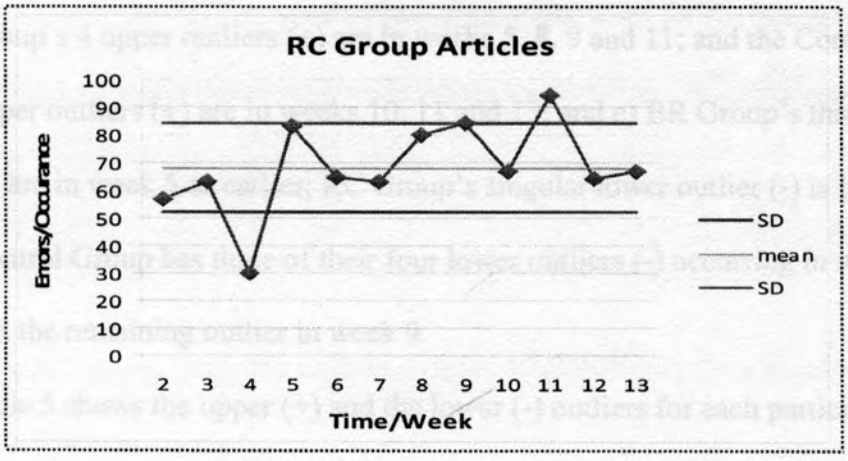

Figure 3

Recast Group's Article Error Rate

Figure 4 presents the Control Group's article error rate imprinted on a perimeter (z+1;z-1) for that group.

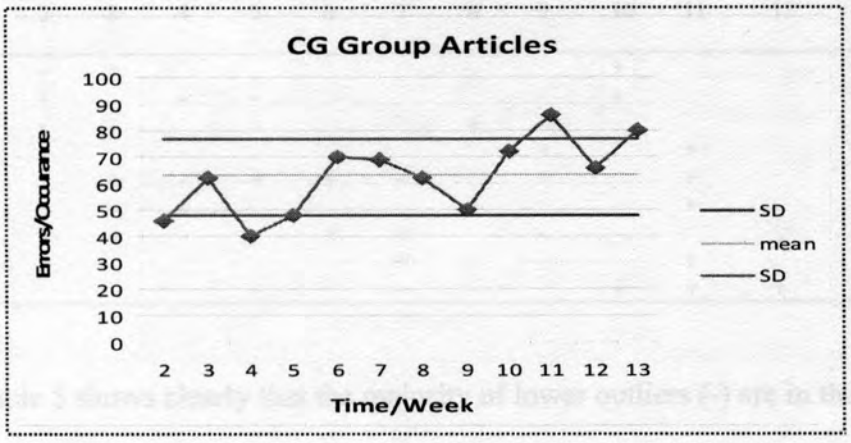

Figure 4

Control Group's Article Error

Comparing Figures 2-4 displays: a) the BR Group has a tighter (smaller range, z+1; z-1) and a lower error rate perimeter (42%-68%); b) BR Group's four upper outliers at or near the upper boundary of the perimeter (+) are in weeks 3, 6, 12 and 13; RC Group's 4 upper outliers (+) are in weeks 5, 8, 9 and 11; and the Control Groups upper outliers (+) are in weeks 10, 11 and 13; and c) BR Group's three lower outliers (-) are in week 5 or earlier; RC Group's singular lower outlier (-) is in week 4; and the Control Group has three of their four lower outliers (-) occurring in week 5 or earlier with the remaining outlier in week 9.

Table 5 shows the upper (+) and the lower (-) outliers for each participant's article error rate.

Table 5

Each Participant's Upper (+) and Lower (-) Outliers for Articles

Wk Part	2	3	4	5	6	7	8	9	10	11	12	13
BR1	-	+							+			+
BR2	-		-	-					+			+
BR4	-	-					+					
R1	-		-					+		+		+
R2		+	-	+	+	-		+		+		
R3	+		-				+			+	-	
C1	+	-	-		+	+		-				+
C2	-					+				+		+
C4				-		-			+	+	+	-

Table 5 shows clearly that the majority of lower outliers (-) are in the first 4 weeks and most of the upper outliers (+) are in weeks 10 to 13, with the majority of them in weeks 11 and 13.

Table 6 and Figure 5 show each group's aggregate past tense rate* for the period studied.

Table 6

Past Tense Intergroup Error Rate % Descriptive Statistics for the Sample (n = 9)

Wk Group	2	3	4	5	6	7	8	9	10	11	12	13
BRC	33	32	64	64	45	39	35	48	57	34	39	48
RC	51	44	38	47	44	61	48	69	38	65	45	60
CG	19	32	48	50	68	37	67	53	56	38	56	56

**Note.* Calculations were made using the same method as articles above.

Figure 5 shows a neutrally skewed (level) distribution/ polygon, relative to Figure 1 (p. 37).

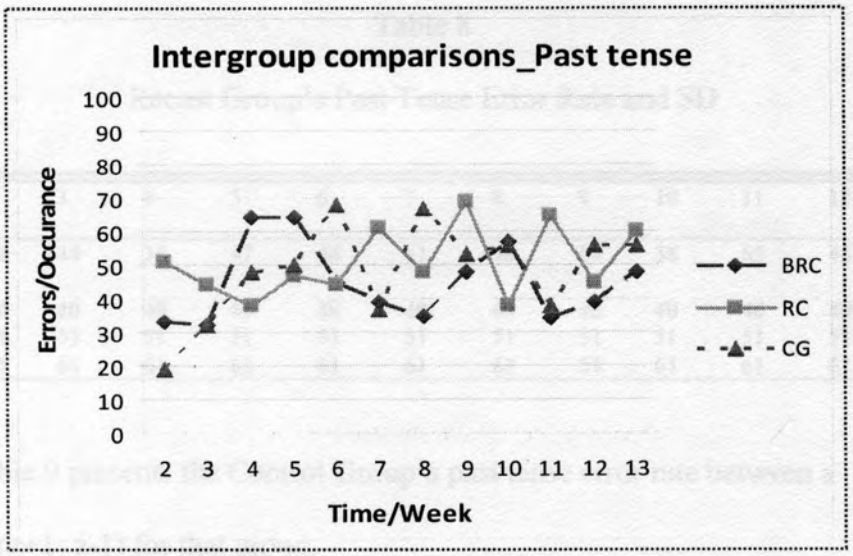

Figure 5

Intergroup Error Rate for Past Tense

Table 7 presents Bold Recast Group's past tense error rate between a perimeter (z+1; z-1) for that group.

Table 7

Bold Recast Group's Past Tense Error Rate and SD

Wk	2	3	4	5	6	7	8	9	10	11	12	13
error rate	33	32	64	64	45	39	35	48	57	34	39	48
SD	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**	**33**
mean	45	45	45	45	45	45	45	45	45	45	45	45
SD	**56**	**56**	**56**	**56**	**56**	**56**	**56**	**56**	**56**	**56**	**56**	**56**

Table 8 presents Recast Group's past tense error rate between a perimeter (z+1; z-1) for that group.

Table 8

Recast Group's Past Tense Error Rate and SD

Wk	2	3	4	5	6	7	8	9	10	11	12	13
error rate	51	44	38	47	44	61	48	69	38	65	45	60
SD	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**	**40**
mean	51	51	51	51	51	51	51	51	51	51	51	51
SD	**61**	**61**	**61**	**61**	**61**	**61**	**61**	**61**	**61**	**61**	**61**	**61**

Table 9 presents the Control Group's past tense error rate between a perimeter (z+1; z-1) for that group.

Table 9

Control Group's Past Tense Error Rate and SD

Wk	2	3	4	5	6	7	8	9	10	11	12	13
error rate	19	32	48	50	68	37	67	53	56	38	56	56
SD	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**34**	**34**
mean	48	48	48	48	48	48	48	48	48	48	48	48
SD	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**	**63**

Figure 6 presents Bold Recast Group's past tense error rate imprinted on a perimeter (z+1; z-1) for that group.

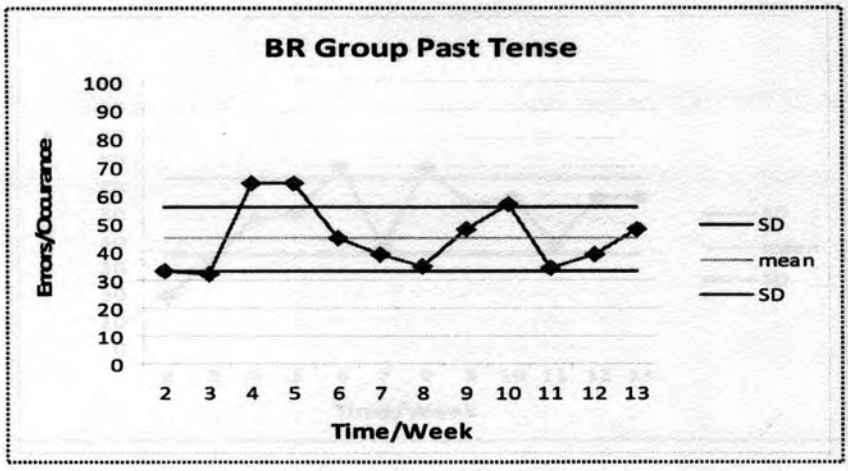

Figure 6

Bold Recast Group's Past Tense Error Rate

Figure 7 presents Recast Group's past tense error rate imprinted on a perimeter (z+1; z-1) for that group.

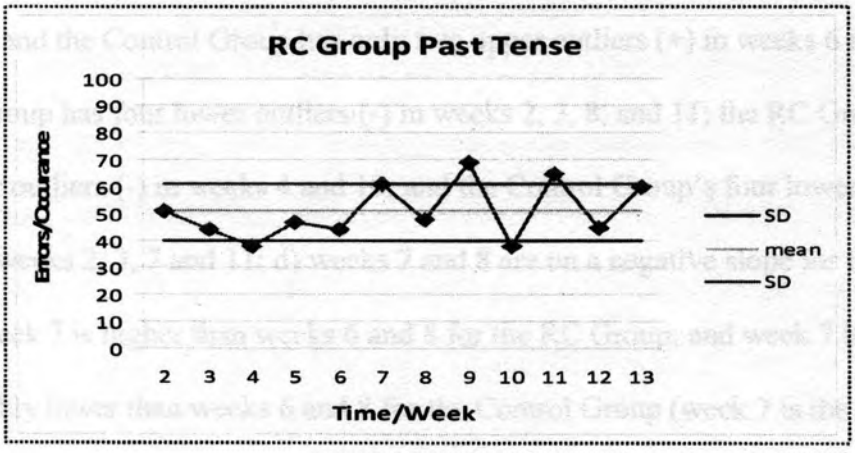

Figure 7

Recast Group's Past Tense Error Rate

Figure 8 presents the Control Group's past tense error rate imprinted on a perimeter (z+1; z-1) for that group.

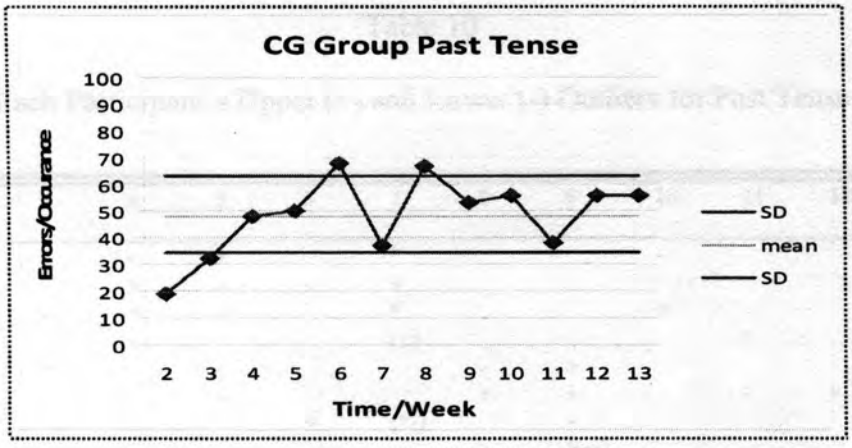

Figure 8

Control Group's Past Tense Error Rate

Comparing Figures 6-8 displays: a) BR Group and RC Group have very similar perimeters (z scores); b) two of the three upper outliers (+) for BR Group are in weeks 4 and 5; three of the four upper outliers (+) for the RC Group are in week 9 and later; and the Control Group has only two upper outliers (+) in weeks 6 and 8; c) the BR Group has four lower outliers (-) in weeks 2, 3, 8, and 11; the RC Group has two lower outliers (-) in weeks 4 and 10; and the Control Group's four lower outliers (-) are in weeks 2, 3, 7 and 11; d) weeks 7 and 8 are on a negative slope for the BR Group; week 7 is higher than weeks 6 and 8 for the RC Group; and week 7 is considerably lower than weeks 6 and 8 for the Control Group (week 7 is the week in which classroom instruction was given for past tense).

Table 10 shows the upper (+) and the lower (-) outliers for each participant's past tense error rate.

Table 10

Each Participant's Upper (+) and Lower (-) Outliers for Past Tense

Wk Part	2	3	4	5	6	7	8	9	10	11	12	13
BR1			-	+		*			-			+
BR2			+	-	-	+						
BR4	-	-	+	+		*			+			
R1	-		-			(+)				+		
R2		+		-			-	+				
R3				-			+	+		-	-	
C1	-				+	(*-)		-				+
C2	-	-	+					(++)				
C4	+	-			+	*		(++)				

* = most attempts
(*-) = most attempts and best week
(++) = worst week
(+) = 2nd worst week

Table 10 shows the same results as in Table 5, in that, most of the lower outliers (-) are at the start of the exchange (weeks 2-5). The most important weeks for past tense are week 7 and the weeks immediately succeeding it (weeks 8 and 9), because it was during week 7 that the participants (n = 9) were given classroom instruction in past tenses. Four of the nine participants made most of their attempts during week 7 and C1 also had her best week (least % of errors) in week 7 as well. However BR2, R1, R2, R3, C2 and C4 all had upper outliers (+) during week 7 or during the two immediate succeeding weeks (8 and 9); with R1, C2 and C4 having one of their highest percentage of errors during this period.

Table 11 displays the total number of Emails each participant sent during the 13-week period, attempts for each (articles and past tense) per Email sent, and the number of omissions for each stated as a percentage of obligatory occurrences.

Table 11

Total Emails, Attempts and Omission % for Each Participant

Participant	Total no. of Emails	No. of article attempts/ Email	No. of past tense attempts/ Email	Article omissions as a % of obligatory occurrences	Past tense omissions as a % of obligatory Occurrences
BR2	97	0.3	0.6	42	3
R1	90	0.7	1.5	39	3
BR1	87	0.6	1.3	33	3
BR4	81	0.5	1.1	34	4
C1	77	0.4	0.9	50	4
R2	76	0.5	0.7	37	4
R3	74	1	1.1	15	1
C4	73	0.6	0.8	20	6
C2	72	0.6	1.7	53	5

In Table 11 the results present the information that every participant attempted more past tense tokens/words than articles tokens/words and the percentage of omissions to obligatory occurrences were higher for articles than past tense.

In Table 12 the number of tokens (words) per Email* for each participant is compared. This table compares weeks 7, 11 and 13 to the first 2 weeks of the exchange. These weeks are of special interest because: during week 7 the participants had past tense in-class instruction; during week 11 the participants were busy with quizzes and assignments in most of their other subjects; and week 13 was the final week of the exchange. The column labeled (+/-) indicates whether the number of tokens increased (+), decreased (-) or remained stable (*) when compared with the number of tokens in the first 2 weeks, "did each participant write more or less as the exchange proceeded?"

Table 12

A Comparison of the Number of Tokens Per Email as Time Proceeded

Wk Part	2	7	+/-	11	+/-	13	+/-	Overall results
BR1	24	25	*	30	+	28	+	Up slightly
BR2	21	9	---	14	-	15	-	Down
BR4	24	23	*	17	-	17	-	Down
R1	31	23	--	24	-	21	--	Down
R2	21	10	--	21	*	20	*	Initial drop then back to stable
R3	33	17	---	34	*	19	--	Down
C1	18	13	-	21	+	15	-	Wk 7 down but stable after
C2	27	34	+	36	++	53	+++	Continuously rose
C4	16	17	*	16	*	12	-	Stable until end

**Note.* Greetings and closures such as "hello my name is ~" and "have a good day" were excluded from the total number of tokens, only the body of each Email was tallied.

As indicated in the column labeled 'overall results,' Table 12 displays that of the nine participants only two wrote more as the exchange proceeded in time. C2 wrote considerably more and BR1 wrote slightly more as the exchange proceeded. Three participants (R2, C1 and C4) remained relatively stable, but the remaining four participants wrote less as the program proceeded. Greenfield (2003) states that "a general decline in student interest and motivation is a natural and familiar process in any pedagogical program as it proceeds" (p. 57).

Because of the huge percentage of obligatory occurrences omissions represented, Table 13 shows the total weekly article omissions as a percentage of obligatory occurrences for the period covered by the exchange.

Table 13

Total Number of Article Omissions as a % of Obligatory Occasions per Week

Weeks	2	3	4	5	6	7	8	9	10	11	12	13
BR1	0	0	50	17	50	25	13	29	60	38	22	67
BR2	0	0	0	0	29	50	50	50	100	60	57	67
BR4	0	100	0	33	33	31	0	75	22	40	50	40
R1	0	0	0	50	50	50	67	100	33	100	73	100
R2	0	0	0	100	0	0	75	0	40	50	63	57
R3	0	0	0	0	29	50	40	0	30	40	0	14
C1	50	0	0	33	100	100	60	38	50	60	46	100
C2	0	0	0	55	46	83	58	50	56	83	55	77
C4	0	0	0	15	50	20	25	38	0	67	40	0

Table 13 clearly shows that for the majority of the participants the total number of article omissions increased during the exchange.

Chapter V

DISCUSSION

Although not possible to draw general conclusions or make any generalities because of the sample size (n = 9) it is possible to contextualize my perceptions and reflections of this study. To paraphrase Denzin and Lincoln (2003) we can learn something from every piece of research undertaken. In this section, I will discuss some of my findings, present some limitations and suggestions for further research, share some additional information teased out by the inclusion of a post hoc questionnaire, which was not part of the original design of this paper, and finally a summary of the discussion.

In answer to the first hypothesis question "Do recasts in an interactive Email exchange between a NS teacher and students of an EFL program help reduce targeted errors in future exchanges," data presented in Table 1 and Table 6 reflects that the error rate in the weeks succeeding week 2 progressively increased higher than the error rate in week 2 for every group. This would suggest that all the participants, regardless of which group they were in, made more errors for both targeted errors, as the exchange proceeded. A possible explanation for this is that students in an Email exchange tend to initially submit a superior first message to convey a good initial impression (see Table 5 and Table 10). Tarone (1983) suggests a shift from their

superordinate (careful) style to a vernacular style and Stockwell (2000) found that as students became more familiar with their interlocutors they became less careful (cited in Stockwell & Harrington, 2003). Warschauer (1996) also stated that students tend to use more complex structures in the TL when using Emails. This over extension may lead to more errors as time proceeds.

Answering the second research question "Does bolding recasts result in fewer errors being made in future exchanges," an argument could be made that (comparing Figures 2-4 and Figures 6-8) the BR Group did perform slightly better (tighter and lower error rate % perimeter) and had less erratic fluctuations (smoother slope) from week to week: However in light of the number of participants this would be a very weak argument. Perhaps a better question would be, why every group fluctuated so much from week to week. According to Mackey and Philp (1998), "if learners are not at the correct developmental level they will not acquire the structure; it is supposedly unlearnable, unteachable, and untreatable" (p. 340). The reason could also be as simple as the students were discussing something familiar to them one week (using formulaic phrases) and something new and therefore a little more difficult in a different week (Stockwell & Harrington, 2003). Rosen (1987) has stated that just the act of writing is a complex and recursive act rather than linear in nature, which could also account for some of the fluctuations.

Table 11 (p. 44) reveals another possibility why the BR Group may have scored better. Three of the top four participants in Emails sent during the study's duration were: BR2, BR1 and BR4, which could indicate that the BR Group (as a

whole) was more motivated. However viewing Table 12 (p. 45) the data conveys a different message. Of the nine participants, only two had longer Emails (more tokens) as the exchange proceeded (C2 and BR1) but, exchanges from C1 and C4 remained stable, therefore indicating that the Control Group may have been more motivated; every participant's exchanges (in the Control Group) remained stable or increased in tokens per Email. The fact that the tokens per exchange remained stable or increased considerably for the participants in the Control Group could also be a factor why their group's error rate remained high.

The data also indicates the participants had a more difficult time with articles. The error rates are lower for past tense than they are for articles; every participant made more attempts and, had fewer omissions per Email for past tense than articles (Table 11). In a study concerning correction accuracy, Ferris et al. (2000), found that there was progress in verb tense but regression in articles even though both errors are considered "treatable" errors. The findings for articles are not surprising given the complex rule structure associated with articles (Bitchener et al., 2005).

The sharp increase in omissions (see Table 13), which contradicts Chamot's 1978 longitudinal study, in that 44 week study omissions decreased (Ellis, 2003), could be another indicator why the error rate increased over time. Because the omissions for articles increased for the majority of participants, this could be seen as an indication that their attention/motivation decreased or they were more preoccupied with other assignments in other subjects and therefore did not focus on form as closely as they did during the beginning of the exchange.

During week 7 every participant was given in-class instruction in past tenses. Viewing Figures 6-8 shows: a reduction in errors from week 6 to week 7 and a further reduction from week 7 to week 8 before the error rate increases in weeks 9 and 10 for the BR Group; the RC Group's error rate rose sharply in week 7 then dropped in week 8 and then continued to 'see-saw' for the remainder of the exchange; and the Control Group's error rate dropped significantly from week 6 to week 7 before increasing as significantly in week 8. This seems to indicate that the students were not developmentally ready for past tense verbs, but the instruction may have enkindled them to attempt more. "We need to recognize that second language learning is a slow and complex process often involving a period of production of correct forms only to be followed by a later period of production of incorrect forms" (Mackey & Gass, 2005).

In a 1996 study Schachter found a lack of tense consistency in L2 output which she labeled "fossilized variation," a phenomenon where a NNS will randomly produce a correct verb usage and shortly afterwards produce an incorrect usage of the same verb (Han, 2002). Dekeyser et al. (2002) states that, some structures are easy to recognize but hard to produce and others easier to produce but harder to perceive. In her 2002 study, Han judged upper intermediate level learners developmentally ready for tense consistency. The participants in this study were not at the upper intermediate development level.

In Table 10, four of the nine participants attempted to use a past tense form more, during this week than any other. If the participants continued attempting to use

these forms in the following weeks, this could explain why the error rate for past tense fluctuated erratically after week seven. Research (Lightbown, 1983; Pica, 1983) has indicated that students tend to overuse forms they have been taught (Truscott, 1998).

Post hoc Questionnaire

As mentioned previously this questionnaire was not included in the original design but, was included to primarily assess if the participants in the BR and RC Groups noticed the recasts in their exchanges with their instructor. Restructuring of the TL grammar may occur if corrective feedback is sufficiently salient that learners notice the gap (Panova & Lyster, 2002). One participant (BR2) stated she noticed the corrections (bolded recasts) but was not sure what she was suppose to do with them (see Appendix C for results of the questionnaire). Schmidt (1990) claims subliminal language learning occurs if the task focuses attention on the relevant features in the input; however the student must also be aware of what they are expected to do with the input. Referring to Schmidt's Noticing Hypothesis 2001, Kim (2006) states that, for the error correction to be effective, the learner must recognize and understand the nature of the correction. Perhaps, if a portion of class time during the beginning of the semester was devoted to what recasts are and how they may assist the student with future exchanges, the student could use this information in Email exchanges and also with classroom discussions.

Every participant answering the questionnaire (n = 6) stated they thought their writing improved over the semester. This is consistent with what Liaw (1998) found in her study. She found that her students' confidence heightened in expressing

themselves in the TL as long as the students continued writing Emails. Interestingly one participant (RC 3) indicated that she felt that her writing did improve over the semester but because she was no longer writing Emails, she felt her writing skill would revert back to "normal".

The most common response to, "what (they thought) was the worst thing about writing Emails" was not receiving English Money if they could not find time to write that day. This does indicate that English Money was a motivator to write. As mentioned in the previous section, perhaps increasing the amount received per Email and if the exchange was worth more towards their final grade, more students would have participated, and with more frequency, in the exchange.

The participants claimed the best thing(s), what they enjoyed the most from the exchange were: a) they learnt new vocabulary, helped with grammar, and improved their English skill–was the most frequent response; b) had a chance to converse with a NS was second; and c) was the first time they wrote in English and they felt closer to their instructor was next. These results are consistent with Warschaurer's 1996 study of 167 university students who felt some of the advantages, among others, of CMC were: a) to learn more about different cultures; b) they enjoyed student–teacher contact; and c) it was a good way to improve their English (faster). Makarchuk (2010) also stated that a benefit of Emails was that students enjoyed sharing opinions and beliefs with their instructor. These responses are encouraging and support an effort to get more students involved.

Four of the six responses to, "would you have preferred (liked) corrections or comments to have been made on your errors or was it OK the way it was", indicated that the students were satisfied with how their errors were treated. One student indicated they would have preferred all their errors being corrected and the other student stated they would have preferred corrections to the recasts. These responses indicate how complicated error correction can be, as stated in Wei (2008). Ferris (1999) claims that teachers must listen to their students; however students often differ in what type of correction they seek. A possible solution would be to address these issues at the same time they are establishing guidelines for the exchange as suggested in Larrotta (2009).

This questionnaire was not included in the original design and was adopted to satisfy concerns whether the participants noticed the recasts. Ideally conducting this questionnaire in person would have been more beneficial; the researcher and each participant could have reviewed some of their Emails together, which could have produced richer more concise answers. This was not possible as the questionnaire was conducted during the interim (between semesters). This resulted in two responses to the final question being confusing, even though the questions were written in both English and Korean, and the students could, if they felt more comfortable, answer in their L1 (5 of the 6 did answer in Korean). In future studies, if a questionnaire is to be used, it is advisable to administer it in person to eliminate any confusing questions or answers.

Limitations and Suggestions

The major limitation of this study is the number of participants. This experiment started with a sample of 27 (n = 27) but due to a high participant mortality rate, it was reduced to a total of nine (n = 9) by the conclusion of the sample period (13 weeks). Hedcock and Lefkowitz (1994) state that, EFL students are less motivated because of their limited need to write fluently and accurately (Ferris, 1999).

One way to increase participation would be to increase the external motivator. By giving more English Money per Email submitted or, by assigning a percentage of the participants' total grade just for Emails (in this exchange Emails were just a portion of the participants' total participation grade) may produce better results. Warschauer (1995) suggests making Email projects an integrated part of the curriculum rather than a stand-alone activity. I have also observed that participation in Email exchanges increases depending on which year the participants are in;[12] seniors tend to participate more than sophomores, which tend to participate more than freshmen. The year in which the participants are in may affect their attitude and motivation towards an Email exchange.

Another limitation to this experiment was the number of participants that completed the pretest, intermediate-test, and the posttest. The test may have also been compromised. In an effort to make the posttest comparable in difficulty to the pretest (Mackey & Gass, 2005) the assignments presented to the participants were almost identical in phrasing (see Appendix E).

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[12] This is the sixth semester this researcher has run an Email exchange at this university: one semester with seniors, three with sophomores and two with freshmen.

One participant (C4) submitted a perfect Email in response to the last special assignment (posttest), which was much better than her previous efforts. By phrasing each 'special assignment' (test) almost identically and by adding an intermediate–test (week 8) some of the participants may have submitted work above their "normal" standard due to "sensitization" (Fraenkel & Wallen, 2008, p. 172). One reason the intermediate–test was included was for reliability and validity (triangulation), to insure that each participant was submitting a "true" sample of their work. It was suggested that to prevent this from happening in the future the tests could be given as an in-class assignment. This is a possible alternative as all the 'special assignments' (tests) had a time constraint to prevent any editing, something that may have been present during daily Email exchanges.

Many of the Emails were of varying length for each participant or got shorter in length as the exchange proceeded. There were no limitations established in this study so students would not feel "burdened" by such a limitation. In Larrotta (2009) she established guidelines with her students in class prior to the exchange commencing, which is one way to standardize Email lengths. A procedure to increase the number of past tense obligatory occasions is to ask the students to write their entries as a "dialogue with oneself" as described in Alvarez and Busby (2002). Using this method should increase past tense obligatory occasions as students would be writing in a reflective manner.

The biggest hurdle, mentioned previously, was to get the students to participate. I have suggested ways to increase participation; however another possible method of

using Emails, as suggested by Belisle (1996), is to routinely assign another member of the group to correct another student's mistakes. By incorporating this into the exchange it may have a camaraderie affect, increasing exchanges and motivation and, may also assist in teaching self-editing simultaneously.

Summary of Discussion

Although the number of participants in this study are limited (n = 9), the data does seem to support that recasts in a 13 week Email exchange will not result in less targeted errors. One of the reasons explored earlier was, according to Han (2002), students below upper intermediate level are not ready for past tense consistency. The students' involved in this exchange are not at the upper intermediate level.

Another possible reason is that the students were too busy reading/processing the Emails for meaning and therefore were less attentive to form. Van Patten (1994) states that learners tend to process input for meaning before they process input for form. Stockwell and Harrington (2003) claim that learners need to notice their errors and make corrections for learning to take place. As BR2 stated, she noticed the recasts but was unsure what to do with them. Nicholas et al. (2001) concluded after their review of the research that, recasts are more effective when the learner is aware that the recast is a correction to accuracy of the form rather than a reaction to the content.

One of the participants (BR1) claimed the thing he liked the least about the Email exchange was asking for help while interpreting my replies. When giving grammatical and rhetorical feedback, one of the main considerations, according to Myles (2002), is the level of proficiency and degree of readiness of the learner. Philp

(2003) adds, the learner will tend to reject input they can not absorb in terms of their current knowledge. Although I attempted to reply at the learners' level or "ι + 1", it is possible I over-estimated my participants' degree of readiness.

It has also been mentioned that noticing the gap is not enough, that students must also revise/repair their errors (Stockwell & Harrington, 2003). The data presented earlier suggested the participants' level of motivation may have declined as the exchange proceeded (fewer tokens per Email and more article omissions). Guenette (2007) citing Ferris (2003), states that feedback and correction will not have any effect if they are not revised by students. Ferris (1999) reported that EFL students are less likely to revise as they are less motivated, they only need to write English in the classroom (or in Emails in this case).

Chapter VI

CONCLUSION

The statement "the belief that error correction works is intuitively strong", rings so true for this researcher. The results of this study, although limited, indicate that recasts did not result in fewer errors being made in future Email exchanges. These results were surprising as well as disappointing. Although generalities can not be made, this study did satisfy, disappointingly, this researcher's concerns regarding recasts in an Email exchange. As a teacher I wanted to be assured my efforts were making a difference.

Researchers (Long, 1977; Truscott, 1996), who claim grammatical structure is a gradual process and not just a transfer of knowledge appear to have the right assumption. Wei's (2008) list of factors concerning corrections and feedback (presented previously), reflect how complicated a process, error correction really is. Some students do request and expect some error correction, as indicated in the questionnaire, and these requests should be administered to, and other students do not.

Participants involved in this study were freshmen at a beginner's level, and may not have been developmentally ready or internally motivated enough. Using upper intermediate participants and having safe guards in place to insure participation is recommended for further research in this area. To insure there are enough

participants in future research, it may be advisable to use more than one class, provided they are at the same developmental level.

The question now is "if recasts do not work, as a corrective measure, should they be abandoned." Lyster (Panova & Lyster, 2002) states that, recasts serve an important communicative function by providing teachers with "efficient and natural ways of responding to students" (p. 591), and recasts also provide students with support (scaffolding) at the same time. Jacobs (2008) encourages teachers to explore the different aspects of CMC stating, "by engaging in writing in online communities teachers can model behaviors and thinking process…and reach beyond the walls of the classroom" (p. 209). In their Email exchange, Van Handle and Corl (1998) took note of common errors, misuse of new vocabulary and structures, then addressed these errors in subsequent classes as part of their regular curriculum. Emails are a decisive method of testing whether classroom teaching methods are producing results and where students need additional support. Larrotta (2009) claims that her Email exchange helped her become more tolerant to learners' mistakes, helped in lesson design, and revealed to her that it was not necessary to correct every mistake. Teaching practitioners can learn from this.

As previously mentioned, this project was partially spawned by my desire to address the question many consciences teachers ask themselves "are my methods making a difference in my students' developmental progress." The results were somewhat disappointing; however by undertaking this project I now can reassess and alter how I approach the teacher–student exchange. This project was partially

reflective in nature, and if permitted, I would like to be allowed to make a personal reflection: 'The teacher in me was constantly at odds with the researcher in me.' I have conducted a teacher–student Email exchange for the last six semesters and have enjoyed it immensely. By critically analyzing every Email and adjusting my responses so they were not natural but, were designed to elicit a reflective response from my students, changed my emotional connection towards the exchange–it was less fun!

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APPENDICES

APPENDIX A

Email Exchange to Show Interaction

Email Exchange to Show Interaction

Tt Email (first turn): the first BOOM of thunder was quite loud - i'm a canadian (name of student-C4) - what did you do this *weekend* – dave

Ss Email (2nd turn): My *weekend* is very busy. I almost go hometown. so I have much to do . what did you do this *weekend*, too?
bye teacher Dave see you ^.^

Tt Email (3rd turn): i went to the *gym* on *saturday* and *swam* on *sunday* - other than that i did homework - where is your hometown? – dave

Ss Email (4th turn): wow! do you like *sport*? Moderate *exercise* is good for the *health*.
My hometown is Cheanan. as i let you know last time famous food 'hodugyja' forget for me by Email?
Oh .... I'am sad

The above exchange is an example of interaction (three turns or more) related to the

first

turn. I have used italics (not in original exchange) to indicate the topic being explored

in each turn.

APPENDIX B

Ranking of Students for Group Placement

Ranking of Students for Group Placement

Student	Number of Email during first 2 weeks	Reference name*
1	11	BR1
2	10	R1
3	10	C1
4	10	BR2
5	10	R2
6	10	C2
7	9	BR3
8	9	R3
9	8	C3
10	8	BR4
11	6	R4
12	5	C4
13	5	BR5
14	5	R5
15	5	C5
16	4	BR6
17	4	R6
18	3	C6
19	3	BR7
20	3	R7
21	1	C7
22	1	BR8
23	1	R8
24	1	C8
25	1	BR9
26	1	R9
27	0	C9
28	0	BR10

* to assure participants remain anonymous a letter/numbering system will be used to reference participants
BR = Bolded Recasts
R = Recasts
C = Control group

APPENDIX C

Post hoc Questionnaire Questions and Answers

Post hoc Questionnaire Questions and Answers

1 Do you think your writing improved (got better) over the semester? 학기중에 쓰기 실력이 향상되었다고 생각합니까?

BR1: yes a lot
BR2: yes a little
BR4: yes a little, but after the semester ends will revert back to normal because no more Emails
RC1: yes
RC2: yes a little
RC3: yes of course, thank you

2 What was the best thing about writing Emails
메일을 쓰는 것에 관하여 무엇이 가장 좋았나요?

BR1: chance to talk with a NS
BR2: helped elevate English skills
BR4: increase vocabulary
RC1: increase vocabulary, close friends
RC2: 1st time wrote in English
RC3: helped with grammar

3 What was the worst thing about writing Emails?
메일을 쓰는 것중에서 무엇이 가장 안좋았던 점인가요?

BR1: had to get assistance to interpret my replies
BR2: not receiving money
BR4: not receiving money
RC1: nothing
RC2: not receiving money
RC3: not receiving money

4 Would you have preferred (liked) corrections or comments to have been made on your errors or was it OK the way it was?
메일을 쓸때 실수한 것중에 수정이나 지적중에서 더 좋았단것이 있었나요 아니면 메일을 보낸 그대로 수정이나 지적없는 것이 나았나요?

BR1: OK
BR2: would have preferred every error being corrected
BR4: OK
RC1: OK
RC2: preferred to be corrected
RC3: OK

5 Did you notice any corrections?

교정을 알았나요?

BR1: did notice the bolded recasts
BR2: did notice but did not know what to do with them
BR4: misunderstood the question
RC1: misunderstood the question
RC2: did notice the recasts
RC3: did notice a few recasts

APPENDIX D

Actual Email Occurrences and Replies

Actual Email Occurrences and Replies

Example of Bold Recast:

Email sent by BR1 : i will absent next tuesday because i will go to hospital. i will have a army test soon.and i need a healthy check document

My response: so you will be absent on Tuesday because you will go to **the** hospital for **an** army check-up – ask a classmate or [name of student – class rep] what you missed - dave

Example of non-bolded Recast:

Email sent by R 1
today will part time job.
part time job is surving only 1 day.
so i get up 5.a.m.
very tired.....
have a good weekend dave

My response: so you got up at 5 am that does make for a long day – is your p/t job just for one day? – dave

Note: this e-mail was sent after 5am on the day she got up so it was past tense so R1 was not talking about a future event

Example of Control group:

Email sent by C1
work is to introduce jobl!!
introduce 6 job!!
poster size change?? and size what??
more big or more small??

My response: so you want to introduce 6 types of jobs - sounds good! the change is bigger - i bought 3 posters and will give you one on tuesday - did you get to see 'no brain' last night? how about im chung hee on thursday? –dave

Note: capitals and punctuation were forgiven to keep the writing casual – as well often I would use prompts to try to negotiate a past tense response

APPENDIX E

Writing Prompts

Writing Prompts

Good evening everyone
Please write about the five most memorable things you did in the month of AUGUST. Write as much as possible about each of the five things. Please write in full sentences and remember you must send the email by 1140 – you have 10 minutes no more - dave

Good evening everyone
Please write about the five most memorable things you did in the month of SEPTEMBER. Write as much as possible about each of the five things. Please write in full sentences and remember you must send the email by 910 – you have 10 minutes no more - dave

Good evening everyone
Please write about the five most memorable things you did in the month of OCTOBER. Write as much as possible about each of the five things. Please write in full sentences and remember you must send the email by 1110 – you have 10 minutes no more – dave

APPENDIX F

Calculation of Obligatory Occasion

Calculation of Obligatory Occasion

Obligatory occasions are the aggregate of attempts (either a correct or an incorrect usage) and omissions of a targeted word/token selected for corrective feedback

Correct usage of (the), does not count as an error but does count for obligatory occasion for articles :

Ss Email: i hope time really goes like the wind.

Incorrect usage of (the) also error in past tense so would be one error for articles plus an obligatory occasion for articles and one error for past tense as well as an obligatory occasion for past tenses

Ss Email: today i watch the movie.

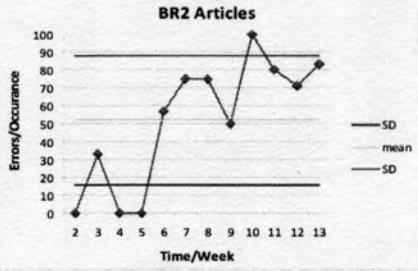
Omission of a targeted word (an), counts as an error and an obligatory occasion for articles:

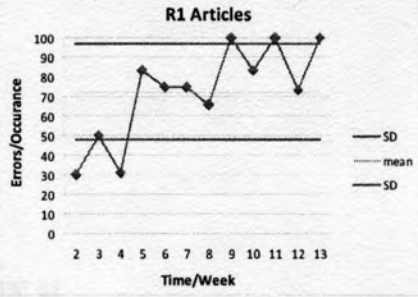
Ss Email : ok I submit excuse slip

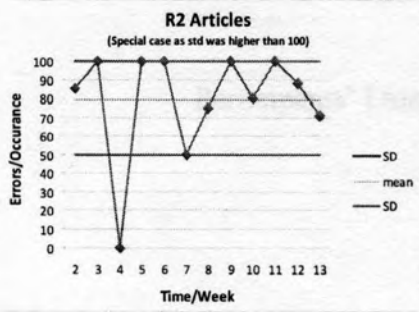
APPENDIX G

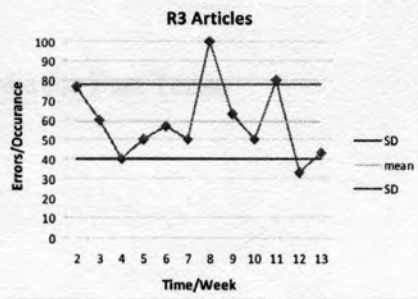
Participants' Line Graphs for Articles

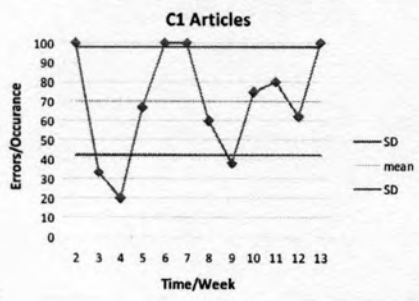
Participants' Line Graphs for Articles

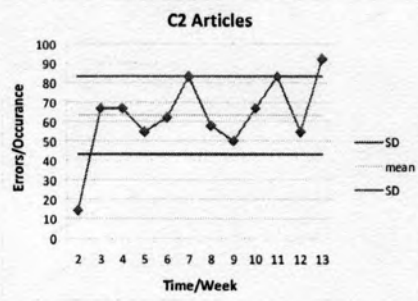


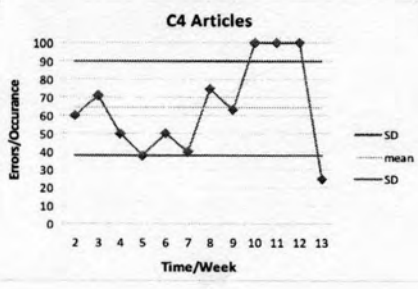








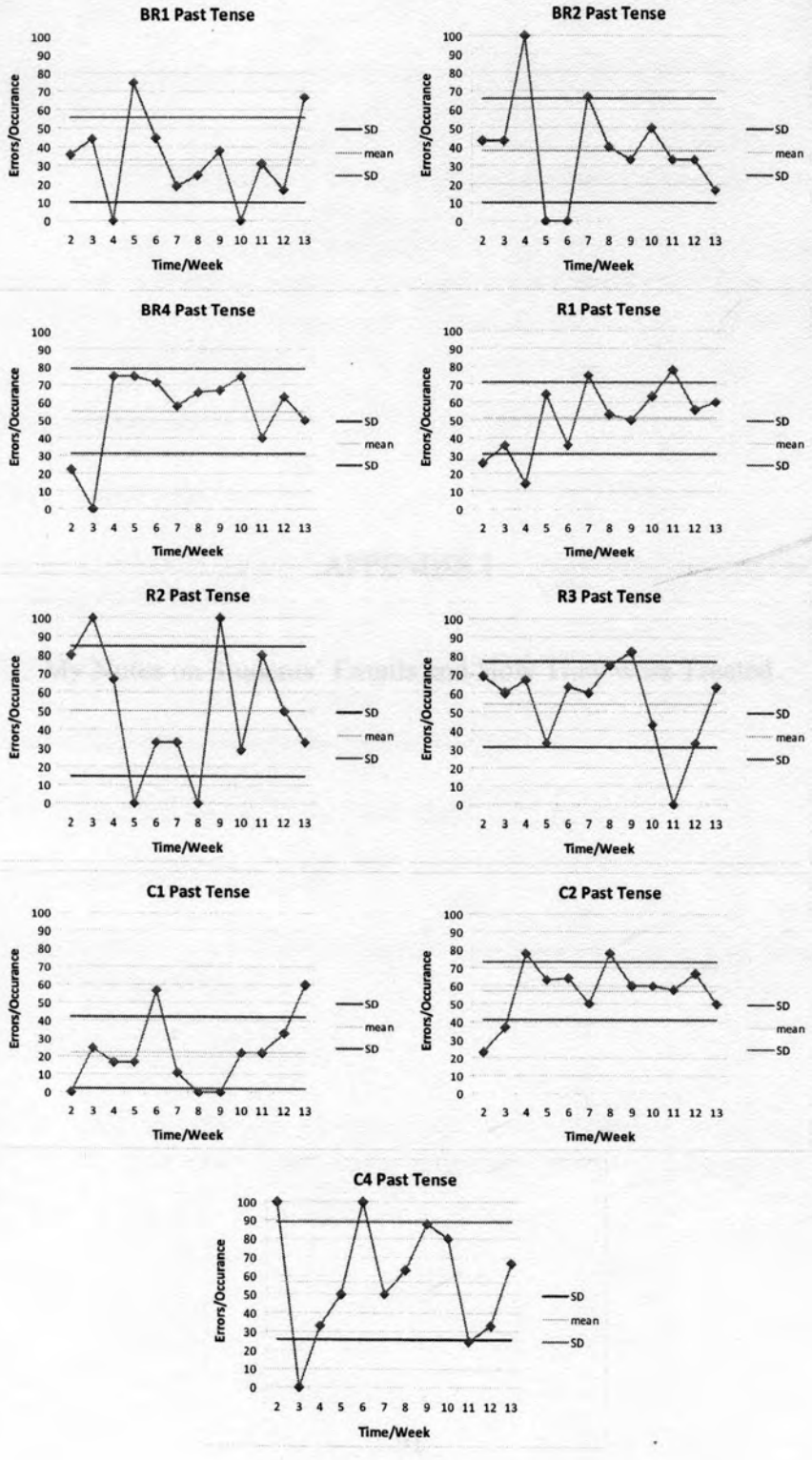




APPENDIX H

Participants' Line Graphs for Past Tense

Participants' line Graphs for Past Tense



APPENDIX I

My Notes on Students' Emails and How They were Treated

My Notes on Students' Emails and How They were Treated

Ambiguity

If a student's Email could be interpreted two ways I gave them the benefit of the doubt:

Ss Email : ok I submit excuse slip – ambiguity as don't know if past or future

Ss Email: i want many money so, i work early. 12pm~10pm. = this sentence could be interpreted as I want a lot of money so I went to work early OR I'll go to work early – in this case I looked at the time it was sent – it was sent at 1030 am so gave the student the benefit of the doubt

Multiple Uses of Phrases

Ss Email: have a nice day!

Many students closed their Emails with this phrase – it was counted once the first time and anytime there after was not

Past Tense Errors

Students answering questions with simple present:

Tt Email: what time did you go to bed last night?

Ss Email: I usually go to bed at 1 am

Although I was hoping for a reflective answer (past tense) I did not give them an error as it is an acceptable answer

Ss Email: I did went

Some students would use the right auxiliary but wrong verb tense or use the wrong aux with the proper verb tense – this was counted as 1 error and 1 obligatory occurrence