



WIKIS IN L2 WRITING INSTRUCTION: A SYSTEMATIC SCOPING REVIEW OF EMPIRICAL RESEARCH

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Abstract:

This article presents a systematic scoping review of the literature on the use of wikis in second language (L2) writing instruction. Through searches of scientific databases for empirical studies that had been published in peer-reviewed venues on the use of wikis and L2 writing, 17 studies were selected for review. These studies mainly investigated aspects of learners, the writing process, and the outcomes of using wikis in L2 writing classrooms. The studies indicated generally positive results regarding the attitudes of learners towards wikis, the interaction among learners, and the quality of the writing projects completed using wikis. However, few studies have found benefits to the linguistic aspects of writing by L2 learners who used wikis to write their projects. Additionally, most studies that used wikis to aid in the writing of L2 texts found challenges in the development of equitable participation of each learner in the writing project, challenges in assessing the learners' writing within the wikis, and general challenges in comparing the methodologies of the different studies. The implications of these findings for future research and writing classrooms are discussed.

Keywords: wikis; L2 writing; collaborative writing; CALL; scoping review

1. Introduction

Since the dawn of the digital age over two decades ago, a variety of digital technologies have impacted how teachers and researchers instruct second language writing. One of the technologies that emerged from the Web 2.0 revolution was the wiki. Unlike blogs, which enable readers to publish content and comments in shared spaces on the Internet, wikis enable various authors to create content, discuss their compositions, and review the revisions made to such content. The features of wikis make them applicable to the study of collaborative writing.

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Within the context of second language education, collaborative writing has been associated with increased interaction among learners, increased focus on language use by those learners, and peer scaffolding within writing assignments. In wikis, learners can work together to plan, draft, and edit writing projects individually. Additionally, the revision histories of such projects enable researchers to investigate the writing and revision processes of each contributing second language learner.

It is difficult to summarize the literature that investigates wikis and second language writing into a unifying theme. Most studies differ in the language that was learned and written, the educational level of the second language learners, the writing tasks that were assigned to those learners, the way in which the learners were divided into groups, the length of the projects, and the outcomes of those projects. Most studies report positive outcomes for learners, but few report positive outcomes for writing quality. A few studies have reported difficulties in collaborative writing projects assigned to second language learners.

A review of the existing literature on wikis and second language writing focuses on three aspects of the existing knowledge. First, wikis have played an important role in enabling second-language learners to engage in collaborative writing in digital spaces. Second, many of the issues that have been discussed in relation to collaborative writing on wikis can be separated from the platform itself and can reappear in other types of writing and collaborative technology. Third, while the existing literature on wikis and second language writing is scattered, a review can help determine which of the published research studies are supported by evidence and which are not.

Therefore, this article presents a scoping review of the literature on wikis and second language writing classes. A scoping review is appropriate for this research topic because of the differences between research studies. This study aims to answer the following research questions:

- 1) What research foci, instructional contexts, participant profiles, and methods characterize empirical studies of wiki-mediated L2 writing?
- 2) What learning, interactional, and attitudinal outcomes have been reported in this literature?
- 3) What conceptual, methodological, and pedagogical gaps should guide future research on collaborative digital writing in L2 education?

2. Method

2.1 Review design

This study used a systematic scoping review design to map and synthesize empirical research on wiki use in L2 writing instruction. The aim was not to calculate pooled effect sizes, but to identify recurrent trends, summarize reported outcomes, and highlight conceptual and methodological gaps.

2.2 Search procedure

A structured search was conducted in major academic databases commonly used in applied linguistics and education research, including ERIC, ProQuest, Google Scholar, and JSTOR. Search terms combined the name of the technology with terms related to writing and language learning. Core search strings included *wiki*, *wikis*, *collaborative writing*, *L2 writing*, *second language writing*, *foreign language writing*, *ESL writing*, *EFL writing*, *Web 2.0*, *wiki AND L2 writing*, and *wiki AND ESL writing*.

2.3 Inclusion criteria

Studies were included if they met all of the following criteria:

- 1) They reported original empirical data.
- 2) They examined the use of wikis or wiki-based environments in relation to L2 or foreign language writing.
- 3) They were situated in formal educational contexts.
- 4) They were published in peer-reviewed journals.
- 5) They provided sufficient information on participants, tasks, methods, and outcomes for analytic comparison.

Studies were excluded if they were purely conceptual, descriptive without empirical data, unrelated to writing, or not situated in second or foreign language learning contexts.

3. Corpus and analysis

3.1 Results

3.1.1 Research focus and instructional context

Research on wiki research in L2 writing has developed in various contexts. Most studies were conducted in higher education contexts. Most studies were conducted in university contexts with EFL and ESL students. Other education levels included one study with primary education students and another with community college students.

The target language for most studies was English. However, only a few studies have been conducted on German, Spanish, French, and Japanese.

Five main research foci have been identified in the literature. One focus includes studying learners' perceptions of using wikis for writing. Others have investigated the revision processes that occur on wikis. Other studies have focused on students' writing outcomes. A few studies have investigated aspects of the writing process related to peer feedback and scaffolding. A few more aspects related to audience awareness and content learning were investigated.

The types of tasks required of the learners varied. There were descriptive writing, summary writing, narrative writing, argumentative writing, paragraphs for specific courses, discipline-specific writing, collaborative expository writing, and translation tasks.

3.2 Methodological patterns

The major research methodologies in this field include qualitative, quantitative, and mixed methods. Many researchers have used the history of wikis as their main data source. This allowed them to investigate the writing process behind the texts, rather than the writing products. Other data sources included questionnaires, interviews, reflections and textual comparisons.

Some of the main methods used include the study of form-focused and meaning-focused revisions, self-corrections and peer corrections, and collaborative and cooperative writing tasks within wikis.

One of the limitations of the existing research methods is the small number of participants in many studies. The time frames of many studies were short. Most studies were conducted with a specific number of students and educational contexts. The concept of collaboration and engagement among writers has not been well defined in many studies.

3.3 Learner perceptions and attitudes

Learners tended to form positive attitudes towards using wikis to write their L2 texts. They generally found it to be a convenient and useful platform for collaborating with peers on writing tasks. Moreover, they enjoyed the opportunity to work with their classmates outside class.

However, students' positive attitudes towards using wikis for writing projects do not necessarily indicate any benefits to their writing outcomes. These attitudes may be formed as a result of the nature of the wikis and the teacher's tasks assigned to the students using such platforms. Nevertheless, it is interesting that the students had such positive attitudes towards using these platforms.

3.4 Engagement in writing processes

The benefits of writing processes are better established than those related to writing outcomes. Most studies indicate that students used wikis to brainstorm ideas for their writing projects. They used the platforms to discuss their writing projects during the pre-writing and drafting stages of their writing processes. Several studies have indicated engagement in writing and discussion of writing projects during the prewriting and drafting stages. Other studies have indicated that engagement and discussion result in better outcomes for learners' writing projects.

3.5 Writing development and text quality

Most studies report that learners experienced development in their writing, though not all studies indicated significant improvements in writing outcomes. A few studies have reported that students' texts created through wikis improved in accuracy, coherence, and quality. Other studies have reported that collaborative writing projects created with wikis result in more precise texts with better meaning, audience awareness, structure, and textual organization. A few studies also report that the use of wikis for writing projects

results in learners' increased attention to both form and content within their writing projects.

However, there is no strong justification for claiming that using wikis for writing projects improves the quality of learners' L2 writing. Most studies that investigated writing quality were limited in various aspects. For instance, most studies lacked consistency in the writing tasks assigned, educational backgrounds, writing proficiency, writing outcome measures, writing contexts, and writing goals of the students included in the studies.

Moreover, a few studies that investigated writing outcomes relied on self-report and other subjective measures of writing outcomes instead of more objective measures.

3.6 Collaboration, cooperation, and participation

Most studies report that the use of wikis enabled students to collaboratively write their projects. However, many studies have shown that collaborative writing does not automatically occur within wikis. In most projects, only some students co-authored the texts on the wikis, while others worked more independently on the projects.

Some students contribute more heavily to writing projects on wikis than others. However, participation among different students in the same writing project was not equal in all studies.

3.7 Audience awareness and feedback

A few studies indicate that the requirement for writing projects to be visible to others in the collaboration and allowing for changes to the texts enabled students to become more aware of their audience and the requirements of textual organization. A few studies also reported that collaborative writing projects on wikis encouraged discourse focused on the readers of the texts written by the students.

A few studies that investigated the nature of the feedback on the writing projects indicated that the feedback was not limited to form and grammar errors. The feedback was related to the content, organization, and meaning of the writing projects. This aspect of writing projects on wikis potentially allows students to gain benefits related to writing development beyond the benefits related to form-focused errors in their writing projects.

4. Discussion

The literature suggests that wikis support an instructional approach to writing that aligns with the process approach to writing instruction. More specifically, most studies indicate that learners have positive experiences when using wikis for writing tasks. However, studies that investigate writing quality and accuracy reveal less conclusive results, which is likely the result of the factors that influence writing instruction and outcomes rather than the impact of wiki technology specifically.

In addition to the relationship between writing quality and wiki technology, other research topics that emerged from the reviewed literature include the difference between collaboration and cooperation in the writing process. While some studies indicate that

learners successfully co-author texts shared on wikis, others indicate that many writing tasks with wikis reveal cooperative behaviors from the learners.

Related to the discussion of collaboration and cooperation in writing tasks with wikis is the tension between collaborative writing and the assessment of that writing. While some of the studies reviewed did include discussions of these aspects of writing tasks on wikis, many of those discussions were general and did not investigate these topics in detail. Future studies should investigate the assessment of collaborative writing tasks using wikis.

Even though wikis are somewhat outdated as a technology for digital writing composition, the research that has been performed in relation to these platforms is still relevant to the study of digital writing today. Many of the questions asked and answered through research regarding writing tasks with wikis relate to many of the same questions asked of digital writing studies in relation to computer-assisted language learning (CALL) today.

5. Conclusions

The purpose of this systematic literature review was to investigate and answer questions regarding wikis, writing tasks, and the outcomes of those tasks with learners. Through reviewing 17 different studies, it becomes evident that wikis have been used in a variety of ways to facilitate collaborative writing tasks for learners of languages other than their native ones. Furthermore, most studies indicate that learners have positive attitudes towards the use of wikis for writing tasks and that the collaborative aspects of writing with wikis can lead to improvements in the writing processes of learners.

However, few studies have revealed improvements in the linguistic accuracy of the writers and in the overall writing quality of the texts created through collaborative writing tasks on wikis. The reasons for these outcomes include various factors related to the writing tasks rather than the use of wikis as the technology component of those tasks. Other challenges to writing tasks with wikis for L2 learners included the unequal participation of some learners in other tasks, the difference between collaboration and cooperation with writing tasks with wikis, and the tension between collaborative composing and individual writing assessment.

Despite the somewhat outdated nature of wikis as a digital writing technology, the research that was performed in relation to wikis and writing tasks with learners of L2 has established many of the same questions that are asked in relation to other digital writing technologies today. Thus, such research continues to have value in the context of digital writing and CALL in L2 education today.

Table 1: Summary of reviewed empirical studies on wiki-mediated L2 writing

Study	Research focus	Context and participants	Wiki-based task(s)	Main findings
Alshumaimeri (2011)	Writing accuracy and quality	42 university students in Saudi Arabia	Descriptive writing	Writing improved in accuracy and overall quality.
Alyousef and Picard (2011)	Wiki use in an ESL business classroom	6 ESL students in Australia	Discipline-based group writing task	Wiki use supported communication, knowledge sharing, and, in some cases, writing quality.
Arnold, Ducate, and Kost (2012)	Revision behavior and group dynamics	53 intermediate German learners	Collaborative composition and revision	Students used both collaborative and cooperative strategies; contribution patterns were uneven.
Aydın and Yıldız (2014)	Task type and revision patterns	34 university students in Turkey	Argumentative, informative, and decision-making tasks	Meaning-related changes outnumbered form-related changes across tasks.
Chao and Lo (2011)	Student perceptions of wiki-based collaborative writing	51 university EFL learners in Taiwan	Story script and narrative writing	Students reported positive perceptions and appreciated time flexibility.
Elola and Oskoz (2010)	Collaborative versus individual writing	8 Spanish majors in the United States	Argumentative essay writing	Collaborative texts showed greater precision in meaning, though accuracy remained a concern.
Kessler (2009)	Attention to form in collaborative wiki construction	Non-native English-speaking teachers	Collaborative knowledge-building wiki	Learners initiated attention to language form during collaborative writing.
Kost (2011)	Writing strategies and revision behavior	5 German language students	Narrative and expository essays	Students used brainstorming, ongoing discussion, and editing throughout the writing process.
Kuteeva (2011)	Writer-reader relationship and metadiscourse	14 university students in Sweden	Academic paragraphs and essays	Wiki writing increased audience awareness and attention to grammatical and structural coherence.
Miyazoe and Anderson (2010)	Learning outcomes and learner perceptions	23 university students in Japan	Writing and translation tasks in blended learning	Students viewed the wiki favorably and showed increased awareness of English writing styles.

Nakamaru (2011)	Wiki engagement in a remedial ESL course	47 community college students in the United States	Reading-linked writing and vocabulary tasks	Stronger wiki engagement was associated with successful course outcomes.
Pellet (2012)	Content knowledge development in L2 learning	30 students	Content-based writing in French	Wiki tasks supported authentic, meaningful, and active learning.
Wichadee (2010)	Summary writing development	35 first-year college students in Thailand	Group summary writing	Students achieved higher summary writing scores and positive attitudes toward wiki learning.
Woo, Chu, Ho, and Li (2011)	Wiki as a scaffolding tool for young L2 writers	38 primary school students in Hong Kong	Collaborative writing	Wiki use supported teamwork and positive perceptions.
Woo, Chu, and Li (2013)	Peer feedback and revision in wiki-mediated writing	12 primary school ESL students in China	Collaborative nonfiction writing	Meaningful editing often occurred at the content level.
Zou, Xiang, and Jeaco (2012)	Wiki use in an online language exchange program	Students in China and the United Kingdom	Collaborative online writing and exchange	Wiki use supported communication and language development opportunities.
Zorko (2009)	Factors affecting collaboration in English language learning	University students in Slovenia	Collaborative English language learning tasks	Wiki work promoted collaboration but also revealed tensions in participation and group interaction.

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Conflict of Interest Statement

The author declares no conflicts of interest.

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