

## **Content Creators and Language Learners: Exploring Web 2.0 and Wikis**

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### **Abstract**

This qualitative study examined the use of Wikis and blogs among graduate students in an online class that was part of a teacher preparation program in English as a Second Language.

Participants included practicing teachers and graduate assistants who represented a variety of learning environments and experiences. The study was framed by a set of overarching questions and utilized a variety of data sets, which were collected throughout the study. These included survey data on use of Web 2.0 tools, participant-designed classroom Wikis, instructional materials for language learning, regular education teachers, ESL teachers, and resources for administrators and community stakeholders. Analysis employed the Constant Comparative process and Grounded Theory. Findings indicate several hindrances as well as benefits to using Wikis in the PreK-higher education environment. Participants emerged as content creators and modeled the process for their ESL students.

**Keywords:** Internet, Web 2.0, Constant Comparative Process, Grounded Theory, Teacher Preparation Programs, ESL Instruction

### **INTRODUCTION**

As professional educators, university professors seek new and innovative ways to integrate technology into coursework and class assignments. Especially critical when working with licensure candidates, it is important to encourage the application and utilization of current technologies and Web 2.0 tools. The relevant use and “practice” within the graduate classroom

assists in gaining skills and knowledge needed to effectively infuse technology into teaching and learning in the K-12 environment.

Coursework—which prepares teachers to work with second language learners, is no exception. In fact, it is critical in that instruction for English language learners (ELLs) must include specific strategies for language learners while assisting students with cultural tools present within the new learning environment as well as within society. The work of Vygotsky tells us that the sociocultural factors involved in learning stem from interaction and use of cultural tools or cultural artifacts. Tools or artifacts involved include those items, practices, or products that are ever-present in society (Cole & Engestrom, 1997; Vygotsky, 1978). In today's world, the cultural tools and artifacts we use on a daily basis include technology, computers, and related Web 2.0 applications.

Based on this premise, coursework that includes a well-designed blend of information regarding second language acquisition, examinations of culture and cultural aspects, specific strategies, methods, and assessments appropriate for ELLs, and applications of technological tools better assist practicing teachers who are preparing to transition from the regular education classroom to the ESL classroom.

In an attempt to encourage the examination and integration of Web 2.0 tools—in particular Wikis and blogs—in the ESL learning environment, this study examined the design, development, and use of Wikis for ELL instruction. The study took place over a one-year period and involved sixteen participants who at the time were: a) practicing teachers in an ESL setting,

b) practicing teachers in non-ESL classrooms where second language learners were present, and graduate students enrolled in an ESL licensure-based program. The study adopted a qualitative approach to action research and was guided by the following overarching questions:

1. What is the current use—if any—of Web 2.0 tools and would experimentation with Wikis and blogs assist in effectively integrating the tools into the language-learning classroom?
2. What factors might influence or hinder effective design, development of language learning materials, content creation, and actual integration for ESL instruction?
3. What information might be gleaned from the study that may assist with future program planning, course tasks, and overall insight to improve practice in the university setting and PreK-12 classrooms setting?

Data sets were carefully selected and aligned with the overarching questions. These included: a) pre- and post study surveys, b) participant-designed wikis and related instructional materials, c) blog entries, d) wiki components, e) online discussion of wiki design and integration, f) electronic communication, and g) end-of study feedback.

### **Cultural Tools for the ESL Environment**

More than likely, there are not many teachers who have not heard or come in contact with new media technologies and technology applications known as Web 2.0. There are web sites devoted entirely to the integration of Web 2.0 tools in classrooms. A good amount of research has been conducted on the impact of electronic technologies and teaching (McLuhan, 1962; Papert, 1994; Tapscott, 2008), however, as teaching and learning continues to adopt new technologies, continued examinations of the use and implementation of specific Web 2.0 tools may provide

additional insight into literacy practice and secondary orality. Secondary orality (Ong, 1982) deals with the need and return to group identity, sharing, and community within the learning environment.

In today's world, Web 2.0 technologies such as Facebook and Twitter help us to connect and reconnect with old friends, colleagues, and relatives. Many practicing teachers are already using these web applications as tools for professional development, homework assignments, class schedules, and parent information. However, when working with second language learners there are additional factors that must be considered. These include: a) access to technology, b) connectivity, c) language diversity and proficiency, and e) prior experience.

The technologies involved in the Web 2.0 classroom must be adapted to the language-learning classroom. In some cases, it is difficult to make that adaptation especially when a regular education teacher is transitioning to the second language classroom. Teachers tend to fall back on what works effectively and what feels most comfortable. But, second language learners have distinctly different needs than their English-speaking counterparts and may not be able to utilize the technology in the same manner. This is where teacher preparation coursework comes into play. By integrating the use of technology tools into assignments, teachers who are preparing to work with second language learners are encouraged to explore their own practice as they build skills and acquire knowledge regarding how to incorporate Web 2.0 tools into the ESL environment. However, a brief examination of what the term, Web 2.0 means and what these tools entail is important before they can be effectively integrated into classroom practice.

As mentioned previously, Web 2.0 tools are common and are being used by many in classrooms

as well as in the home environment. Although familiar to most English speaking students, there are many second language learners with minimal experience using Web 1.0 tools and minimal knowledge and experience working with Web 2.0 applications. Web 1.0 is considered to be the first version of the web because it enabled a small number of users to create content for a larger number. For example, teachers as well as students view Internet sites created by web designers; however, they may have little experience designing a web site of their own.

Web 2.0 and related tools are viewed as “social web applications” because they engage users and encourage active communication and collaboration. Web 2.0 includes blogs, podcasts, iBooks, Wikis, YouTube, Teacher Tube, and social networking sites such as Facebook, MySpace, and Twitter. Web 2.0 tools are the second-generation Internet applications and include the following characteristics:

- They are used for productivity as well as pleasure,
- They all involve shareable content created by users,
- They involve social networking and web-based communities, and
- They help to facilitate interactive information sharing and collaboration.

These tools in particular promote the creation of content and easily allow for communication and interaction. It is the Web 2.0 tools that work especially well with second language learners because of the skills involved in use. For example, blogging encourages writing, reviewing, and responding. Wikis enable students to use language learning strategies and skills in conducting research and creating entries. In further exploring the processes involved in second language learning, there are three areas which are closely aligned with Web 2.0 tools: a) language

feedback, sharing, interaction, and contribution, b) language production, and c) language reception (Figure 1).

**Figure 1.** Web 2.0 Tools that May Be Used for Language Learning in the ESL Environment

Language Feedback, Interaction, Sharing, and Contribution	Language Production	Language Reception
<ul style="list-style-type: none"><li>•Blogs</li><li>•Survey Monkey</li><li>•Games and Simulations</li><li>•Social Networking</li><li>•Wikis</li><li>•WebPages</li><li>•Presentatoinis</li></ul>	<ul style="list-style-type: none"><li>•Twitter</li><li>•Wikis</li><li>•Blogs</li><li>•YouTube</li><li>•Social Networking</li><li>•Web Pages</li><li>•Podcasts</li></ul>	<ul style="list-style-type: none"><li>•Podcasts</li><li>•iBooks</li><li>•iTunes</li><li>•YouTube</li><li>•Wikis</li></ul>

### Exploring Wikis

Although there are many possibilities for integrating Web 2.0 tools in second language instruction, the remaining discussion will focus on the Wiki and the creation of content for the purpose of language learning, professional development, and parental involvement in the ESL classroom. The Wiki – if integrated into language learning – may provide a valuable tool to facilitate secondary orality in literacy development as well as affording a tool that relies on print while also encouraging oral community, group-sense, and community participation. For example, a classroom Wiki developed by the population within the classroom community promotes secondary orality through self-awareness, content creation, shared responsibility, and language use. (Ferris & Wilder, n.d.; Gronbeck, Farrell, & Soukup, 1991; Ong, 1982). In addition, considering the ease of use and design, the Wiki is a key tool that may be integrated into ESL teacher preparation coursework. The wiki affords a variety of applications appropriate for second language learners, which may be aligned with teacher preparation course content and

tasks.

Leof and Cunningham (2001) share that Wiki is a type of software that allows users to freely create content and share the content with others via the web. The word, *wiki*, is Hawaiian for *quick*. In the world of Wiki, this implies that content may be easily shared as well as changed. This is due to the fact that the software enables “open editing” which allows many users to revise and edit the original content, therefore, creating a community of interaction and communication.

Set up in a manner similar to an encyclopedia entry, a Wiki entry may include interlinked pages created by users to further expand information. A teacher or student-created wiki may include public pages as well as private pages. Pages may be set so that only the creators are able to edit and revise or set up as “public pages” where any user may alter existing information. In terms of ESL classroom instruction and activities, a Wiki encourages users to become writers, editors, users, and evaluators of information. In addition, classroom Wikis for second language learners:

1. Promote authentic interaction and communication when creating, discussing, and sharing content.
2. Emphasizes student-centered learning and places the second language learner “in charge” of his or her created content.
3. Facilitates teamwork as ELLs collaborate on group Wikis and engage in conferences in order to evaluate and edit content.
4. Encourages reading, writing, language production, and reception.
5. Promotes creativity through the design and development of the Wiki.

6. Provides opportunities for ELLs to interact and gain experience using cultural tools and artifacts.

However, many practicing teachers—although they may be familiar with Wikis and frequently use Wikis—do not have the expertise in design and/or meaningful use in the language-learning classroom. Craig (2011) suggests that creating a Wiki as part of ESL teacher preparation coursework allows practicing teachers to carefully analyze information critical to completing licensure requirements as well as examine and create content relevant to their own individual classroom situations. Components may include: a) professional development information, b) resources for ESL as well as regular education classroom teachers, c) student pages, d) newcomer information, e) methods and materials for ESL instruction, and f) interactive resources such as discussion topics and blogs. Other uses that may be considered in terms of the actual ESL learning environment include:

- Creating a grade-level Wiki for collaboration between ESL and regular education teachers.
- Glossary of terms and vocabulary words created by second language learners.
- Content Wiki to support CALLA or SIOP instruction.
- Individual student Wikis based on projects and language learning.
- Journaling and book discussions—class, group, or individual.
- Portfolio Wikis based on content instruction or writing.
- Student presentations reflecting content and language.

Once complete, the content selected and created may be shared with colleagues, community members, and students for instructional and information purposes. The practice of creating a



Wiki also allows practicing teachers to experiment and generate additional ideas for classroom use with second language learners. The time spent designing the Wiki provides opportunities to reflect on the differences and needs of second language learners as compared to English speaking-students.

Raymond (2010) shares that there are both pros and cons of using wikis in the classroom. The pros include the ability to structure groups and encourage content creation as part of assigned language learning tasks. The content creation that is part of wiki design promotes receptive and productive language. For the second language learner, the process of content creation also provides opportunities for authentic language use. In addition, the collaboration involved in wiki use and design enables interaction that is meaningful and content-based. Wiki use may also allow for observation of student tasks that leads to demonstration of knowledge and language. The integration of wikis in the language-learning classroom requires instruction that is engaging and student-centered (Wetzel, 2009). With advantages come disadvantages. The disadvantages of wiki use involve accessibility, available technology, and time. In addition, many school systems have a strict policy in place for student Internet use. The policies in place as well as the network security may prevent fluid use and access. Working with second language learners presents additional challenges in terms of familiarity with technology and –in some cases—lack of technological literacy skills needed to fully explore and use teacher-designed wikis as well as engage in any type of content creation without additional practice and instruction with technology.

However, many second language learners are now considered lifelong English learners and

represent a population of children of immigrants—not immigrant children. This factor that is rapidly changing the face of second language populations presents yet another situation—one that reflects societal needs in terms of technology and technology use. As early as 2001, Prensky observed that students in public school classrooms were rapidly changing in terms of becoming a population of cyber-based learners requiring information that was not “fixed” but fluid and flexible. In support of this changing population, Ferris and Wilder (2006) point out that an alternative model of education began to emerge in the mid-2000s that was better suited to students operating in a cyber age. The model includes new forms of print and language as well as characteristics of community, collaboration, and participation—all of which greatly benefit the second language learner throughout the process of language acquisition and literacy development.

### **The Study**

This study examined the design, development, and use of Wikis for ELL instruction. The study took place over a one-year period and involved sixteen participants who at the time were: a) practicing teachers in an ESL setting, b) practicing teachers in non-ESL classrooms where second language learners were present, and graduate students enrolled in an ESL licensure-based program. The study adopted a qualitative and utilized a set of overarching questions as a guide. The questions were carefully aligned with specific data to inform the inquiry (Table 1). Participants enrolled in graduate-level coursework as part of the M.Ed. in Curriculum and Instruction with Concentration and Add-On Endorsement in English as a Second Language and Licensure-Only programs were invited to participate. The study—approved by the institution’s IRB—required a call for participation and informed consent. After the call for participation, sixteen graduate students agreed to participate. The participants represented full time ESL

teachers employed in a public school on an emergency license, regular education classroom teachers, one substitute teacher, and full time graduate students.

Table 1

*Triangulation Matrix*

Question	Data Sets	Data Sets	Data Sets
What is the current use—if any—of Web 2.0 tools and would experimentation with Wikis and blogs assist in effectively integrating the tools into the language-learning classroom?	Pre-Study Survey	Online Discussions	Participant-designed Wikis
What factors might influence or hinder effective design, development of language learning materials, content creation, and actual integration for ESL instruction?	Participant blog entries	Electronic email correspondence and sharing	Individual Wiki components
What information might be gleaned from the study that may assist with future program planning, course tasks, and overall insight to improve practice in the university setting and PreK-12 classrooms setting?	Post study survey	End-of-Study feedback forum	Artifacts: related instructional materials designed for Wiki inclusion

Participants also represented a variety of experience and educational settings (Table 2).

Table 2  
*Participants*

Code	M.Ed. Candidate with Endorsement	Current Teaching Assignment	Location
2	M.Ed. with Endorsement	ESL Grades 5-8	Suburban
3	M.Ed. with Endorsement	ESL Grades 7-12	Urban
4	ESL Endorsement only	ESL Grades K-8	Suburban
5	ESL Endorsement only	ESL Grades PreK-K	Suburban
6	M.Ed. with Endorsement	3 <sup>rd</sup> Grade	Rural
7	M.Ed. with Endorsement	Spanish – Grades 9-12	Suburban
8	M.Ed. with Endorsement	English – 2-Year CC	Urban
9	M.Ed. with Endorsement	1 <sup>st</sup> grade	Rural
10	ESL Endorsement only	5 <sup>th</sup> grade	Rural
11	M.Ed. with Endorsement	Sub Grades K-4	Rural
12	M.Ed. with Endorsement	E A Grade 3	Urban
13	M.Ed. with Endorsement	Graduate Assistant	N/A
14	M.Ed. with Endorsement	Graduate Assistant	N/A
15	M.Ed. with Endorsement	Graduate Assistant	N/A
16	M.Ed. with Endorsement	Graduate Assistant	N/A

## Methodology

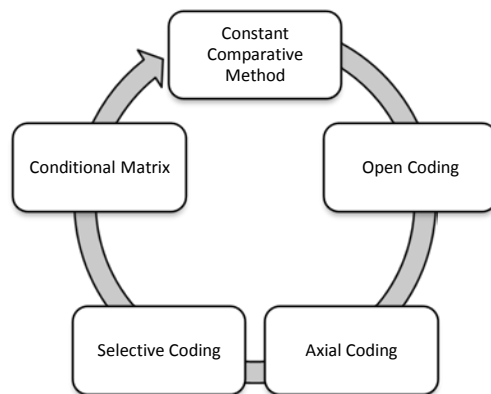
The study employed the processes and steps involved in Action Research and took a qualitative stance in design and analysis. The study was guided by a set of overarching research questions—as appropriate for qualitative methods. Through the framework of action research, those working within practitioner-based environments are encouraged to use their expertise and knowledge to conduct systematic inquiry to improve practice (Craig, 2009). Because the process is viewed as community-based research, action research was employed in terms of the structure and processes of the inquiry. The rationale for the design was driven by specific factors related to improving practice with the ESL classroom, regular education classroom, and university classroom. Action research is grounded in the goal of improving practice. The steps offer a systematic examination of practice and encourage self-examination within the practitioner-based

environment. As with any action research framework, the inquiry adopts qualitative or quantitative research design. The action research process and design for this study employed a qualitative approach in: a) overarching questions that frame the study, b) triangulation processes, c) coding and analysis procedures, and d) reporting findings in a thick, descriptive narrative. Due to the nature of the inquiry, this particular study adopted grounded theory (Glaser & Strauss, 1967; Lincoln & Guba, 1985; Strauss & Corbin, 2008) as the design within the action research framework.

### **Data Analysis**

Data were collected over a six-month period. Analysis followed the Constant Comparative (Figure 2) method and involved specific types of coding including: a) open coding, axial coding, and selective coding. A conditional matrix was developed and served as a coding device (Strauss & Corbin, 2008). Analysis procedures involved levels of categorization, assigning attributes, and identifying emerging themes and patterns. Once collected, each data set was organized, coded, and memoed. The use of triangulation matrix provided an organizational framework and assisted in determining the results of the inquiry. In addition, the researcher engaged in epoche in order to re-examine all data, engage in reflection, and remove any preconceptions, biases, and assumptions (Craig, 2009; Patton, 2002). The next step in the analysis required the researcher to identify chunks of meaning derived from emerging patterns and themes. Subsetting enabled further analysis. Additional coding was applied in order to break down the data sets, examine, compare, and categorize one last time (Craig, 2009; Maykut & Morehouse, 1994; Strauss & Corbin, 2008).

**Figure 2.** *Constant Comparative Analysis Process*



## Findings and Conclusions

Findings are aligned and presented based on each overarching question that framed the study. Emerging themes are outlined and further explanations are offered. The themes emerged as a result of the data sets collected to inform each overarching question and were identified throughout the data sets.

Question #1: What is the current use—if any—of Web 2.0 tools and would experimentation with Wikis and blogs assist in effectively integrating the tools into the language-learning classroom?

- Theme 1: Web 2.0 for Fun – Based on the pre-study surveys, approximately half of the participants “experimented” with Web 2.0 tools for non-teaching related tasks such as visiting food blogs, using Wikipedia, and setting up social networking pages. These participants shared that they only used the tools for recreation and did not use them extensively in the classroom. Non-use participants indicated that they were aware of some of the tools, but had not used them personally or in the classroom (Pre-Study Surveys, Discussions). Overall, the participants did not view Web 2.0 tools as something

that would be used on a daily basis for instructional purposes. Other than setting up and using Facebook, none of the participants had engaged in Wiki design or blog design.

- Theme 2: Classroom Implementation – As the study progressed, each participant designed a language-based blog and Wiki. The individual designs reflected participant preferences in terms of intent for use, color, graphics, and templates. As the study progressed, some of the blogs and Wikis took on a professional design appearance that reflected: a) higher levels of technological literacy, b) expertise in curriculum design, and c) overall detailed aesthetics. Interestingly enough, some of the participants who lacked prior experience with Web 2.0 tools designed blogs and Wikis that reflected a high degree of technological literacy as well as aesthetics. By the end of the study, the majority of participants began using the Wikis for second language instruction in their own classrooms (Participant Wikis).

Question #2: What factors might influence or hinder effective design, development of language learning materials, content creation, and actual integration for ESL instruction?

- Theme 1: Time Warp – Based on data collected, the most critical factor that seemed to either facilitate or hinder effective design was time. Participants shared that they lacked the time needed for detailed design and development of Wiki content or they enjoyed the design process, thus, they dedicated hours to the development of their Wikis and blogs. Participants who indicated (Electronic mail; Forums for Sharing) that they enjoyed developing curriculum materials, designing graphics, and locating additional online resources for the Wikis produced by far better Wikis and blogs than participants who cited time as a deterring factor. In addition, individual blog entries revealed that there were several participants who just were not interested in devoting time to design. The

main goal was to complete the minimum and not “go beyond that” (Participant Blog Entries).

- Theme 2: Content Creation – The individual Wiki components as well as blog entries indicated that all participants struggled at some point with creating appropriate content for specific language learners in multi-lingual ESL classrooms. Factors that posed challenges included: a) age appropriateness, b) reading levels, c) proficiency levels, and d) content and standards. As the study progressed, however, almost every participant was able to create several appropriate Wiki components for targeted second language learners, community awareness, and teacher training. By the end of the study, most of the participants added components to the Wikis that required second language learners (K-12) in their own classrooms to create content as part of the classroom Wiki. In addition, participants who were also practicing teachers continued to use their blogs by transitioning the personal blog to a classroom blog that enabled ESL students to use language authentically by blogging (Participant Blog Entries).

Question #3: What information might be gleaned from the study that may assist with future program planning, course tasks, and overall insight to improve practice in the university setting and PreK-12 classrooms setting?

- Theme 1: Keep on Blogging and Using Wikis – The post study surveys as well as the end of study feedback offered by participants indicated that there is a need for including assignments that involve Wiki design, blogging, and content creation in teacher preparation coursework. By doing so, university professors model and encourage the transition and carry over to the K-12 classroom. Participants that took part in the study shared that they enjoyed designing the Wikis, using the blogs, and adding materials that



reflected the needs of their own K-12 second language learners. In addition, the data collected shows that there was a high degree of connection between the university coursework and the K-12 classroom—which encouraged meaningful use of the Web 2.0 tools by participants as well as their own ESL students.

- Theme 2: Living Portfolios – Although Wiki components were guided by the actual class assignments (university coursework), the majority of participants added artifacts to the Wikis. Examples include: a) community resources such as public library materials, lists of physicians, information regarding housing, etc., b) additional lesson plans, vocabulary lists, suggested reading, c) parent-guardian resources and updates regarding school routines, and d) materials for regular education teachers who also work with ESL students. As a result, the Wikis in particular became a “living portfolio” that could easily be continued. As a result, the inclusion of Wikis and blogs may be considered in program and coursework revisions as well as data for accreditation visits.

## **Discussion and Issues to Consider**

As with all web applications, there are specific issues that must be considered when integrating Web 2.0 tools such as Wikis in the second language classroom. First and foremost is privacy. If K-12 students will be creating and using the Wiki, be sure that student identity is protected and that all policies for Internet use in place within the school or district are considered. One way to allow students to post pictures as authors of the Wiki is to have them create a cartoon version of themselves. There are many free web services where students can experiment with “cartooning.” In addition to privacy issues, policies and guidelines for Internet use apply to second language learners as well as regular education students. Second language learners in the middle and high school grades are especially vulnerable due to the nature of teen interaction. Issues such as

protecting personal information and avoiding cyber bullying should be addressed whenever any student is working with Web 2.0 applications (Magid, 2010).

Creating and designing a Wiki also provides opportunities for second language learners to critique and evaluate accuracy and appropriateness of information. Incorporating rubrics adapted for ESL learners is one way to encourage content evaluation and also assists students in developing writing and editing skills while using language for authentic purposes. With content creation comes social responsibility and accountability. Collaborative discussions regarding what is socially acceptable in terms of language use is yet another way to engage second language learners while encouraging them to experience Web 2.0.

This project was fueled by the need to provide evidence of culminating experiences and project for continued accreditation through NCATE (National Council for the Accreditation of Teacher Education). One of the goals of the inquiry was to possibly collect data on how candidates for the M.Ed. were applying program content and skills in the ESL learning environment. Although the Wikis were wonderfully designed and used to a high degree within the classroom—many of the candidates—upon completing the program—used the privacy setting to comply with individual school Internet use policies. Because of this, the Wikis are no longer available to the general public. Thus, the completed Wikis cannot be used as evidence for culminating experience for accreditation. With that said, the projects proved to be useful tools in the second language classroom.

As new technologies become available it is critical that they be considered as tools for both ESL teacher preparation and ESL classrooms. By carefully examining and exploring the possibilities

educators—in higher education as well as in the K-12 environment—are better able to design meaningful tasks for students. By doing so, authentic use of language and literacy development—traditional literacy as well as technological literacy—is encouraged while gaining skills need to effectively utilize Web 2.0 tools. On the horizon, it is predicted that soon Web 3.0 tools will be widely available and used. Web 3.0 tools are expected to evolve as part of a semantic and intelligent web—a place where software agents will integrate information to give intelligent responses to human users (McManus, 2009). This study provided participants with opportunities to experiment and explore Web 2.0 tools. As a result, there was a high degree of carry over to the K-12 ESL classroom. Possibly, it will be the current second language learners who will become the creators of software agents.

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