Exploring Wiki-Mediated Collaborative Writing: A Case Study in an Elementary Spanish Course

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ABSTRACT
Wikis, as one of the Web 2.0 social networking tools, have been increasingly integrated into second language (L2) instruction to promote collaborative writing. This paper reports on a case study involving 35 university students at the beginning level who contributed to wiki pages over a period of 14 weeks. The affordances and constraints of using wikis for collaborative writing were drawn from data triangulation: (a) group wiki pages, (b) student surveys, and (c) final interviews. The results show that creating wikis had a positive impact on the development of students’ writing skills through collaborative engagement. Scaffolding through peer feedback played a crucial role in the L2 writing process through which students not only helped each other organize the content but also made error corrections for language accuracy. In addition, the results indicate that task type affected the amount of writing produced by each group. The study suggests that the instructor needs to guide students during the revision process and offer them hints and tips for effective use of feedback.

KEYWORDS
Wikis, Collaborative Writing, Learners’ Perceptions, Role of Task, Peer Feedback

INTRODUCTION
Collaborative and reflective practices are needed for today’s global and network-based communication world. Wikis, as a form of asynchronous computer-mediated communication (CMC), have grown in popularity to support collaborative learning (Richardson, 2006) and writing instruction (Lamb, 2004). In the field of second language (L2) learning, wikis have been mainly used for collaborative writing, including the 21st Century Teaching and Learning Project at Texas A&M University-Corpus Christi (Garza & Hern, 2006) and the Collaborative Learning Program at the University of Wisconsin (Kato & Rosen, 2007). Lund (2008) in her recent ESL study stresses that wikis offer a collective approach to language development and production. Learners branch out from individual contributions to collective production. Central to composing wikis is the process involving changes over time that shape how knowledge is constructed and developed in a multidimensional way. Team members go through several stages of drafting, revising, editing, and publishing. To this end, a wiki affords a means of integrating social, linguistic, and cognitive processes of language learning. Learners use the L2 as a cognitive tool to interact, negotiate, and construct meaning with others in a socially situated activity. According to Leuf and Cunningham (2001), wikis are highly democratic and decentralize individual power because all participants have an equal opportunity to contribute, edit, and reconstruct entries. Teamwork, consensus building, collaborative effort, and individual accountability, therefore, are essential to the effective use of wikis.
Revision Cycles through Peer Feedback and Collective Scaffolding

Storch (2005) points out that students are more receptive to feedback because they are responsible for the collaborative writing activity. The editing process in wikis is transparent because all changes are archived, which enables teachers and students to observe writing in progress. This visibility encourages the continuous refining of the shared writing. However, learners may not feel comfortable changing each other’s contributions in an open source wiki environment. Given that wikis are fairly easy to edit and changes are published instantly, vandalism or loss of content without consensus among team members may occur. Moreover, wikis are multiauthor-owned products, and it may be challenging for students to relinquish individual ownership. As a result, wikis may create aggressive attitudes and feelings of discomfort among users.

Anecdotal reports indicate that wikis hold great potential for supporting online collaboration and community building. Relatively few studies have reported on the effectiveness of wikis on collaborative writing in L2 contexts (Arnold, Ducate, & Kost, 2009; Kessler, 2009; Lund, 2008; Lund & Smørdal, 2006; Mak & Coniam, 2008). No study has explored how a wiki as a computer-mediated tool fosters process writing within the context of elementary language instruction at the university level. Using a social constructivist approach to mediated collaborative learning, this paper reports on a recent study involving 35 beginning students of Spanish who co-constructed wiki pages using task-based activities. The study focuses on the examination of student perceptions of the effectiveness of using wikis to foster collaborative writing. The affordances and challenges of wikis were explored through data triangulation: (a) group wiki pages, (b) student surveys, and (c) final interviews.

Social-Constructivist Approach to Online Collaborative Writing

Unlike the traditional process of writing, which focuses on individual production, the non-linear approach to process writing in wikis involves collaborative interaction grounded in the social-constructivist paradigm of language learning. According to Duffy and Cunningham’s (1996) constructivism, “[l]earning is a social, dialogical process of construction by distributed, multidimensional selves using tools and signs within context created by the various communities with which they interact.” (pp. 181-182). Rather than learning in one-way delivery of knowledge from a teacher, learning begins as a social process that involves members of a community who share and build L2 knowledge together in order to accomplish a joint task (Pavlenko & Lantolf, 2000; Vygotsky, 1978). Accordingly, meaning is shaped and knowledge is collectively constructed through negotiation of meaning and self-reflection (Higgs & McCarthy, 2005). A wiki as asynchronous CMC fosters critical thinking through the revision cycle, which affords learners more time to reflect rather than react instantly.

Like other social networking tools, a wiki provides a medium for the writing process that promotes different stages of collaboration and scaffolding. Learners assist each other in organizing, composing, and revising content and form (grammar) to ensure high quality production. Scaffolding, therefore, demonstrates supportive processes that enable learners to solve linguistic problems and carry out a shared task (Lee, 2008; Wood, Bruner, & Ross, 1976). Importantly, scaffolding demands active participation, individual accountability, and collaborative efforts (Lee, 2004). Previous research in language learning has concluded that collaborative scaffolding through peer feedback results in the emergence of a zone of proximal development (ZPD)—the distance between what learners can achieve by themselves and what they can achieve with assistance from others with the goal of becoming autonomous learners (Lee, 2007, 2008; Swain & Lapkin, 1998).
METHODOLOGY
Within the context of social constructivism, three central questions were addressed in this study:

1. How do learners view the effectiveness of using wikis in the support of process writing through social interaction and collaboration?
2. What role does task play in wiki-mediated writing?
3. To what extent does the use of wikis promote peer feedback and scaffolding in the revision process?

Context of the Project
The study was set up using wikis for two second-semester elementary Spanish classes in the spring 2008. At the researcher’s institution, the elementary language courses are mainly taught by teaching assistants (TAs) under the supervision of a tenure-track professor whose specialty is applied linguistics. The instructional principles of the course focus on the development of students’ communicative language skills through task-based instruction (TBI). The class meets 5 hours per week in a classroom. As part of the course requirements, students write three 1-page individual essays using a word processor. Two essays with one draft each were assigned as homework assignments. Students write the third essay in class without a draft within the 50-minute period of time. To facilitate the in-class writing, students are allowed to use a dictionary to look up unfamiliar words.

Wiki technology was implemented in two sections of elementary Spanish to replace the traditional compositions. The primary aim was to support process writing by creating a virtual learning environment for group collaboration and scaffolding. On the TAs’ part, wikis afforded them an innovative approach to teach L2 writing as well as to explore Web 2.0 technology. The program Wikispaces, freely available software, was adopted for the study because wikis are not available in Blackboard, the course management system at the author’s institution. Fifteen percent of the course grade was awarded for wiki writing. Throughout the semester several instructional adjustments were made to increase interaction and collaboration among students. For instance, more revisions from each student were required after the first wiki assignment and more time was allocated for writing cultural reports.

Participants
Thirty-five students participated in the project. At the beginning of the semester, a survey was given to the participants to determine their linguistic backgrounds and internet technological skills. All participants were native speakers of English with less than 2 years of Spanish language instruction prior to the study. The average age of the students was 19.6 years, and the majority of them were either freshmen (n = 15) or sophomores (n = 12). Three were juniors and five were seniors. Most of the students (n = 32) were taking elementary Spanish to fulfill the foreign language requirement. Only a few students (n = 3) enrolled in the course because of their personal interest in the subject matter. All students were competent users of Web 1.0 technology, including browsing the internet and using email and text chat. None of students had used a wiki prior to the study, so a brief training on how to use Wikispaces was provided to them. Students were also encouraged to take the Wikispaces Tour (http://www.wikispaces.com/site/tour#introduction) and/or view tutorial videos available in YouTube to familiarize themselves with Wikispaces.
Task Design

L2 researchers have repeatedly argued that the task design is crucial for online learning (e.g., Hampel, 2006; Lee, 2005). In order to reach learning goals, tasks need to be conducive to collaborative interaction. Topics should allow students to create new ideas and freely express themselves. According to Lee (2007), open-ended and problem-oriented tasks afford opportunities for students to collaborate and negotiate both meaning (content) and form (grammar) to maintain a balance between fluency and accuracy. For the project described here, various types of meaning-focused tasks with the emphasis on certain linguistic structures were created. For instance, one of the tasks required students to use the two distinct aspects of the past tense in Spanish (preterit vs. imperfect) to narrate a story “Once upon a time…” Cultural topics were designed to afford students additional opportunities to gain knowledge and awareness of Hispanic culture (see Table 1).

Table 1
Sample Topics and Tasks for Wiki Assignments

<table>
<thead>
<tr>
<th>Topics</th>
<th>Tasks</th>
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<tbody>
<tr>
<td>#1 Once upon a time …</td>
<td>Use your imagination to create an original story with your partners. In the story, you will need to create main characters, describe the setting, explain the conflicts and find resolutions. You are required to use the preterit and imperfect for this assignment. You may add digital photos and images to illustrate the story.</td>
</tr>
<tr>
<td>#2 Exploring Hispanic culture</td>
<td>You will write collaboratively with your classmates to produce a cultural report concerning a Hispanic country of your choice. You will need to find general information (geography, climate, government, economy, popular customs, regional cooking) about the selected country or region using online resources including websites. You are encouraged to use videos from YouTube, photos from Flickr to support the content.</td>
</tr>
<tr>
<td>#3 Vacation in a Spanish-speaking country</td>
<td>For this assignment, you and your partners will decide on a Spanish-speaking country that you would like to visit. Create a seven-day travel plan in which you describe places to visit and things to do in order to explore the best historical and cultural aspects of the country. Be sure to include a complete itinerary for the trip (e.g., transportation, lodging and meals). You may add websites, photos and videos to the writing.</td>
</tr>
<tr>
<td>#4 A letter to Dear Abby</td>
<td>For this assignment, you and your partners will compose a letter in which you describe problems or dilemma and ask for help or advice from a famous newspaper columnist Dear Abby in order to find solutions to the problems.</td>
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Procedure

At the beginning of the semester, the instructor designed a class wiki under which the structure of the main page was created to organize its content. The opening page consisted of several hypertext links including assignments, schedule, groups, and resources. In a trial wiki page, students practiced using main features including the editing, the history and the discussion pages. They also learned to add photos, external links, and videos to support content. After the trial, students worked in groups of 4 or 5 to create wiki pages. To facilitate scaffolding, the instructor assigned one student with relatively high proficiency in Spanish to each group to assist others in the process of revision. The small size enabled team members to become quickly acquainted with each other so that they felt comfortable making contributions. Individual contributions and collaborative effort are less likely to occur without proper guid-
ance. Thus, the instructor provided guidelines to the students explaining how to contribute to wikis (see guidelines in Appendix A) in conjunction with grading criteria (see grading criteria in Appendix B) to ensure the accountability of the individual and the quality of collaborative writing.6

Each group took 2 to 3 weeks to complete each assignment. Each wiki was organized into four stages: (a) drafting, (b) revising, (c) editing, and (d) publishing. Students focused on the content and the overall structure of the writing before they worked on language problems. Prior to the drafting stage, each group spent 25-30 minutes in class brainstorming and organizing ideas. To ensure that the draft was posted in a timely fashion, team members were assigned a specific date and time for completion of the various parts of the task. Students collectively wrote drafts, read, and edited each other’s contributions. They were asked to view changes made in the history page, as well as provide feedback to each other using the discussion page before making edits. Feedback no longer exclusively came from one single instructor. Instead, the instructor played a facilitating role in bringing students’ attention to language problems’ during the revision process. The instructor’s assistance was kept to a minimum to encourage peer scaffolding. Upon receiving feedback, students made revisions and published the final product in the course wiki space. All wiki pages were archived in Wikispaces for data analysis.

DATA COLLECTION AND ANALYSIS

Both quantitative and qualitative data provided multiple sources of information to investigate the effectiveness of wikis for collaborative writing. Students voluntarily completed a survey at the end of the semester. The survey consisted of 10 statements (see questionnaire items in Table 2).

Table 2
Student Perceptions of Wiki Assignments

<table>
<thead>
<tr>
<th>Statements of the Survey</th>
<th>Mean</th>
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<tbody>
<tr>
<td>1. Wiki assignments related well to course objectives.</td>
<td>4.2</td>
</tr>
<tr>
<td>2. I liked the topics we used for wiki assignments.</td>
<td>4.4</td>
</tr>
<tr>
<td>3. I enjoyed working with my classmates to create wiki pages.</td>
<td>4.1</td>
</tr>
<tr>
<td>4. I often used the history page to view changes before I edited others’ entries.</td>
<td>3.6</td>
</tr>
<tr>
<td>5. I found the Discussion page useful for posting comments and communicating with group members.</td>
<td>4.3</td>
</tr>
<tr>
<td>6. I enjoyed the revision process and I learned from making edits.</td>
<td>3.7</td>
</tr>
<tr>
<td>7. I felt comfortable editing my classmates’ work.</td>
<td>2.8</td>
</tr>
<tr>
<td>8. I prefer writing in wikis to writing traditional compositions.</td>
<td>4.1</td>
</tr>
<tr>
<td>9. I believe that contributing to wiki pages helped me write a better in-class composition.</td>
<td>4.1</td>
</tr>
<tr>
<td>10. Overall, I had a positive experience with writing wikis.</td>
<td>4.2</td>
</tr>
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</table>

A 5-point Likert scale ranging from 1 (Strongly Disagree) to 5 (Strongly Agree) was used to gauge students’ views of the wiki. Students also provided brief explanations for their answers. The survey elicited responses in three areas: the effectiveness of wikis for collabora-
tive writing (statements #3, #8, #9, #10), the role of task for wiki assignments (statements #1, #2), and feedback and scaffolding in the revision process (statements #4, #5, #6, #7). In addition, students from each group were randomly selected for a 20-minute interview. Open-ended questions were used to seek additional observations on wiki technology and offer suggestions for improvement (see interview questions in Appendix C). Responses on similar topics were grouped together and incorporated into the survey results for discussion. Qualitative data from the readily available wiki pages provided additional evidence to illustrate and support the findings.

RESULTS AND DISCUSSION

Effectiveness of Wikis for Collaborative Writing

The mean scores displayed in Table 2 records the students’ views on the effectiveness of the wiki for collaborative writing (first research question). The results support those reported in recent wiki studies (Arnold, Ducate, & Kost, 2009; Mak & Coniam, 2008) revealing that the students had a very fruitful experience with wiki assignments (see especially statement #10). During the final interview, the respondents commented that they found writing in the wiki environment enjoyable. One student said: “Wikispaces was fun to use, and it was a great tool for people to create and share knowledge together.” Students also praised the unstructured wiki because it enabled them to decide as a group what and when to write, as well as how to produce a finished document. To this end, the wiki supported learners’ autonomy and self-directed learning by encouraging them to make choices and initiate attempts to bring ideas to share with others. More than 50% of the students expressed their preferences for creating a wiki to traditional writing with a word processor (statement #8). For instance, a student described her experience using the wiki as,

The traditional writing is somewhat boring. You only write for the instructor. I must admit that before I used wikis, I really did not care much about writing. I did not like to write. One thing I really liked about wikis is how we wrote collaboratively for multiple readers. Writing for a broad audience made me more serious about writing. I actually enjoyed it.

It is clear that the wiki had a positive impact on this reluctant student and further changed her attitude towards L2 writing.

Students made favorable comments about working with their peers (statement #3). Regardless of their background, one third of the students \( (n = 12) \) stated that the extrinsic motivation pushed them to be self-regulated and to strive for high quality writing by working closely with their peers. One student openly admitted,

I took wiki assignments very seriously. I felt compelled to work hard because I really wanted to receive a good grade for this class. Actually, I did not really mind putting more time into the assignments. However, it was difficult to contribute when other members delayed their writing. I felt rushed to finish editing. However, I think over time we learned to work more collaboratively with each other.

Despite certain difficulties in writing jointly (e.g., negotiating content and resolving disagreements), students felt that their sense of shared ownership and individual accountability gradually increased throughout the course of writing wikis. Nevertheless, some students
(n = 7) preferred to work alone because they did not have to depend on others’ schedules and wait for their responses. It is possible that online learning conditions may be affected by learning styles, personality, and individual differences (Lee, 2005). The findings suggest that students need to adopt collective ways of thinking and learn to collaborate with others so they are ready to work as a team.

There appeared to be a clear consensus among the students that their contributions to wiki pages helped them to write a better in-class composition (statement #9). Typical comments made by the students include the following:

Having the opportunity to use wikis helped me organize and convey my thoughts more quickly during the in-class composition. I was able to gather ideas and come up with a plan, as if there were a mental map to guide my writing.

Using wikis helped me self-reflect on my own writing. I made sure to revise my essay and make error correction before handing it to the instructor.

After using wikis, writing the in-class composition became easier for me. I knew how to go about making changes to enrich the content.

These comments suggest that the wiki helped the beginning students build their confidence in L2 writing, enhance their organizational skills, and foster critical reflection.

**Affordances of Task-Based Writing in Wikis**

The second research question addresses the role of task-based writing in wikis. The results shown in Table 2 indicate that students were extremely satisfied with the wiki topics that they found relevant to the course content (statement #1). They commented that tasks were authentic and engaging. In particular, topics were broad enough to allow the students to be creative while using certain vocabulary and grammatical structures (statement 2). One student enthusiastically said during the final interview,

I really liked how the topics enabled us to use specific grammar points. Writing wikis served as an extension to practice what we had learned in class. After writing a few wikis, I understood better how words and grammar were used in context. I believe that my Spanish has improved by contributing to wiki pages.

Topic choice appeared to affect the degree to which students engaged in collaborative writing. For instance, the majority of the groups not only produced a great amount of writing (e.g., more than 700 words per essay) but also added embedded multimedia sources including websites, pictures, and videos to support the content of their cultural reports (Topic #2 in Table 1). Similar to the findings reported in the study of Lund and Smørdal (2006), the students agreed that having the freedom to choose a specific theme of Hispanic culture allowed them to incorporate their personal interests. Records from students’ interviews revealed that the students became more motivated and involved in the process of writing while exploring the Hispanic cultural topics.

Like other researchers (Ware & O’Dowd, 2008), Lee (2008) highlights that tasks should offer opportunities for students to reflect on their language problems during the meaning-
driven exchange. Open-ended topics, such as writing a letter to Dear Abby required students to use specific grammatical structures including the present subjunctive to ask for advice. The results indicate that in many instances, task type allowed learners to focus on form through peer feedback, as illustrated in the following example found in the discussion page:

1. Jjscholl: However, I had a question in the last paragraph. Should it be “Me molesta que Alejandro fume tanto” instead of “fuma tanto”?
2. ChantelSheets: Is it one of the WEIRDO verbs that we have learned in class?
3. dmw27: I think it is like “no me gusta” --one of the emotional verbs but I’m not really sure.
4. ChantelSheets: Yeah … I think you guys are right. I see Michael’s note that we should use the subjunctive here, expressing wishes, hopes and emotions (p. 365+). Let’s change the verb. Anything else?
5. dmw27: Now I see that we also need to change--espero que Ud. ‘puede’ to ‘pueda’--the subjunctive. What do you guys think?
6. Jjscholl: I agree. I’ll finish some final edits. Now it’s even kinda’ funny and flows a bit better than our last one.

In lines 2, 3, and 4, learners collectively provided explicit cues to bring their partner’s attention to form by sharing grammatical knowledge, referring to the instructor’s feedback, and offering suggestions. The above interactive exchange suggests that collaborative problem-solving tasks engage students in reflecting on language form and correcting errors to improve accuracy.

To achieve real-world communicative competence, learners not only need to be able to use the target language correctly but also appropriately (Kasper & Rose, 2001). Meaningful tasks should allow learners to explore various discourse dimensions including sociolinguistic features (Lee, 2004). The nature of the tasks (“A letter to Dear Abby”) exposed students to pragmatic aspects of the target language. The following example found in the discussion page illustrates just how the beginning students managed correctly to decide between the formal usted and informal you tú forms of address:

1. Odjay: Hey guys. Do you think this “letter” should be written in “tu” form or usted?
2. Sarah03: I’d say usted because we’re talking to someone who we don’t know but I’m not sure.
3. Chantel02: Yeah i would think it would be usted. We don’t know him, and he is also a Dr?
4. Eac45: Yeah, I agree, we don’t know him and he is a doctor -a doctor of love hahah - but a doctor none the less.

This exchange exemplifies the fact that the team members were aware of appropriate social conventions of using formal usted to address someone whom they did not know. After several turns, the group was able to reach the final solution. As Lee (2005) noted, task type affects how learners interact with each other for meaningful use of the target language. The findings here also suggest that it is the task, not the technology itself, that promotes the high degree of collaborative exchange in the wiki environment (Lund, 2008).

The question remains as to what extent the use of wikis promoted peer feedback and scaffolding in the revision process (third research question). The following discussion attempts to answer this question.
Peer Feedback and Scaffolding in the Revision Process

Statements #4, #5, and #6 are related to the revision and editing of the wiki pages. Although the final wiki pages did not result in error free products, students agreed that the wiki fostered collaborative scaffolding through which they helped each other re-organize the content and correct errors. The results showed that more than 50% of the students found the history and discussion pages useful, although at the beginning they did not take advantage of these two features. Being able to view changes made by other team members on the history page enabled students to observe the evolving document and make improvements. Two students made the following comments during the final interview:

At the beginning our wikis looked messy, but after several stages of editing they shaped into a well-organized document. It took a group effort to make it happen. I was satisfied with the outcomes, although our final wiki pages were not perfect.

Although it is time consuming and tedious to read all changes made by each individual, I found the history page quite useful because it allowed me to reflect on the revisions made by other team members and learn from them.

To this end, wikis support individual reflective learning through collaborative writing.

In terms of quantity of edits shown in the history page, analysis revealed that the majority of the students increased their participation in the revision process throughout the semester. Figures 1 and 2 show the revision rates, expressed as percentages, of each student in each group on successive wiki assignments, the first “Once upon a time …” and the second “Exploring Hispanic culture.”

Figure 1
Revision Rate in Assignment #1 by Each Student in Each Group
The overall revision rate of the second assignment for all students and across all groups (Figure 2) was higher than the one found in the first assignment (Figure 1). It should be noted that the length of each essay affected the number of revisions made by each group because task type affected the amount of writing produced by each group. For example, students produced a greater amount of writing using free-choice cultural topics than when creating a story using the two past tenses. It should be noted that the transparency of the wiki pushed students toward efficiency of self-discipline, as noted by this student: "I realized that I needed to be accountable for myself and the group after noticing the low number of revisions I had made in the history page."

The ZPD of Vygotsky’s theory stresses the importance of scaffolding in socially collaborative interaction. The results here indicated that the revision process created a virtual community for peer support. Students expressed their affective support to team members by making flattering comments in the discussion page, as illustrated in the following:

Sarah, I liked your part of the essay, it was pretty funny. I think we kind of have a pattern here of growing up with movies and a nice connection with Grandma and other loved ones.

Hey guys this looks pretty good. This is a really creative story with a great plot.

Bev, your questions are very good ones. I will try to do my best to clean up some of the “yo”s etc as well as accent marks.

During the final interviews, more than 50% of students \( (n = 12) \) remarked that the group dynamic and interpersonal rapport affected the way they interacted with each other as shown in previous CMC research findings (Lee, 2005, 2007).
Further analysis using data in the history page showed that students’ presence was visible during the revision process. In many cases, students detected and corrected errors at the sentence or word level (Villamil & Guerrero, 1996; Arnold, Ducate, & Kost, 2009), such as *Alejandro es [tiene] dieciséis años*, *Mi amiga’s nombre [El nombre de mi amiga] es Susana*, and *Yo estaba [era] joven*. Collaborative scaffolding appeared to be effective during the editing process. The following collaborative dialogue found in the discussion page illustrates how learners assisted one another in reconstructing linguistic forms:

1. jervinis31: Okay so I’m all done. I have two sentences that I am having trouble with. One is “Yo espero mi problema puede ser ayudado” (I hope that my problem can be helped) The other is “La sola chica que puedo hablar con es mi madre” (The only girl that I can talk to is my mom) I don’t even know if they make sense or if you guys know if there is a different or easier way to say it.
2. jwe6: We might want to just simplify the first sentence to... I hope that you can help me with my problem (Espero que pueda ayudarme con mi problema).
3. aed22: I think we need to put ‘con’ before ‘quien’ but I’m not sure.
4. jwe6: We also need to fix a few more small things like mi bolsa ‘lujoso’ to ‘lujosa’ in paragraph 1 and add ‘me’ for desperté in paragraph 2.
5. jervinis31: I’ll make changes. Now we need to add pictures.

Scaffolding occurs when an individual who has higher level skills and/or knowledge provides guidance to a person who is less capable or knowledgeable. In line 2 the student with a higher level of proficiency in the language provided assistance to her peer who was struggling with a couple of the Spanish language structures (line 1). Attention to form continued in lines 3 and 4 as the team members collectively addressed language errors and offered solutions to the problems. This finding is not consistent with the results reported by Kessler (2009) that wikis did not seem to encourage attention to form for accuracy during meaning-driven activities.

Apart from linguistic scaffolding, students made suggestions for improving on the content, as illustrated in the following posts found in the discussion page:

1. aaa25: I agree with T that that last paragraph is a little redundant. I still think we should keep the emphasis on the mother’s pleas for help from the doctora. Does anybody want to tackle it?
2. bjx22: How about if we add a few more sentences at the end? Something like I want to believe him but I think Alejandro lies?? (Quiero creerlo but pienso que Alejandro mienta).
3. bjx22: One more thing. We had the mother raising the boy alone for 10 years and the father dying 2 yrs ago, so I changed them both to 5 years.
4. kalgirl: Ok, So I did my best to make the last paragraph stronger, I hope it reads better. Maybe we should include somewhere in the story that the mother goes outside to retrieve the cigarettes???
The above example shows that the group worked in an interactive and collective manner to consider and build upon each other’s comment. Nearly half of the students noted that using the wiki afforded them the opportunity to produce high-quality final products that they would not have otherwise done individually.

Despite the fact that students enjoyed the revision process, more than 40% of them were notably reluctant to edit their peers’ entries because they lacked confidence in their own writing (statement #7). Interestingly, during the interviews, some students ($n = 8$) pointed out that they were much more willing to add text rather than to edit existing writing. One of their major concerns centered around the overriding of each other's ideas, as wikis permit more than one person to edit the same text simultaneously. Some students maintained that people should not change others’ ideas without the author’s consent. Furthermore, they tended to favor teacher feedback over that received from their peers. They believed that the instructor should be the one who makes error correction. The finding is consistent with the one found in Lund’s recent study (2008). It is likely that the beginning students were not capable of resolving language problems due to their inadequate proficiency in the language. Students suggested that the instructor should establish clear rules and provide specific guidance to assist them in the peer-editing process. To ensure effective peer feedback, the instructor should constantly monitor the editing process.

**CONCLUSIONS, LIMITATIONS, AND FUTURE STUDIES**

The current study explored the effectiveness of using a wiki for collaborative writing from the perspective of beginning-level students. With the short time span involved in wiki writing, there is no guarantee that the students would exhibit major improvement in their writing. However, the findings of this study are noteworthy. Overall, the findings show that the advantages of writing using wikis outweighed the few challenges. As Lee (2008) and Levy and Kennedy (2004) have argued, focus on form is considered crucial for the balance of fluency and accuracy in computer-mediated learning. One of the significant benefits of wikis illustrated by this study is that peer collaboration and scaffolding fostered attention to form for the improvement of language accuracy. Task-based learning is crucial for meaningful interaction and collaboration. More than 50% of the students were satisfied with and motivated by tasks with open-ended topics that empowered them to be creative while at the same time focusing on form (e.g., specific grammar structures and lexical items). Despite the fact that students benefited from making edits, they did not feel secure or comfortable correcting each other’s mistakes. Students with low language proficiency are not equipped to provide substantial feedback. While error correction should be encouraged during the revision process, the instructor plays an important role in guiding students and offering them strategies and tips for effective use of feedback.

Much more research is still needed to fully understand the role of wiki technology in L2 collaborative writing. Apart from the sample drawn from the beginning language learners, the study examined the effectiveness of a wiki for collaborative writing from the learners’ perspectives. It would be worthwhile to explore instructors’ responses to utilizing wikis as a teaching tool for L2 collaborative writing instruction. Another limitation of this study is that the data collection only included a postsurvey. A future study focusing on the comparison of the results of pre- and postsurveys would contribute to a clearer understanding of wiki-based writing processes. Another potential area which warrants further study is the use of wikis for telecollaboration involving learners from two cross-cultural institutions. It would also be beneficial to include various levels of language proficiency (e.g., intermediate and advanced) to determine whether degrees of language proficiency influence how the participants socially and cognitively co-construct knowledge in the wiki learning environment.
In conclusion, while a one-semester study of a wiki is limited in scope and depth, the students’ perceptions toward online collaboration have offered valuable insights into our understanding of the use of wikis in the writing process. Importantly, the project succeeded in making the process of writing a positive and rewarding experience for the beginning-level students. The use of the wiki resulted in creating a greater sense of community and collaborative learning than would have otherwise been possible with traditional writing instruction. Task-based writing not only empowers students to be creative with the content, but also encourages focus-on-form for language accuracy, which is essential for the development of L2 communicative competence. Wikis as a dynamic vehicle have great potential for the process of collaborative writing. Since today’s learners are technologically savvy, L2 professionals are strongly encouraged to take full advantage of the widely available wiki technology to utilize in their courses in order to promote collaborative interaction and critical reflection within a socially bounded learning environment.

NOTES
1 The researcher was the supervisor of the TAs during the academic year of 2007-2008.
2 TBI allows learners to negotiate meaning using open-ended types of communicative activities and involves learners’ active participation in sharing, exchanging, and debating information through self-expression and self-discovery (for more information, see Lee, 2002).
3 The researcher discussed the option of using wikis for writing assignments with two of the TAs, and they agreed to implement wiki technology in their teaching. The researcher and the two TAs worked closely to set up web pages, content, guidelines, and grading criteria for all wiki assignments throughout the semester.
4 As part of university policies, students who have received credit for two years of high school Spanish or one year of college Spanish cannot receive credit by taking Elementary Spanish. Therefore, all participants had had less than 2 years of language study prior to the study.
5 All letters collected from wiki groups were used for the in-class composition called “A letter from Dear Abby.” Each student first read the letter assigned by the instructor and then, acting as Dear Abby, wrote an essay to respond to the letter.
6 Both TAs and the author collaboratively wrote the guidelines and rubrics.
7 In most cases, the instructor provided implicit corrective feedback using phrases, such as “check the verb forms in the preterit in the first paragraph” or “re-write the first three sentences in the conclusion.”
8 Two or three students from each group were interviewed (n = 20) and represented more than 50% of the 35 students in the study.
9 It should be noted that changes can be remedied through the history page.

REFERENCES


APPENDIX A
Guidelines for Writing Wikis

1. **What kind of participation do you need to have?**
Prior to writing your wiki page it is strongly recommended that the group discuss the topic and agree on a general direction. It is also important to designate an order of participation, making sure all students know when, what, and how they are expected to contribute. The first student (to be determined) is in charge of initiating the essay.

2. **How much do you need to write/revise?**
Each student must contribute a minimum of 12 new sentences. Each consecutive student should read through what has already been written, editing only the most recent contribution, before adding their own. A minimum of 7 edits must be made. The first student, who initiated the composition, is responsible for editing the last entry.

3. **What kinds of revisions should you make?**
Use the rubric to guide you through the revision process. Be sure to (1) use a range of topic related vocabulary, (2) check gender/number and subject/verb agreement, (3) use appropriate verb tenses and forms, (4) use complete sentences and cohesive devices to present a logical progression of ideas, (5) check spelling, accents, and punctuation and (6) be creative and original.

4. **Final Pass Free-For-All**
After the last individual edit, all members of the group should take the time to thoroughly read through the essay in its entirety, discussing any troublesome areas or suggestions for improvement. All group members are encouraged to make additional revisions where needed.

5. **How to collaborate/discuss with others?**
Use the Discussion page or place comments within parenthesis in the body of the text to make suggestions and ask questions. Comments may be made in English. Keep in mind that wikis focus on the process of writing and really require the collaborative efforts of all group members. You need to contribute in a responsible manner. This means not leaving things until the last minute. You need to complete assignments on time in order for your group to progress. Hold each other accountable.

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6. Five Wiki Tips

- Contribute/review regularly
- Communicate/Discuss with fellow group members
- Make small edits
- Use the history to see past changes
- Refresh before writing to avoid problems of concurrent editing

APPENDIX B
Wiki Grading Rubric

<table>
<thead>
<tr>
<th>Individual</th>
<th>5-4 points</th>
<th>3-2 points</th>
<th>1 point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content</td>
<td>Topic fully covered; relevant vocabulary</td>
<td>Topic only partially covered; vocabulary sometimes limited and/or unrelated</td>
<td>Topic barely discussed; limited and unrelated vocabulary</td>
</tr>
<tr>
<td>Grammar</td>
<td>Few errors in spelling, grammar, and punctuation</td>
<td>Some basic spelling, punctuation, and grammatical errors, but comprehensible</td>
<td>Numerous errors in grammar, spelling and punctuation</td>
</tr>
<tr>
<td>Style/Flow</td>
<td>Coherent and well organized; ideas fully developed</td>
<td>Ideas somewhat developed but at times difficult to follow</td>
<td>Disconnected discourse and underdeveloped ideas</td>
</tr>
<tr>
<td>Effort/Creativity</td>
<td>Contributed more than necessary amount. Put care and effort into the process resulting in a very interesting and original essay</td>
<td>Semicreative contribution; fulfilled basic requirements of the assignment; at times lacking in originality</td>
<td>Little effort shown; insufficient information</td>
</tr>
<tr>
<td>Review/Revision</td>
<td>Active participation in group discussion; exceeded revision requirements</td>
<td>Spotty participation in group discussion; completed minimum revision requirements</td>
<td>Little participation in group discussion, review, and revision process</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Group</th>
<th>5-4 points</th>
<th>3-2 points</th>
<th>1 point</th>
</tr>
</thead>
<tbody>
<tr>
<td>Collaborative Product</td>
<td>Finished work with evidence of active collaboration; stayed on task; produced a high-quality essay; completed by deadline.</td>
<td>Finished work with some evidence of collaboration; strayed some from task; essay is not fully developed and contained some organizational flaws; completed by deadline.</td>
<td>Finished work with little evidence of active collaboration; undeveloped essay; many organizational flaws; did not meet deadline.</td>
</tr>
</tbody>
</table>
APPENDIX C

Questions for final oral interviews

1. Briefly explain your experience in using wikis for writing assignments. Do you think your Spanish writing skills have improved through online collaboration with your peers? Why?

2. Share with me your views on the topics we used for wiki writing. What topics/tasks did you like the most and the least and why?

3. Tell me the most valuable and interesting part of wiki writing and why.

4. Describe the most difficult important part of the wiki writing and why.

5. Overall, tell me how the experience of using wikis as the collaborative writing tool changed your perspectives on L2 writing instruction. Do you have any suggestion for the future use of wiki technology?

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