

STUDENT-INITIATED ATTENTION TO FORM IN WIKI-BASED COLLABORATIVE WRITING

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This study reports on student initiated attention to form within the collaborative construction of a wiki among pre-service Non-Native Speaker (NNS) English teachers. Forty NNS pre-service teachers from a large Mexican university were observed over a period of a sixteen week semester in an online content-based course aimed at improving their language skills while studying about the cultures of the English-speaking world. A core element of the course was a wiki that was collaboratively created, developed, and revised throughout the course. Students were encouraged to focus on language accuracy while actively participating and interacting with their peers in varied ways. This article explores the degree to which these NNS EFL teacher candidates attempt to correct their own and others' grammar errors in a long-term collaborative task. The article also addresses the level of accuracy these participants achieve and the attention they pay to grammar revision versus content revision. Follow-up interviews with participants provided insight into the perception of the importance of grammar in the context of collaborative technologies among these NNS pre-service teachers.

INTRODUCTION

One obvious benefit of technology for language learning is the creation of opportunities for students to use language in authentic contexts. Such activities encourage students to strive for autonomy in the target language. This study investigates student behavior within a long-term autonomous interactive task. The primary purpose of this paper is to identify students' autonomous language learning ability, specifically focusing on their attention to grammatical accuracy throughout the task. Their performance is evaluated with respect to an autonomy framework (Littlewood, 1996) to identify the degree to which these teacher candidates are able to correct their own and others' grammar errors in a long-term collaborative task. Such observation provides us with an understanding of student behavior when engaged in these kinds of tasks and environments.

LITERATURE REVIEW

Student Attention to Form and Content Based Instruction

While there is general agreement that some attention to grammar is necessary in language teaching, some have argued that inductive, or student-initiated, attention to grammar may be most effective (Long, 1996). Stryker (1997) found that the elimination of grammar from content-based instruction (CBI) resulted in students' demanding formal grammar instruction. In the same article, Stryker concludes that the use of CBI does not preclude grammar instruction; rather it requires that teachers make informed decisions about how and when to teach grammar and encourage the use of self-correcting techniques, thus allowing students to develop responsibility for their learning and use of the target language.

Factors that have been shown to influence students' attention to form include nature of collaboration (Swain, 2000; Swain & Lapkin, 1998), type of task (Storch, 2001; Williams, 1999), student proficiency level (Leeser, 2004), and length of task discourse (Williams, 1999). These few studies have investigated student-initiated attention to form in classrooms where teachers are present to respond to requests. There seems to be no research regarding observation of student-initiated attention to form when working in a "student-only" online environment. Further, there has been little discussion over the role that student-only tasks may play in students' autonomous attention to form.

Such tasks may be most relevant for advanced learners. Ellis (2006) concludes that when dealing with explicit understanding of grammar it may be best to rely upon deduction for simple rules and induction for more advanced rules. While not explicitly addressing CBI, Ellis (2006) states that “focus on form can be incidental, where attention to form in the context of a communicative activity is not predetermined but rather occurs in accordance with the participants’ linguistic needs as the activity proceeds” (p. 100-1). This flexible approach to addressing grammar concerns would alleviate problems of inappropriate matching between the grammatical focus of lessons and the needs and interests of students (Garcia Mayo, 2002). One approach to introducing such flexibility into the language classroom is to employ collaborative practices and principles into the learning process.

Collaboration

Many have argued for the promotion of collaboration among learners (Bruce, Peyton, & Batson, 1993; Storch, 1999). Arnold & Ducate (2006) observed that the context, tools, and participants of a learning environment help to mediate collaborative learning. Swain concluded that collaborative activities, “lead learners to reflect on their own language production as they attempt to create meaning” (1995, p. 141). Researchers have found that collaborative writing contributes to an increased complexity in writing and willingness to utilize peer feedback (Sotillo, 2002) as well as increased grammatical accuracy and overall quality of writing (Storch, 2005). Some have identified that students are likely to actively engage in online collaborative activities due to the public nature of the information and sense of accountability (Sengupta, 2001). Through the act of collaboration, students are exposed to valuable input from others (Vygotsky, 1962), encouraged to produce enhanced output (Oxford, 1997), given more opportunity for practice (Ortega, 2007), and provide effective linguistic feedback for themselves and peers (Vygotsky, 1978). The evolution of collaborative writing may be intrinsically connected with iterations of technology since new developments provide new opportunities for collaboration. Unlike most previous research on collaboration, which has focused upon pair and small group work, the current study incorporates wiki technology which supports a many-to-many form of collaboration.

Wikis and Language Learning

Levy and Stockwell (2006) provide an overview of the distinctions between various types of Computer-Mediated Communication (CMC), including suggestions that asynchronous CMC may allow for more focus on form due to the additional time available for reflection. However, wikis are not included in this otherwise comprehensive overview. The literature contains no evidence of research into the use of wikis in the context of language learning. Therefore, it may be necessary to provide some background.

Wikis are unique among CMC tools. CMC tools such as discussion forums, synchronous CMC, email, and conferencing tools accommodate the collaborative discussion of ideas well, but students are typically expected to produce or perform some task outside the context of the CMC itself. The permanent retention of each iteration of posts in a wiki provides users the opportunity to explore the evolution of any wiki page, and, if deemed appropriate, replace the current version with a previous iteration. Wikis allow for the complete revision of text by any user. Thus, a contribution is not a comment or response (as it might be in a blog), but an alteration to the previous contribution. This means that a wiki-based text is in a constant state of potential collaborative change. Wikis have been described by the creator of the first wiki (wikiwikiweb), Ward Cunningham, as “the simplest online database that could possibly work” (Leuf & Cunningham, 2001, p. 4). In addition, they are also very fast. In fact, Cunningham adopted the term wiki (intended to be pronounced weekee) from a Hawaiian word for “quick.”

As Godwin-Jones (2003, p. 15) states, “Wikis are intensely collaborative.” In fact, it is precisely the accessibly and extensively open nature of wikis that results in much of the public scrutiny of the legitimacy of Wikipedia as a source of academic information. The mere ease with which contributors can alter information may be too much of a temptation for those interested in constructing misleading information. However, this openness to collaboration may also result in the rapid correction of such

erroneous information. Discussing the emerging technology of wikis, Godwin-Jones states, “Such a system only works with users serious about collaborating and willing to follow the group conventions and practices” (p. 15). Such responsibility is representative of characteristics associated with autonomy among language learners.

Autonomy in Language Learning

Learner autonomy is obviously important in SLA. Successful autonomous use of the target language should be the ultimate goal of language instruction. As students progress toward autonomy, it is important that they develop the ability to self assess their own accuracy (Little, 1999). However, some have suggested that the risk of losing control over the classroom may actually deter teachers from helping students strive for autonomy (Cotterall, 1995). Research has investigated a number of factors that can affect autonomy. Kupetz and Zeigenmeyer (2006) argue that autonomous learning can be achieved by encouraging students to “take responsibility and make informed choices” (p. 63). Spratt, Humphreys, and Chan (2002) suggest that motivation may be a precursor to autonomy. Benson (1997, 2001) recognizes the enormous potential for the development of autonomy through the use of technology, as well as the reliance upon autonomy in order to effectively utilize the potential of technology-based learning environments.

The current study contributes to the literature by examining student-initiated attention to form in an autonomous collaborative writing environment. Its goals are to determine the degree to which students will initiate attempts to correct their own and peer contributions as well as the degree of accuracy that they achieve. The current study also seeks to understand students’ perceptions of the autonomous collaborative task. It is based on Littlewood’s framework of autonomy which identifies “autonomy as a learner” as including “(a) the ability to engage in independent work (e.g., self-directed learning); and (b) the ability to use appropriate learning strategies, both inside and outside the classroom” (1996, p. 431). The framework divides autonomy into *ability* and *willingness* with *ability* subdivided into *knowledge* and *skills* and *willingness* comprised of *motivation* and *confidence*.

METHODOLOGY

Background information

The current study was conducted over the course of a sixteen-week semester in an online content-based instruction course for Non-Native Speaker (NNS) pre-service English teachers. The course, Cultures of the English Speaking World, is an academic course with a secondary function of providing students with meaningful target language exposure. The course is a required component of a teacher preparation course at a large Mexican university. The course was delivered through a Moodle-based course management system with additional features of [Adobe Acrobat Connect](#) and [Gong](#) voice board for synchronous and asynchronous video and voice interaction, respectively. Students were required to participate at least three times a week to stay on top of the required tasks, including weekly discussion forum exchanges, access to static and dynamic web-based content, live video lectures, student video presentations, and an ongoing collaboration on a wiki. The wiki, intended to serve as a final product of the class, allowed students to collectively define the rather abstract term *culture* throughout the 15-week long course. While there may be myriad benefits for this kind of collaboration, this study is concerned with student-initiated attention to grammar.

Research Questions

The following research questions guided this study:

1. To what degree will NNS EFL teacher candidates perform autonomously as they attempt to correct their own and others’ grammar errors in a long-term collaborative writing task?

2. How accurate will they be in making these peer and self corrections?
3. What can these postings tell us about students and long-term web-based collaborative writing?

Students and Instructor

The 40 students in this class were all in their final year of a BA program in English Language Teaching in Mexico. They ranged in age from 21-23 years old. They all received passing grades and participated extensively throughout the class. All of the students in this class were at the same level of second language proficiency according to a series of inhouse English proficiency exams. The students demonstrated comfort and familiarity with the technology. They were required to complete an integrated online orientation to the course management system that provided the researcher a detailed (mouse click by mouse click) record of their performance through the students' automated orientation to the course site, course expectations, and varieties of media and links they would be expected to utilize. Records of their progress illustrated a high level of user capability. However, there were a small number of students who demonstrated slight difficulty accessing some resources. These students participated in a videoconference learner training session with the instructor that guided them in the use of these resources. Learner training is important for successful use of instructional technology (Hubbard, 2004).

This study introduced wiki technology in the first week and required students to locate and report on information related to culture, the class' area focus, that they had found through Wikipedia. Students collected data and reflected on the accuracy of this information by referring to external sources of information. All of them were familiar with wikis (in the form of Wikipedia) before it was introduced in the class. The instructor (who is also the researcher) teaches in an intensive English program with 20 years of experience teaching ESL and EFL in varied settings, including numerous experiences using technology in the language classroom and at a distance.

The Task

The Wiki collaboration task was treated very differently from other tasks in the course. Other tasks included an extensive amount of presentation, feedback, and interaction between students and the teacher, including feedback regarding grammatical accuracy. It was not unusual for discussions to reach eight layers of embedding, suggesting active ongoing interaction. The wiki task was initiated by the teacher and left up to the students. It was their responsibility to collaboratively construct the wiki as a reflection of what they had learned in the class as a community. There was no intervention from the teacher. This was intentional to determine if the autonomous constructivist activity would enable students to establish a sense of responsibility for the ongoing maintenance and revision of the document. The wiki itself was constructed within the content management system, resulting in a safe password-protected environment for students to share ideas and take risks with their language. The intent of this study was for this group of students to be solely responsible for the construction of knowledge. They would not receive feedback, updates, revisions, or elaborations from anyone other than their immediate peers, thus encouraging a sense of responsibility.

Students were encouraged to cull what they perceived to be the highlights of the other activities into the collaborative construction of this wiki. Four times throughout the quarter (Weeks 1, 5, 9, and 13) they were sent a simple set of instructions to guide them to participate:

Please remember to contribute to our wiki. This wiki belongs only to our course and will allow us to collaboratively integrate all of our various thoughts on the meaning of culture into a cohesive idea. You can edit, delete, add and alter information. Remember there will be a record of the changes you make so try to be constructive. You should also strive for accuracy both in content and language.

These instructions were intentionally left brief and free of information related to the topic in order to allow for the observation of student behavior without undue influence from the prompt.

Data & Analysis

Most previous studies of collaborative writing have focused on the face-to-face, or CMC-based, metatalk of students as they progressed through collaborative writing tasks. The present study relies upon the data provided by the wiki itself rather than face-to-face observations. When a student chooses to alter a portion of the wiki text, she must select the portion that she will work with. Portions are typically divided into sentences, paragraphs, or a series of paragraphs in a particular subtopic. In this study only the portion of the text that the student demonstrates attention toward at the editing level is taken into consideration. Thus, an error that is overlooked at the beginning of a portion chosen for editing is counted, but an error in a previous sentence or paragraph is not. This approach only holds students accountable for the portion of the text they choose to edit, ignoring the interaction with any peripheral text. Language related episodes (LREs; Swain & Lapkin, 1995) were used to identify learner attention to form throughout the construction of the wiki. Typically LREs refer to the metalinguistic attention to discourse between students rather than actual language use. For the purposes of this study an LRE is defined as any language oriented contribution to the wiki. Alterations that were not considered germane include alteration of visual style and inclusion of hypertext links, images, and other media. LREs were coded according to the following:

- Form Only, Content Only, Form/Content, Content/Form
- Accurate, Not Accurate

For the purposes of this coding, *Form/Content* was used to refer to revisions that seemed to focus on form with some additional, often minor or extraneous, alteration to the content of the text. The label *Content/Form* was used to refer to revisions that seemed to focus on the content with a minor contribution to the form. Data analysis was conducted independently by two trained raters. These raters both hold Masters degrees in Linguistics. Both were given the basic preceding LRE categorization and told to identify error types as they emerged. Thus, coding was established in an ongoing manner as the raters interacted with the data. The raters negotiated three isolated LREs where they did not initially agree about coding. Thus, inter-rater reliability was (0.99). The error categories that emerged during the analysis included:

- Articles
- Coordination
- Fragment
- Part of speech
- Punctuation
- Run on sentence
- Spelling
- Subject/Verb agreement
- Word choice

Follow-up interviews were conducted with the students to gain insight into their decision-making process and develop an understanding of their willingness and ability to attend to the form errors observed in the wiki. As the autonomy framework establishes, there is a distinction between ability and willingness in the demonstration of autonomy (Littlewood, 1996). All of the participants were invited to participate in the interviews. A total of twenty interviews were conducted. Each of these was between ten and twenty minutes in length. These were done individually with the participants after the completion of the course by the instructor and were guided by the questions in [Appendix](#). Each interview also provided an opportunity to ask students about their individual contributions and any changes they might have overlooked. Interviews were conducted using desktop video conferencing software.

FINDINGS

The overall tendency among participants was to focus on meaning rather than form. When form was central to a revision, it was nearly always accompanied by some additional contribution to the content rather than an isolated incidence of error-correction. Although the students were capable of achieving a level of grammatical accuracy in their more formal writing, they seem to consider a web-based collaborative activity to be less form demanding. They tended to defer to meaning, and often even design and style, rather than attend to grammatical concerns. In many cases they were willing to devote a great deal of time altering font and adding links to support the content of sentences that contained numerous grammatical errors. When asked about this observation, some responded that they had no problem understanding the meaning of the sentences in question and, thus, they did not bother to correct these errors.

A total of 233 edits were made by the students in an overall history of 160 total iterations of the wiki. This indicates that some iterations involved multiple contributions. Among these 233 edits, 169 (73%) involved LREs while 64 (27%) of the total contributions involved no LREs. These 64 contributions addressed formatting, font, or other design issues. An overview of all contributions is given in [Table 1](#).

Table 1. Focus of LRE Wiki Contributions

	Form	Content	Form / Content	Content / Form	Total (LRE)	Other (non-LRE)
Total Number	29	92	6	42	64	64
Percent of LREs	17%	54%	3%	25%		
Percent of Total	12%	39%	3%	18%	73%*	27%

*Total does not match summation of categories due to rounding.

Of the 169 contributions that involved LREs, twenty-nine (17%) were form-only. Ninety-two (54%) were content-only. Six (3%) were form-focused with some additional contribution to content. Forty-two (25%) were content focused with some attention to form. Seventy-seven (45%) of the LREs included some element of attention to form (Form + Form/Content + Content/Form). These are the contributions upon which these findings will focus. First we will take a look at the types of errors which students were most likely to attend to.

Table 2. Error Type and Student-Initiated Attention to Form

Error Type	Number of Student Initiated LREs (%)
Word Choice	25 (32)
Spelling	19 (25)
Coordination	8 (10)
Subject/Verb	8 (10)
Agreement	
Word Form	6 (8)
Article	3 (4)
Run on Sentence	2 (3)
Style	2 (3)
Punctuation	2 (3)
Fragment	1 (1)
Preposition	1 (1)
Total	77 (100)

Error Type and Attention

Student initiated attention to form was divided into ten categories. The breakdown of these ten error types is presented in [Table 2](#).

Students initiated an attempt to correct word choice and spelling errors much more than anything else. In fact, these two error types combined accounted for 39 (51%) of the 77 revisions that attended to form. Individually, word choice accounted for 25 (32%) and spelling accounted for 19 (25%) of the 77 attempts. Coordination and Subject/Verb agreement each accounted for 8 (10%) of the LREs primarily or secondarily focused on form.

Accuracy

Among all 77 LREs that were primarily or secondarily focused on form, 41 (53%) were accurate. Among the 35 form-focused LREs, 22 (63%) were accurate. The breakdown of accuracy across incidents is presented in [Table 3](#).

Table 3. Error Type and Accuracy

Error Type	Accuracy	Percentage Correct
Word Choice	13 of 25	52%
Spelling	10 of 19	53%
Coordination	4 of 8	50%
Subject/Verb Agreement	4 of 8	50%
Word Form	4 of 6	50%
Article Problem	3 of 3	100%
Style	1 of 2	50%
Fragment	1 of 1	100%
Preposition	1 of 1	100%

Among the 41 accurately identified and addressed corrections, 13 dealt with word choice. Most of these changes were justified by students as attempts to achieve enhanced academic register. The following example illustrates an acceptable sentence altered for this purpose:

(Note for all the following examples the [-] indicates text omitted in the LRE and the [+] indicates the replacement text. Errors are identified by bold text)

-Culture means that we can do many things that **are different from** other societies.

+Culture means that we can do many things that **distinguish** us from other societies.

The second most frequently addressed form was spelling. 10 (25%) of the 41 accurate corrections were devoted to spelling. The final wiki still included more spelling mistakes than any other error type (7 of 18). This example illustrates an adherence to North American English spelling conventions while striving for concision.

-In other words we can summarize that culture is a system of shared beliefs, values customs, **behaviours**, and artifacts that the members of society use to cope with their world and with one another and that are transmitted form generation to generation through learning.

+In other words we can summarize that culture is a the totality of socially transmitted **behavior** patterns, arts, beliefs, institutions, and all other products of human work and thought.

Attention to coordination errors was initiated a total of 8 times. Four (50%) of these were performed accurately. One such attempt combined attention to coordination with what is often deemed to be a stylistic preference in academic writing.

-So far we have mentioned what “culture” is, but I consider it is important to mention what it is NOT. “Culture” is NOT something we can touch or something we can see. It is a belief, it is in our minds, it is part of us.

+So far we have mentioned what “culture” is, but I consider it is important to mention what it is NOT. “Culture” is NOT something we can touch or something we can see. It is a belief, it is in our minds, **and** it is part of us.

A total of 4 (10%) of the accurately addressed revisions dealt with subject and verb agreement issues.

-One important thing that really **enrich** every culture is the use of body language and gestures because they express the traditions of a country.

+One important thing that really **enriches** every culture is the use of body language and gestures because they express the traditions of a country. In the same way, idioms show the popular way in which speaker represent their country because each idiom expresses an idea which is understood by certain people.

In addition to addressing the issue of subject/verb agreement, the student adds a new contribution, albeit one offering opportunities for others to further identify and correct errors. By the end of the course this portion was completely rewritten and elaborated upon to result in the following:

In addition, nonverbal communication or the use of gestures and body language are also part of a culture and they can be interpreted as having communication without words. There is not only an oral way of communicating and gestures and body language are also amazing human creations in each culture. We can communicate with gestures, clothing, eye contact, and some intentional phrases which are not literal. The use of gestures as a **mean** of communication is different in some countries because of history and cultural characteristics. In other words, using gestures and body language **vary** among different cultures. In the same way that languages vary in all the cultures, the different codes we have to communicate vary in signs and meanings.

A total of 8 attempts were made to correct what seemed to be previously accurate discourse, including one discussed in word choice. While it is obvious that students demonstrated an interest in addressing issues of word choice, 48% of word choice attempts resulted in error. This example illustrates a student’s preference for the word *begins* over *starts*. Yet, the student misspells *begins*:

-We have to take into consideration that we belong to a society and there is where “culture” **starts**.

+We have to remember that we are part and belong to a society and there is where “culture” **beguines**.

In a follow-up interview this student explained this word choice as more academic. However, the misspelling of the word and introduction of new words defeats this intention.

In some cases errors were simply deleted from a passage with no other content change or attempt to otherwise alter the sentence. Further, there was often no attempt to address other errors present in the portion of text selected.

-I read something related to the use of space and gestures in different countries. **For example, there are high.** In other words, using gestures and body language vary among different cultures. In the same way that languages vary in all the cultures, the different codes we have to communicate vary in signs and meanings

+I read something related to the use of space and gestures in different countries. In other words, using gestures and body language vary among different cultures. In the same way that languages vary in all the cultures, the different codes we have to communicate vary in signs and meanings

In follow up interviews with students, they demonstrated the ability to quickly correct all of the errors in question. In most cases they considered them to be (as one of the students said) “minor annoyances that did not distract from meaning.” An example of such an error includes the wrong verb form in the initial sentence:

As **it is** stated before, each country has its own culture, but we may find some differences among people. From these differences, other groups come out, which are named subcultures

This easily overlooked type of error was typical throughout the LREs. However, many others are quite obvious to the trained observer. None of the errors produced during the process of the wiki collaboration were identified by raters as potentially confusing. The low severity of the errors may have contributed to the fact that they were overlooked. Some specific errors were overlooked repeatedly and a total of 18 remained in the final document. Many of these were not overlooked as they were in portions of the text that were never revised. The nature and extent of overlooked errors may be the most interesting aspect of this study.

Overlooked Errors

Throughout the sixteen weeks there were 46 overlooked errors. These are extant errors that students failed to address while contributing to the same sentence. This total includes errors that were repeatedly overlooked. The total of distinct overlooked errors was 18. To reiterate the methodology, these errors were only counted if they existed within the units of the contribution in question. [Table 4](#) provides an overview of the nature of overlooked errors.

Table 4. Overlooked Errors

Error Type	Overlooked	Percentage of Total
Punctuation	10	22%
Word Form	8	17%
Coordination	7	15%
Word Choice	7	15%
Spelling	6	13%
Article Problem	3	6%
Run-on Sentence	2	4%
Preposition	2	4%
Subject/Verb Agreement	2	4%
Total	46	100%

Among 46 LREs, students elaborated upon content without attending to the pre-existing error. Perhaps due to the advanced level of the students in this class, sentence-level errors were rather limited compared to word-level errors. Due to the higher frequency of word-level errors there appears to be a higher rate of these being overlooked, but proportionally there is negligible difference.

The vast majority of postings dealt primarily with content. In many cases content was addressed while overlooking form. Many of the content-only contributions overlooked multiple errors in a passage while adding content. This example illustrates spelling errors, missing verbs, and awkward word choices:

(Note, some overlooked potential corrections are indicated between brackets)

-Culture, a very common word used by most **of the** people. But do we really know what it means? Most of the people have a wrong idea about what culture is. We tend to associate this concept **to the kwoldge** that a person has. However, knowledge is just part of a big group of elements that **conform** Culture.

+Culture, **[is]** a very common word used by most **[of the]** people. But do we really know what it means? Most of the people have a wrong idea about what culture is. We tend to associate this concept **to the kwoldge** that a person has. However, knowledge is just part of a big group of elements that **conform** Culture. However it is an essential element that defines a person.

In some cases, errors were overlooked while students were attending to rather minor design conventions, such as color of font, placement of quotation marks for emphasis, or elimination of redundant spacing. This is illustrated below:

-Culture "is the full range of learned human behavior patterns". This means that culture is the way a person acts according to where he/she lives and the environment that **sorrounds** him/her.

+Culture "is the full range of learned human behavior patterns". This means that culture is the way a person acts according to where he/she lives and the environment that **sorrounds** him/her.

The redundant space after the first word in this paragraph is removed while the spelling of "surrounds" is unaddressed.

In a number of examples there is an addition of information without any attention to numerous errors in the extant text.

-From all of the above, I can say that culture is the set of characteristics acquired and that **tell** who we are, where we are from, and whom we are with and that culture goes hand **to** hand with society **[Runon]**.

+From all of the above, I can say that culture is the set of characteristics acquired and that **tell** who we are, where we are from, and whom we are with and that culture goes hand **to** hand with society **[Runon intact]**. It also involves how people behave in a society.

Besides that, it allows us to know its customs, values, beliefs and so on.

While students obviously overlooked slightly more errors than they chose to accurately correct, they demonstrated a willingness to participate in the collaborative activity. They engaged in both peer- and self-editing throughout the semester.

Peer- and Self-Editing

Students were not hesitant to edit their peers' postings. In fact, they demonstrated more willingness to edit their peers' writing than their own. A total of 130 of the iterations were devoted to contributing to others' previous contributions. [Table 5](#) shows comparisons between peer- and self-editing across individuals.

Table 5. Summary of Peer- and Self-Edits

Student	Form	Content	Form/Content	Content/Form	Other (non LRE)	Total
1		P2, S2	P1	P1	S1	P4, S3
2	P2	S3		S1	S3	P2, S7
3		P1, S2		S2	S1	P1, S5
4	P1	S2			P1, S2	P2, S4
5		P1, S1	P1	S2		P2, S3
6	P1	S1		P1	S1	P2, S2
7	P1	P2, S2		S2	S2	P3, S6
8	P1	S2			S1	P1, S3
9		P3, S3		S2		P3, S5
10		S1	P1	S1	P1, S1	P2, S3
11		P3, S2				P3, S2
12	P2	S1		S1	S1	P2, S3
13	P1	P1, S2			S1	P2, S3
14	P1	S2		P1	S3	P2, S5
15	P2	S3		S1		P2, S4
16	P1	S2			S3	P1, S5
17		P1, S2		P1, S1	S1	P2, S4
18	P1	S2			S1	P1, S3
19		P1, S1		S1	P1, S5	P2, S7
20	P1	S2			S1	P1, S3
21	P1	S2		P2, S1	S1	P3, S4
22	P1	P2, S1			S4	P3, S5
23		P1, S1		S1		P1, S2
24	P1	S3		S1	S1	P1, S5
25	P1	P1			S3	P2, S3
26	P1	S2		S1		P1, S3
27	P1	S1			P1, S1	P2, S2
28		P1, S1		S2	S2	P1, S5
29	P1	S2				P1, S2
30		S3		P2, S2	S3	P2, S8
31	P2	S1			S1	P2, S2
32		S2	P1	P1	S1	P2, S3
33	P1	S2			P1	P2, S2
34		P1, S3		S2	S3	P1, S8
35	P1	S2			S1	P1, S3
36		S2	P2	P1, S2		P3, S4
37	P1				S4	P1, S4
38	P1	S1		P1, S2		P2, S3
39	P1	S1		P1, S2	P1, S1	P3, S4
40		P2			S5	P2, S5
Total	P29	P23,S69	P6	P12, S30	P6, S58	

Note: S=Self-edit and P=Peer-edit (for example, P2 indicates that a student performed two peer-edits while S3 indicates a student performed three self-edits)

These totals reflect LREs and other contributions to illustrate the focus students placed upon the latter. When addressing issues of formatting and other non-LRE related contributions, students were primarily self-editing. In fact, students engaged in much more self-editing overall, but the form-focused edits were

primarily peer-focused. Peer-editing contributions included 72 of the 77 form-oriented LREs. All of the 35 form-focused contributions were peer revisions. This supports the notion that students were willing and able to work collaboratively in the autonomous environment. Thirty iterations were devoted to self-correcting. 25 of these involved corrections of content or style while five involved issues of accuracy. Although this number may be small, the overall peer- and self-editing activity seems to be spread broadly across the students. All of the 40 students demonstrated at least one incident of self-correction of some sort. 26 of the occurrences of self-correction happened within ten minutes of a previous contribution. Self-correcting in such an environment may be support for the notion that public display of texts instills a sense of responsibility and obligation.

DISCUSSION

The first research question addresses students' autonomous performance in a long-term collaborative writing task. The results suggest that students were able to meet the *knowledge* and *skills* subcomponents of *ability* within Littlewood's (1996) autonomy framework, but lacked the *motivation* and/or *confidence* subcomponents of *willingness*. Considering the high frequency of peer-edits, the students appear confident in their collaboration. The nature of peer-edits also suggests that students were not afraid to critique one another. It appears that they lacked the willingness to attend to form issues that they were quite capable of correcting. It appears that there is a contextualized willingness and an associated continuum of tolerance regarding form; students simply did not address issues of form that did not impede meaning. In the interviews, students expressed surprise that there would be any focus on grammar following this activity despite the fact that the prompt explicitly encouraged them to strive for accuracy both in content and language. Two astute observers mentioned that since they hadn't been corrected explicitly they didn't bother to focus on the form of their contributions. In fact, these same two individuals found this activity to be "extremely liberating" and "a lot of fun" due to the lack of explicit attention to grammar. These students both explained that they teach grammar explicitly because that is how they were taught, but they would reconsider this approach in their future teaching. This response runs counter to Stryker's (1997) suggestion that the lack of grammar in a Content-Based Instruction context may result in students demanding explicit grammar instruction. Perhaps a limited amount of teacher intervention, or some external incentive, would encourage more attention to issues of accuracy.

The second research question concerns level of accuracy in peer- and self-editing. Participants in this study were willing to contribute to the collaborative task in the form of peer- and self-editing. Self-editing was primarily focused on revisions unrelated to form while peer-editing addressed form more frequently. The students demonstrated an ability to perform autonomously but did not demonstrate an equivalent willingness to strive for perfect grammatical accuracy. When presented with grammatical errors they had made in the autonomous task, they were able to quickly resolve them in the follow-up interviews. These findings are consistent with those of Williams (1999) in regard to the nature of students' initiation of attention to form: students will focus on form when engaged in meaning-based tasks, albeit infrequently. It also supports Storch's (2001) findings that writing tasks result in less student-initiated attention to form. However, this experiment with many-to-many collaborative writing did not appear to contribute to an increased grammatical accuracy as previous studies have found in pair or small group peer collaborative tasks (Storch, 2005).

Question 3 regards the overall nature of student long-term collaborative writing. Other observations indicate that students were more likely to be accurate when focusing on grammar rather than correcting grammar as a secondary act while focusing on meaning. Since the primary focus of their contributions leaned toward content, the accuracy of their self-initiated attention to form may have suffered. In fact, students frequently overlooked glaring grammatical issues that they later demonstrated ability to correct, while attending to rather insignificant issues of formatting, font, and other personal stylistic preferences. In spite of this lack of accuracy, interviews revealed that students seemed to be satisfied with the level of

accuracy for the context of this task. Based upon information gathered in follow up interviews, this lack of attention to form is the result of two factors: the informal context of the collaborative writing environment and the perceived low-impact nature of the errors themselves. While this may be enhanced by an increased priority upon the role of form, it may simply indicate that this level of grammatical accuracy was acceptable for the context of this task. Students were not distracted by the errors due to the lack of severity, and they were much more focused on addressing issues of meaning and design. An acceptable level of tolerance for errors may play an important role in the development of autonomy through autonomous tasks.

Pedagogical Implications

Autonomous environments may encourage participation and enhance collaborative creation of information, but it may be necessary that the teacher experiment with a variety of roles (including no role at all) in order to allow competent advanced students to explore topics extensively. Such extensive self-guided exploration encourages the autonomy that learners need to acquire language (Little, 2007). While many tasks in a content-based class may involve elements of, or even a focus on, form, it may be equally important to provide students with tasks that do not introduce the power dynamics of the teachers' presence. In fact, there may be an unseen benefit for the advanced-level students in the form of greater output (Oxford, 1997), more opportunity for practice (Ortega, 2007), or a greater sense of autonomy (Benson, 1997). Each of these characteristics may contribute to linguistic development, particularly for more advanced language learners. The task and environment may influence these fluency building practices as well as their attention to accuracy.

Students may benefit from a carefully created and controlled environment that encourages autonomous collaboration without the teacher playing a strong presence or any presence at all once the collaboration is underway. It may be fruitful to provide a variety of collaborative tasks in order to find optimal conditions for particular groups of language learners and their unique needs. With a limited body of research on the use of wikis in the language classroom, language teachers should embrace the opportunity to experiment and observe students' use in varied collaborative tasks with varied teacher content and form-focused intervention.

Limitations and Recommendations for Future Research

With the increased use of collaborative tools such as wikis it is inevitable that more research will provide insight into the ways these tools can best serve the needs of teachers and students. This study explores the potential of student-centered autonomous collaborative writing tasks used by NNS EFL teacher candidates in Mexico. While the results of this study may be valuable for a variety of contexts, there are certainly student populations who do not have much in common with the participants in this study. Replicating this study with other groups of language students from a variety of language backgrounds and contexts would enhance the conclusions of this study. Future research may also examine the students' interaction with the text in varied ways.

Unlike previous studies, which have taken place in face-to-face classrooms and focused on tasks or number of turns necessary to resolve issues of form (Storch, 2001; Williams, 1999), this task took place in an autonomous web based *teacherless* environment. The attention to form was comparable to these previous studies. While it may be disappointing that students did not demonstrate the willingness to correct form in an autonomous task, there may be much to learn from this observation. It seems that students in this study achieved an acceptable threshold of accuracy for the context in which they were working. In fact, it seems that they may establish different thresholds for different settings and tasks. Perhaps the very nature of the *teacherless* space encourages a more relaxed attitude toward accuracy.

Follow up interviews indicated that students considered the discussion forums and wiki to be very different environments due to the intervention of the teacher in the discussion forums. This may provide

interesting opportunities for future research. Future researchers may also consider holding students accountable for the whole of a text, rather than the small portions they choose to edit, since each alteration essentially creates an entirely new iteration of the text as a whole. The limited amount of form correction overall, and self-correction in particular, suggests that even students at this advanced level of proficiency may need more teacher intervention or grading incentive when working in autonomous environments. Constructing alternate wiki-based tasks with varying degrees of teacher intervention while maintaining a modicum of autonomy for students may also contribute to a better understanding of the optimal role of a teacher in creating and maintaining autonomous learning environments.

CONCLUSION

The notion of an autonomous environment in which students can collaboratively construct meaning without any teacher intervention is appealing and may contribute to autonomy through increased opportunities for practice. However, the use of autonomous space may require some additional management in order for students to reap all potential benefits. It appears that students are willing to collaborate in such autonomous environments, but they may not have the inherent willingness to strive for total accuracy. It may be important to provide students with varied contexts in which they can interact. They may benefit simultaneously from autonomous contexts in which they do not feel compelled to strive for accuracy as well as contexts that provide explicit demands for accuracy. Students in this study demonstrated the ability to correct and learn from their own and classmates' form errors, but not the willingness to do so when working in an online context, engaged in a task that they recognized as primarily focused on the creation of meaning. In fact, it appears that the degree of accuracy that participants achieved was acceptable for their purposes in this task. This may indicate that certain tasks and environments require more explicit practices and related expectations.

The teacher candidates felt that they would like to utilize similar tasks in their own teaching with perhaps a slight inclusion of teacher intervention. If an increased level of accuracy were determined to be necessary, perhaps students could be encouraged to attend more to accuracy. Perhaps the inclusion of non-Spanish speakers, or even native English speakers, would motivate students to strive for greater accuracy. Perhaps a sequence of regularly scheduled activities alternating between a focus on content and accuracy would accomplish this goal. Future research will certainly contribute to interesting variations of this collaborative construction task, including the degree of intervention by teachers.

APPENDIX

Questions that Guided Interviews

- What did you think were the merits and weaknesses of the different forms of computer-based communication used in the course?
- Discussions Chat Wiki Skype
- What was your preferred form of computer-based communication used in the course?
- What was your impression of the weekly discussions?
- Did you benefit from the exchange of ideas with your peers?
- If so, can you think of one example?
- Do you think your peers benefited from your contributions to the discussions?
- If so, can you think of one example?
- What did you think of the use of Wikipedia as a source for content?
- Do you think your peers benefited from your contributions to the wiki?
- Did you benefit from your peers contributions to the wiki?
- What was your overall impression of the collaborative wiki writing task?

- What was your overall impression of the Moodle site?
 - What was your favorite aspect of the site?
 - Did you enjoy using the Moodle site as a student?
 - Would you consider using a system like Moodle as a teacher?
 - Would you consider using online discussions as a teacher?
 - Would you consider using a collaborative wiki as a teacher?
 - What do you think about this contribution that you made to the wiki?
 - Is there anything else about the class that you would like to share?
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