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WIKI-SUPPORTED COLLABORATIVE WRITING: SAUDI FEMALE
GRADUATE STUDENTS' WRITING PRACTICES, DISCOURSE
STRATEGIES, AND PARTICIPANT PERCEPTIONS

A Dissertation

Submitted to the School of Graduate Studies and Research

in Partial Fulfillment of the

Requirements for the Degree

Doctor of Philosophy

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Indiana University of Pennsylvania

December 2018

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Title: Wiki-Supported Collaborative Writing: Saudi Female Graduate Students' Writing Practices, Discourse Strategies, and Participant Perceptions

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This study explores its participants' task-based linear wiki-afforded collaborative writing experiences as well as their perceptions of these experiences. Its pre-task survey establishes the preparedness for collaboration of its participants, nine Saudi female TESOL graduate students working in three groups. Further, its mock writing task draws information about the design of its task, an asynchronous collaborative essay to be written within the Wikispaces (www.wikispaces.com) wikis and about the management of its wiki reply protocol from multiple-threaded to linear. To complete the study's collaborative writing task, first, in the wiki "Discussion" module, the participants generate and negotiate five essay topics, hence, the content analysis of their ESL challenges-related topics and the discourse analysis of their negotiation consensus-driven strategies during the brainstorming and outlining of their essay. To explore the nature of the participants' collaboration, their discussion notes from the wiki "Discussion" module are also subjected to discourse analysis and mined for particular collaboration strategies that the participants might adopt. Further, in the wiki "History" module, to understand the collaborative process during the actual co-construction of each group's essay, the writing changes (e.g., drafting, revising, and editing) are subjected to rhetorical analysis. Finally, to understand the participants' collaborative writing experiences, content analysis is applied in comparing their perceptions of their experiences to their actual collaborative performance. The study's results include: One, a vigorous discussion of potential essay topics using negotiation strategies (e.g., making the first offer, focusing on the target, ranking priorities,

making a counter-offer, and reaching a final agreement); Two, a varied use of collaborative writing activities (e.g., brainstorming, outlining, drafting, revising, and editing); Three: a flexible use of collaborative writing strategies (e.g., single-author, sequential single-author, parallel, and reactive) in the essay planning and co-construction; and, Four: the participants' perceptions of their collaborative writing experiences that emphasize their wiki-based co-construction of a text as a unique, qualitatively different product, a hybrid rather than a mixture of its individual contributions, one that also needs careful planning and design for specific contexts. Finally, this study details theoretical and practical implications for further research.

Keywords: wiki-based collaborative writing, collaboration, writing strategies, task, wikis

Dedication

I dedicate this dissertation to

My backbone “Dad”

Dr. Abdalelah Saaty

My soulmate “Mom”

Asma Baeshen

My “Supernatural Power”

My Brothers

Hattan, Ryan, and Mohammed

My “First Nephew”

Abdulelah

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CHAPTER 1

INTRODUCTION TO THE STUDY

Sarah: Look! My essay and your essay complement each other. I mean ... Hmm, our ideas fit together.

Noura: Hmm... let me see... You are so right!! This main idea in your essay is well explained in mine, and this example here can be added in your second paragraph.

Sarah: If only we could put them together in one essay. It will be a masterpiece!

Noura: Yes!! One strong well-written essay with amazing ideas...

Sarah: ...where we can help each other...

Noura: ... and write together.

(A conversation between two students I overheard in a college writing class)

“Alone we can do so little; together we can do so much.” (Helen Keller)

Introduction

The notion of togetherness, as in joint, group, cooperative, interactive, and collaborative efforts is growing in popularity. Inspired by my own experience and my students' enthusiastic comments, and by the many technology-based ways of learning together I wanted to explore such possibilities in a traditionally non-collaborative learning area, writing. Especially in a foreign language, writing alone can be a forbidding task. But it doesn't have to be, not any more. Therefore, this study explores and celebrates the nature of togetherness in writing. The contemporary writing classroom, whether face-to-face or online, can draw on a growing body of knowledge about writing and learning together and on a wealth of technological devices to make it happen. This study explores collaborative writing theories and practices that stem from a constructivist view of learning and from the use of technology-aided learning platforms, such as wikis.

Context of the Study

Collaborative writing is often analyzed in the context of Vygotsky's (1978) work, which emphasizes learning as a social activity where knowledge is constructed efficiently and effectively by engaging the learner in collaborative activities, as well as by allowing the learner to be responsible for his/her learning (Abu Bakar, Latif, & Ya'acob, 2010). Vygotsky's constructivist perspective continues to be influential today, especially in ESL scholarship (Donato, 1994, 2004; Storch, 2002, 2004). With time, the concepts of interaction, in general, and collaboration in particular, have gained popularity and acquired new meanings (Storch, 2002, 2004). This study embraces constructivist theory and adopts its emphasis on learning as a socially constructed activity and on interaction as essential for cognitive development. It defines collaborative writing as "the joint production or the coauthoring of a text" (Storch, 2011, p. 275) by three 3-member groups of TESOL graduate students in completion of an online wiki-based writing task.

Furthermore, to apply the constructivist perspective effectively, this study creates viable opportunities for writing collaboration by using Web 2.0 technologies, such as wikis. Thus, it supports the claim that "the evolution of collaborative writing may be intrinsically connected with the iterations of technology since new developments provide new opportunities for collaboration" (Kessler & Bikowski, 2010). The recent evolution of collaborative writing has benefitted from one truly revolutionary development, the Web 2.0 online writing technologies and the second generation of web development and design, which facilitate communication, collaboration, information sharing, and knowledge building. Web 2.0 is defined as a set of Internet applications that facilitate and enhance social interaction, in which users can create, edit, and share knowledge online (Anderson, 2007), and, also, as "Networked tools that support and encourage individuals to learn together while retaining individual control over their time, space,

presence, activity, identity, and relationship” (Anderson, 2005, p. 4). A popular Web 2.0 technology, and an effective collaborative writing tool, wikis are widely used in educational settings, especially in ESL writing settings.

In the West, the wikis’ collaborative nature is the focus of a rapidly expanding research interest in exploring their use in educational contexts. Defined as a “freely expandable collection of interlinked web pages, a hypertext system for storing and modifying information – a database, where each page is easily edited by any user with a forms-capable Web browser client” (Leuf & Cunningham, 2001, p. 14), wikis have entered educational theory and practice at all levels. The majority of research studies on wiki-based collaborative writing, however, are conducted in ESL contexts (e.g., Alyousef & Picard, 2011; Kessler & Bikowski 2010; Li & Zhu, 2013). Despite wikis’ popularity in the West, very limited research on this topic exists in the Saudi Arabian educational contexts (Alshumaimeri, 2011; Alshalan, 2010). Furthermore, as shown in the literature review in Chapter 2, there is no research conducted on Saudi female students using wiki-based collaborative writing in graduate TESOL programs in Saudi Arabia. That has important practical implications because the Saudi Arabian Educational system is currently assessed for adopting new teaching pedagogies as well as for utilizing technology in classrooms. Hence, it is important to examine the effectiveness of the new teaching pedagogies along with technology, such as wikis, in authentic Saudi educational settings.

The Problem

In a country steeped in traditionalism, teacher-centered pedagogies, a male-dominated social environment, and restricted roles for women in public life, technological progress is slowly but surely making a difference in both learning and teaching and has the potential of altering that situation by enabling new forms of collaboration.

In Saudi Arabia, the importance of learning to write in English for academic purposes,

along with the importance of using technology in educational settings, is rapidly increasing. It is aided by the accessibility of new Web 2.0 technologies, i.e., wikis. It provides researchers with a window into L2 collaborative writing. However, memorization and rote learning as teaching methods are still the norm in the country (Elyas & Picard, 2010). Also, teaching leans towards lecturing and tends to be more teacher-oriented than student-centered (Jamjoom, 2010). In a typical Saudi educational setting, the teacher is considered the knowledge provider, as Freire (1985) explains when critiquing this teacher-centered model, which he calls the “banking method,” “the educator [is] the one who . . . transfers existing knowledge to the learner.” (as cited in Bartholome, 2009, p. 345). Students, on the other hand, are considered more as passive objects than as active learners (Elyas & Picard, 2010). They are not used to participating in small group activities, or to giving presentations. Thus, working in group activities and/or projects may be problematic for Saudi students. In addition, students might not assign active roles for all group members, or they might struggle with dividing work equally among group members. Therefore, some Saudi students find it difficult to work collaboratively.

The adequate adaptation of technology in education can create a space beyond the traditional Saudi classroom setting, and, thus, facilitate collaborative writing and students’ interactions to enhance their writing processes. Web 2.0 technologies can make learning more interesting and help students to become more engaged in the learning process. Users can interact easily with each other and share ideas and knowledge. Thus, it is important to examine the interest in and awareness of using Web 2.0 technologies in L2 writing settings. However, due to cultural and traditional customs, it is challenging for Saudi females to be publicly active in online spaces. Thus, a controlled use of technology, which is limited to classroom use and restricted to students, can be one way to create a nonthreatening online space for Saudi females where students’ writing and personal information could be protected from the public. In such a safe

learning environment, Saudi females could experience being active in an online space without risk to their personal information.

The Gap

In my review of the literature in Chapter 2, I have identified a paucity of research in collaborative writing and interactions in the L2 writing context, including face-to-face and computer-based collaborative writing environments. With a concentrated review of the literature and synthesis of previous empirical research studies on students' participation in and perspectives on wiki-based collaborative writing in L2 educational environments, I have identified significant gaps within the field of research, which helped in shaping the design of the current study. Although most of the existing research studies about wiki-based collaborative writing are in ESL educational settings (Chao & Lo, 2011; Kessler & Bikowski, 2010; Li & Zhu, 2013), very limited research on this topic exists in the Saudi Arabian learning context (Alshumaimeri, 2011; Alshalan, 2010). Here, I elaborate only on the available wiki-based writing studies that address this field, albeit from a different perspective. By doing this, I define a significant gap in the knowledge on wiki-based writing research and practice.

To my knowledge, currently only four studies about wiki-based collaborative writing are set in Saudi contexts. Yet, they have different emphasis than the current study and do not focus on Saudi female graduates' educational settings. For example, Alzahrani and Woollard (2012) examine the potential of a wiki as an e-learning tool through the perspectives of 24 Saudi male undergraduate students from two colleges: science and education. The researchers use interviewer-administered questionnaires for data collection. They analyze students' responses as they conduct frequency counts and percentages. Their findings are presented through descriptive statistics. Data are examined to reveal students' perceptions on using wiki technology in

learning, not to analyze students' writing. Findings indicate that students prefer to learn collaboratively and hold positive perceptions on wikis.

Similarly, another study by Alkhateeb (2013) investigates a group of ESL instructors' experiences and reflections regarding the utilization of wiki-based tasks in a higher education institute in Saudi Arabia. It focuses on the instructors' perceived influence of wikis on collaborative writing but does not examine nor report findings from the students' writing products. The participants were six ESL staff members with different backgrounds, nationality, years of experience, and academic positions. The researcher followed a qualitative research approach by conducting twelve interviews. The findings reveal that the utilization of wikis in L2 writing creates new possibilities for instructors to expand their writing pedagogies.

A different study by Alshumaimeri (2011) investigates the use of wikis in improving writing skills, that is their effect on accuracy and fluency. The participants, twenty-four male students in their preparatory year at King Saud University in Saudi Arabia were divided into an experimental group (22 students) and a control group (20 students). The researcher followed a quasi-experimental research design in which a pre-test and a post-test were used for data collection. The study's results suggest that wikis can benefit students by improving their writing accuracy and fluency skills in a collaborative environment.

Unlike Alshumaimeri (2011), Alshalan (2010) examines the use of wikis in improving writing skills of Saudi female tenth graders in a female-only educational setting. The participants were forty-four students in three classes: two classes of thirty-three in the experimental group, and one class of fourteen in the control group. It investigates if wikis improve students' writing accuracy (e.g., sentence-level grammatical errors and spelling) and overall quality (e.g., organization, fluency, and content). The study followed a quantitative research approach and quasi-experimental research design. The findings conclude that the students who received the

treatment of process writing through wikis outperformed the control group in the post-test in a statistically significant way.

Although these studies are in Saudi contexts, they do not truly represent, or relate to the Saudi female graduate educational setting. Thus, in order to implement wiki-based collaborative writing in a Saudi female graduate educational context, there is a need to explore its effectiveness in this particular population and to understand these students' perceptions on using wikis in collaborative writings tasks. This need is due to the fact that wikis are still relatively new in Saudi educational contexts.

Furthermore, even though much research has delved into students' perceptions of wiki-based collaborative writing (e.g., Chao & Lo, 2011; Li, 2014; Li & Zhu, 2013; Lund, 2008), more research is still needed, especially in the exploration of student experiences in wiki-based collaborative writing activities. Therefore, this study further explores the link between students' participation in and perceptions of wiki-based collaborative writing. Motivated by the above research gap and pedagogical need, the current study aims to examine a wiki-based collaborative writing task for female Saudi TESOL graduate students, thus, focus on both their writing experiences and on their perceptions of those experiences.

The Wiki

For the purposes of this study, I chose wikis because of their accessibility, availability, and appropriateness with regards to the task at hand: the co-creation of a joint text. Here, they represent a Web 2.0 technology that could be used as a collaborative learning and writing tool.

As a second-generation Web 2.0 tools, wikis facilitate communication, collaboration, information sharing, and knowledge building. As a Web 2.0 technology with a valuable collaborative nature, wikis have gained attention as a preferred tool for collaborative writing (Godwin-Jones, 2003). The wikis' most important asset is that they are free and easy to use (Li,

2014). All wiki users can write, comment, and edit the wikis' content. In fact, even novices can easily use wikis without having advanced computer skills (Wang, 2014; McMullin, 2005). Additionally, wikis can be set up as public, permitting access and text editing by anonymous users, or, alternatively, they can be set up as private, limiting access and editing to authorized users only. Educational wikis, which allow access only to registered students, are fundamentally private but not anonymous communities (McMullin, 2005). Students' personal information and writing can be protected if the instructor limits the access to the wiki pages to her students only. Since most Saudi female students are not used to writing publicly online, or to revealing their personal information in online spaces, their instructor can easily limit wiki access to her students only. Also, using wikis does not require revealing any personal information about its users. Thus, it is easy to protect students' privacy. Therefore, wiki utilization can be suitable for collaborative writing and learning in Saudi educational settings.

The wiki technology is ideally suited for collaborative learning and writing. In fact, a "wiki is likely to be the most relevant technology for collaborative writing because it is designed for multiple users to easily build websites and web pages" (Chao & Lo, 2011, p. 398). An underlying objective of wikis is "to realize and enact a more fully social view of writing in each text . . . plainly and literally, connected to and developed by a number of people" (Lundin, 2008, p. 455). The wiki's open-end review structure makes it one of the most suitable tools to support collaborative writing in an online mode (Parker & Chao, 2007). In particular, wikis' main modules, such as its "History," "Discussion," and "Comment," offer opportunities for collaborative writing, as well as for student interaction during collaborative writing tasks. A wiki enables all edits to be traced back to the original author and/or text (Chao & Lo, 2011). Also, the noticeable color changes (e.g., deletion in red and insertion in green) help students and teachers to identify revisions easily. Thus, a wiki's "History" module saves every edit made to the page

and helps monitor students' writing progress, whereas its "Discussion" and "Comment" modules facilitate students' interactions. The wiki's tracking feature allows teachers and researchers to follow students' interactions and collaborative writing process by examining who makes changes, what changes are made, how often these changes occur, and when they occur. Additionally, wikis offer students the advantage of flexibility and the convenience of not having to meet in person. The latter is essential for both short- and long-term group projects. Therefore, wikis are seen as an ideal tool for student collaborative work (Doolan, 2006).

In educational settings, wikis support collaborative writing and cater to many of the principles of the social constructivist learning theory including collaborative opportunities, experience with multiple perspectives, active and engaging learning, learner-centered environments, and social negotiation (Doolan, 2006). Thus, wikis can serve as an example of the social constructivist approach to learning, where students can be active learning agents in co-creating knowledge rather than passive observers of others' knowledge.

In this study, wikis are used as a tool for conducting a wiki-based collaborative writing task for Saudi female TESOL graduate students. I chose Wikispaces (<http://Wikispaces.com>) as its platform because it offers a set of features that are easy to learn, use, and incorporate into a course. The wiki utilized in this study is private, that is with limited access to participants only. Only authorized members can read, write, comment, and edit the wiki pages. Participants are encouraged to use the wiki's "History," "Discussion," and "Comment" modules to interact with group members as they complete the wiki-based collaborative writing task. It is these wiki features that sparked my interest in using wikis in education.

Researcher Motivation

In addition to the suitability of wikis for collaborative writing tasks, I have personal reasons to explore their educational applications deeper. These include my academic background

and teaching experience, my interest in technology in general and its use in second language education in particular, especially in the context in which I have been personally involved.

My academic interest in technology and its relation to second language writing derives from my personal experiences and initial inquiries into this subject. It has motivated me to learn more about wiki-based collaborative writing. My interest in wiki-based collaborative writing started with a personal experience when teaching at a university in Saudi Arabia and has continued to grow ever since. The latter has been an eye-opener, as it made me realize the challenges that ESL students face in learning writing. When teaching, I also realized that students were using technology to mediate their communication and interaction with the world around them. This experience has piqued my interest in exploring the ability of technology to facilitate teaching writing to Saudi students.

My teaching experience at the university has been rewarding in that it has provided me with valuable skills through assigning several writing tasks throughout the semester. It was important for my students and me to scaffold the writing process, from brainstorming to the final draft. For some of the writing tasks, I assigned peer/group discussions that generate the writing topics. As time went by, the students experienced the process of providing feedback to each other's drafts. One day, a student suggested that it could be beneficial and easier for them if they worked together on a single writing task, in peer groups. Other students liked and supported that idea and were excited to try it. At that moment, I realized that my students were referring to collaborative writing, where several students co-author a single text. Until then, I had been cautious in applying collaborative writing tasks fearing rejection by students, colleagues, and a university that have no experience in it. However, these students' comments emboldened me to try it out. Obviously, my students, were eager to try it, and I was thrilled at this discovery. Gladly, I found it was a good time for me and for my students to come out and embrace the new

age. For me, it was a liberating moment of finally substituting the toil of teaching for the joy of teaching. I told the class that this was a great idea and I would happily follow up on it. Later that day, I went back home and thought about collaborative writing tasks. Swept by this idea, I read about collaborative writing until I managed to create a task for them. In the end, the students worked in groups of three to complete the task. After that, I asked them for feedback and suggestions about this new writing experience.

Later, I found that for most of my students, my joy of teaching translated into their joy of learning. Some students told me that working together helped them develop their writing skills. They even spoke about their enjoyment in talking to their peers about their text, as well as in providing feedback to each other's writing. Other students told me that they wished they had more time to communicate with each other in class and outside class. The students indicated their difficulty in arranging to meet outside class due to their different schedules and commitments. However, a few students mentioned that it was not easy for them to work or communicate with others and that they preferred to write individually. This teaching experience helped me realize that I needed to learn more about the nature of teaching collaborative writing in order to find effective teaching pedagogies for female Saudi TESOL graduate students to facilitate collaborative writing through the use of technology. That led me to explore various computer-mediated technologies that aid students in communicating more effectively with each other during the collaborative writing process. As I evaluated the benefits and caveats of online collaboration tools and writing opportunities in various Web 2.0 technologies, wikis emerged as well suited for my research and pedagogical purposes because of their collaborative affordances and ease of use.

As I learned more about wikis, I realized that my initial exhilaration was not enough to materialize my dreams of incorporating collaborative writing in my writing classes. In Saudi

Arabia, where I come from, wikis are not widely used yet. Furthermore, the educational and social implications of using online tools are seen as somewhat problematic and even objectionable. Maybe because of this, there is minimal research on using wikis in Saudi learning contexts, particularly in female-only educational settings. As I began exploring wikis, I became increasingly interested in their ability to support learning and collaborative writing in educational settings, in their potential to empower female students in particular, and, last but not least, in their ability to foster these in a subtle, even subversive way. Thus, driven by my research interest and teaching experience, by the potential of wikis as emerging tools in ESL settings (Chao & Lo, 2011; Li, 2012, 2013; Li & Zhu, 2013), and by their suitability for the Saudi context, I became strongly motivated to further examine the interactions of Saudi female students in the process of completing a wiki-based writing task as well as in gaining an insight in their perspectives about their writing experience. This realization shaped the purpose of this study.

Purpose of the Study

Based on my motivation to employ innovative and effective online technologies as an act of advanced pedagogy but also as an act of social good, the purpose of this study is to explore how Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task and how they interact throughout the completion of that task. Additionally, this study investigates Saudi female TESOL graduate students' perceptions of their own use of wiki-based collaborative writing when completing a collaborative writing task on the specially created Wikispaces (<http://wikispaces.com>) site. The purpose of this study is to explore collaborative writing as "the joint production or the coauthoring of a text" (Storch, 2011, p. 275) by its participants, who, in small groups of three, work collaboratively on completing a collaborative wiki-based writing task, where they discuss and co-construct the task by using the wiki "Discussion" and "History" modules.

Research Questions

The aforementioned background, my personal motivation for this study, and the gap revealed in the literature (explained in greater detail in Chapter 2. Review of the Literature) guide my research focus on exploring the way Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task and the way they interact throughout the completion of that writing task. In addition, this study investigates Saudi female TESOL graduate students' perceptions of their own use of wiki-based collaborative writing. Accordingly, my research intends to provide a deeper insight into the above areas by seeking answers to the following three research questions:

1. How do the participants collaborate during the discussion of the co-construction of their asynchronous, wiki-supported task-based essay afforded by the wiki "Discussion" module?
 - a. What topics do they consider for their essay?
 - b. What discourse practices do they employ in negotiating the content and organization of their essay?
2. How do the participants collaborate during the actual writing of their asynchronous, wiki-supported task-based essay afforded by the wiki "History" module?
 - a. What writing activities do they engage in co-creating their collaborative essay?
 - b. What writing strategies do they employ in co-creating their collaborative essay?
3. How do the participants perceive their asynchronous wiki-supported task-based collaborative writing experience?

Methodology Overview

My study focuses on the way Saudi female TESOL graduate students interact to co-construct written texts in a wiki-based collaborative writing task. It also investigates the

perceptions of their own use of wiki-based collaborative writing when completing a writing task. Therefore, it follows a mixed research inquiry methodology. The data from the participants' actual wiki entries are analyzed following a quantitative and qualitative approach, while the participants' perceptions are analyzed qualitatively. The research design of this study corresponds with Creswell's (2009) definition of qualitative research as "a means for exploring and understanding the meaning individuals or groups ascribe to social or human problems" (p. 4) and of quantitative research as offering numeric frequency-count analyses. Thus, researchers using a mixed qualitative-quantitative approach in applied linguistics often study naturally occurring language phenomena but also the perceived effect of those phenomena on its participants.

Consequently, to answer the research questions, a number of data collection instruments are employed in this study including: a pre-task questionnaire and individual face-to-face semi-structured interviews and reflection letters for the qualitative analysis. Additionally, the wiki "Discussion" and "History" records are analyzed and used as data sources for both the quantitative and qualitative analysis. I discuss the data collection methods and my methodological approach in greater detail in "Chapter 3. Methodology."

Significance of the Study

The significance of this study encompasses both theoretical and pedagogical dimensions. Mainly, this study contributes to the current body of computer-based collaborative writing literature, particularly in emerging wiki-based collaborative writing contexts. To the best of my knowledge, researchers have not investigated how Saudi female TESOL graduate students interact to co-construct written texts in a wiki-based collaborative writing task, nor investigated their perceptions of their own use of wiki-based collaborative writing when completing a joint writing task. Therefore, this study aims to fill an existing gap in EFL online collaborative writing

research, in general, and in wiki writing research, in particular. It also lays the foundation for further explorations of Saudi female students in online collaborative writing educational settings. Furthermore, this study has valuable theoretical implications. It has reinforced the importance of social constructivist learning theory in teaching L2 writing in an ESL learning setting. Overall, this study is a an attempt to investigate aspects that govern wiki participations and interactions from a social constructivist perspective. It proposes understandings and observations of computer-based collaborative writing from a social constructivist theory perspective which can inform and intrigue future studies.

The pedagogical significance of this study lies in its exploration of new teaching approaches that help in the development of the Saudi educational scene and, thus, in the country's overall development. Today, the Saudi educational system is striving to find contemporary teaching pedagogies and approaches to help in the country's development and to discover paths of self and social development. One of these developments is the emphasis on utilizing technology in education. Also, the importance of collaboration and teamwork is highly emphasized in learning settings. Along with these current developments, there has been a strong impetus towards female education in particular. Therefore, research in the area of online collaborative writing in relation to the Saudi female context is highly needed due to the expanding Saudi interest in investing modern teaching and learning approaches, as well as in utilizing technology in educational settings. However, along with the general support for innovative technologies, there is a strong opposition to any methodology or educational tool that might be deemed counterproductive or inappropriate in the Saudi context. This study aims to provide an acceptable technological tool that is applicable in collaborative writing as well as across the curriculum.

Moreover, the findings of this study aim to help English writing educators in Saudi

Arabia to understand and appreciate the role of online collaborative writing in English writing education and its implementation in Saudi classrooms. In addition, understanding students' perceptions of collaborative writing in a wiki platform can have a considerable impact on improving English writing teaching. It presents insightful ideas to Saudi English writing educators and curriculum designers to be implemented in various educational contexts. Since the participants in this study are preparing to be future English instructors, the results from this study can be used by them and by other instructors to better understand how Saudi female students perceive their participation in online collaborative writing. Further, the study can aid in adopting the use of wikis as a collaborative writing medium to meet students' needs and to mirror teamwork in the professional world.

This study provides Saudi female TESOL graduate students with a venue to experience wiki-based collaborative writing where they interact with each other in co-constructing professional knowledge. With this study, I aim to raise awareness of the role of Web 2.0 technology tools, such as wikis, as a means of enhancing the English writing process in an ESL setting. I hope that this study might help to set the foundation for further research on online collaborative writing in Saudi contexts. Also, I hope that this study aids in adopting the use of wikis as a collaborative social-constructivist tool in writing education and in other educational contexts to fit student and social needs.

Operational Framework of Concepts: Glossary

In this section, I provide the definitions of key terms utilized throughout the study.

Collaborative writing: Involves multiple writers who co-produce written texts termed as a single text with plural authors (Ede & Lunsford, 1990). Collaborative writing in this study is defined as “the joint production or the coauthoring of a text” (Storch, 2011, p. 275) by TESOL graduate students working in small groups of three to complete a wiki-based writing task.

Distributed authorship: Describes interactive and remote authoring (Ascott, 2005). The same term is also used to refer to projects in which a large number of participants contribute to a common pool of artistic material (Bruns, 2010). Here, it is used to refer to the co-creation of collaborative writing essays within this study's context.

Perceptions: In this study, it refers to participants' opinion of their own use of a wiki-based collaborative task. For their perceptions, participants draw on their own writing changes and on their group members' contributions to the joint writing product, as well as on the interactions they experienced and the skills they developed in the wiki collaborative writing. This study focuses on exploring students' overall perceptions of their wiki-based collaborative writing experiences.

Social constructivism: Learning theory that emphasizes the need for collaboration among learners (Woo & Reeves, 2007). Here, it provides the conceptual framework guiding the study of collaborative writing. It also supports the qualitative analysis of the data to glean insights in the participants' collaboration and perceptions of the co-construction of the wiki-based task.

Web 2.0 technology: The second generation of web development and design that facilitates communication, collaboration, information sharing, and knowledge building. It refers to the set of Internet applications that facilitate and enhance social interaction, in which users can create, edit, and share knowledge online (Anderson, 2007). This study is focused on the wiki as a Web 2.0 technology tool.

Wiki: "Freely expandable collection of interlinked Web pages, a hypertext system for storing and modifying information - a database, where any user with a forms-capable Web browser client can edit any page" (Leuf & Cunningham, 2001, p. 14). A wiki is mainly a collaborative website whose content can be created and edited by anyone who has access to it. In

this study, participants use the Wikispaces (<http://wikispaces.com>) wiki with a private setting in which only wiki members can view, write, and edit pages.

Writing changes: Refers to the ways students' co-construct joint texts in wikis. The writing changes in this study refer to three main categories: drafting, revising, and editing (Lowry, Curtis, & Lowry, 2004). In this study, writing changes refers to group members' drafting, revising, and editing changes as recorded by the wiki "History" module.

Overview of the Dissertation Chapters

This dissertation comprises five chapters. Chapter 1 discusses the study's background, its statement of the problem, its purpose, its research questions and methodological design, and its significance. Chapter 2 reviews the literature on collaborative writing, technology-assisted collaborative writing, and on the social constructivist theory that underpins collaborative writing. It also reviews wiki technology, in general, and wikis in educational settings, in particular. Chapter 3 presents the methodological approach employed in this study to explore the participants' experience in and perceptions of wiki-based collaborative writing. It presents the research design, setting, participants, data collection instruments and methods, and the data analysis procedures. Chapter 4 reports the findings from the data analysis of the pre-task survey questionnaire, the wiki "Discussion" and "History" modules, the semi-structured oral interviews, and the reflection letters. Chapter 5 summarizes the research results in relation to its research questions and discusses the findings' significance. It also presents the pedagogical implications from the use of wikis in collaborative writing in ESL settings. Lastly, it concludes with some suggestions for future research on wiki-based collaborative writing.

Chapter Summary

Chapter 1 provides an overall description of this study. It introduces the study's background, statement of the problem, purpose, and research questions. It also describes relevant

theoretical and personal perspectives, discusses the importance of the study, defines key concepts, and outlines the organization of the dissertation.

The following Chapter 2 reviews the theories and the relevant literature that inform this study. Specifically, it reviews theoretical perspectives on social constructivist learning theory as it relates to collaborative writing. It also examines research on collaborative writing in ESL learning settings and wiki-based collaborative writing. Furthermore, it identifies theoretical and pedagogical gaps that this study aims to bridge. Chapter 2 concludes with a summary of the background for this study, i.e., the kingdom of Saudi Arabia as it relates to the social constructivist theory provisions underpinning this study with respect to the Saudi educational system, the teaching of English, the use of technology, and the role of women in it.

CHAPTER 2

REVIEW OF THE LITERATURE

Introduction

This chapter provides a foundation for the present study by reviewing empirical and theoretical literature. The review of the literature in this chapter falls into three main sections. First, to explore the current state of research and to inform this and future studies, it provides an overview of the literature on collaborative writing in ESL settings and, particularly, in technology-rich educational environments. Additionally, it addresses wiki technologies in general, and, more specifically, wikis in educational settings. Thus, it attempts to bridge the gaps identified in the literature reviewed for this study. The second section discusses the theoretical framework that guides this study and provides the background of collaborative writing. Specifically, it reviews theoretical perspectives relating to social constructivist learning theory as it relates to collaborative writing. This theory is also used to justify and to situate wikis within ESL learning settings. Since the participants in this study are Saudi female TESOL graduate students to be employed in the Saudi context, a third section is added to the literature review. The latter provides a brief socio-cultural and educational background of the kingdom of Saudi Arabia by reviewing the Saudi educational system, the importance of teaching English in Saudi Arabia, and the status of Saudi women. It also addresses the status of technology in the kingdom, the use of technology in Saudi education in general, and its use by Saudi females in particular.

Collaborative Writing Settings

Here, I differentiate between the different degrees and levels of cooperation in writing. On the one hand, I refer to the lower mechanical process of group writing as a composite additive process where individual contributions to the text remain separate, and where the final text is a mixture of its constituent contributions. On the other hand, and, in relation to this study,

I emphasize collaborative writing as a process of co-creation and co-construction of a qualitatively new text that is not derivative of its constituent contributions. I define the latter type of jointly produced text as the blended product of true collaboration, co-authorship, and text co-ownership.

Central to this study, the notion of collaborative writing emerges in the 1980s (Ede & Lunsford, 1990). It is informed by the concept of knowledge as a social construct and of writing as a social process (Ede & Lunsford, 1990). Collaborative writing in this study refers to the “coauthoring of a text” (Storch, 2011, p. 275) by Saudi female TESOL graduate students working in groups of three to complete a wiki-based collaborative writing task. Limiting the group size to three or four members tends to enable students to interact and collaborate most productively (Dobao, 2012; Li, 2012; 2013). Therefore, collaborative writing in this study allows the Saudi female TESOL graduate students to cognitively create a single text as multiple co-authors.

Furthermore, in this study, collaborative writing refers to the cognitive creation of a single text by multiple authors who share ownership. The process of jointly creating a text involves its authors in a shared decision-making process throughout the text’s creation and at every stage of its creation (Ede & Lunsford, 1990). More specifically, the co-authors share equal participation in the planning, generating ideas, deliberating about text structure, and in editing and revising the final written product. Consequently, the shared ownership of a text is not just a matter of participating in the above stages of its development as a way of combining all individuals’ personal contributions in the form of a collage. Here, text ownership extends to the co-creation of a text that goes beyond the physical compilation of individually created text segments to signify the creation of a joint text that is the result of collaborative cognition (Storch, 2012, 2013). This means that participants are responsible for the overall quality of the entire text,

i.e., for its composition, revision and editing, and not just for their own parts (Arnold, Ducate, & Kost, 2012). Thus, unlike group writing which may be a joint additive process of text co-creation as compilation, collaborative writing is a shared cognitive process of text co-authorship as co-ownership supported by both the L1 and L2 writing process.

Additionally, collaboration in the writing process is reinforced in both L1 and L2 writing. In L1 writing, Bruffee (1993) “posited that collaborative writing benefits students by providing certain resources that are not accessible to students performing individual writing” (as cited in Li, 2014, p. 19). For instance, through collaborative writing, students experience a variety of roles that are usually inaccessible within individual writing sessions, such as being critical readers, tutors, and/or editors (Li, 2014). In L2 writing, whether in pairs, or in larger groups, collaborative writing encourages students to process language deeply and reflect on their language use (Storch, 2011). Moreover, Bruffee’s (1993) idea of collaborative writing has expanded into a strategy that allows students to blend their writing together, thus creating unique and truly co-created texts. In addition to the co-creation of uniquely blended text content, collaborative writing has a positive effect on learners’ grammatical accuracy and discourse fluency in this process (Storch, 2002). Students dictate the content, the language and its use, and simultaneously solve content and linguistic problems within the context of collaborative writing (Li, 2014; Swain, 2000). Added to this is yet another benefit: as students jointly produce texts, their sense of co-ownership empowers them to contribute to the decision-making and problem-solving on various aspects of writing (Storch, 2005). Thus, collaborative writing in an educational context engages and enhances all cognitive levels of text composition in both the L1 and L2 writing process.

Despite these and other benefits of collaborative writing reported in the literature, some drawbacks and challenges have also been emphasized as equally important in defining

collaborative writing. These include concerns regarding student commitment in collaborative writing (e.g., not all students shared the work equally and had different working and writing styles) (Arnold et al., 2009). Such students contributed very little due to the lack of penalty for their inadequate participation, which, nevertheless, affected the level of collaboration, and thus, disrupted the students' learning experience (Coniam & Kit, 2008). Furthermore, some students reported their preference for individual writing marked by cooperation rather than collaboration. That was attributed to individual student working and writing style and ingrained habits (Ducate & Kost, 2009). Thus, besides the benefits associated with collaborative writing, it is essential to consider these and other real and potential caveats.

Collaborative Writing in ESL Settings

Collaborative writing and learner-learner interaction are associated with Vygotsky's concept of social constructivism (Razak, Saeed, & Ahmad, 2013), which holds that knowledge is constructed efficiently and effectively by engaging learners in socially collaborative activities, and by allowing learners to be responsible for their learning (Abu Bakar, Latif, & Ya'acob, 2010). More recent research on learner interaction in collaborative writing also emphasizes social interaction as an important factor for cognitive development (Vygotsky, 1978; Storch, 2002, 2004). Over the past decades, collaborative writing in English as a Second Language (ESL) settings have captured the attention of instructors and researchers alike (Donato, 1994, 2004; Storch, 2002, 2004).

ESL scholars suggest that collaborative writing may be conducive to language learning because it provides learners with a wide range of multiple opportunities for language practice. In fact, when students attempt to negotiate meaning during collaborative writing, they become aware of their own and their peers' language use. Several studies have shown that interaction and meaning negotiation between ESL students can lead to better knowledge construction and more

accurate writing, which constitutes an important part of language learning (Storch, 2002; Storch, 2011). Therefore, the concept of collaborative writing aligns with social constructivist learning theory.

Collaborative writing has received considerable attention as a form of developing ESL students' writing skills (Storch, 2011). Research studies in L2 writing demonstrate the usefulness of collaboration in promoting and developing writing skills. More specifically, they claim that collaborative writing encourages students to brainstorm ideas and to contribute more detailed ideas than individual writing (Godwin-Jones, 2003). When applied to writing tasks, collaboration requires learners to reflect on their language use, discuss alternative forms of language use, and collaboratively solve problems, which consequently helps to facilitate and enhance L2 writing (Li, 2014; Swain, 2000). More importantly, research on L2 writing maintains that collaborative writing promotes interaction and mutual support among writers, which helps writers hone their writing skills (Chao & Lo, 2011).

More recently, the process of collaboration and collaborative writing is increasingly aided and enhanced by modern technologies. Most prominent among them, Web 2.0 technologies and their increased use in ESL learning settings have made collaborative writing accessible online (Kessler, 2009; Storch, 2012). Currently, one of those Web 2.0 technologies, the wiki, is widely integrated into collaborative writing activities in ESL contexts, mostly due to its free availability, user friendliness, and collaboration affordances.

Collaborative Writing in Technology-Afforded Settings

Over time, technology has developed writing in many ways. It has transited writing from pen and paper to computer word processing, and then, to advanced online writing environments (Kessler et al., 2012). More recently, computer technology development, particularly Web 2.0 tools, has influenced the notion of collaborative writing as well as enormously transforming its

practices and processes (Li, 2014). Thus, free collaborative writing tools available to the current generation of students support more effective teaching and learning approaches (Brufee, 1973; Parker & Chao, 2007; Li, 2013) especially for students who have grown up with technology and have used the Internet all their lives (Prensky, 2001).

Collaborative writing, which is well supported theoretically by the social constructivist learning theory, now benefits from the findings of emerging empirical research studies that investigate online collaborative writing in L2. The development of newer Web 2.0 technology tools provides opportunities for new types of interactions, collaborative learning, and collaborative activities that are typical for online collaborative writing modes (Godwin-Jones, 2005). Thus, Web 2.0 technology tools have facilitated and supported collaborative writing by complementing, enhancing, and adding new collaborative dimensions to the L2 classroom (Parker & Chao, 2007).

The rapid development of technology benefits collaborative writing in many ways. The increased use of computer-mediated communication (CMC) technologies, especially Web 2.0 tools, such as wikis and social networks, have facilitated and supported collaborative writers (Li, 2014; Kelssler, 2009; Warschaner & Grimes, 2007). Using these tools in educational settings offers a qualitatively new, albeit not yet well-understood types of socialization, interaction and communication that promote learning. In their support of communication among learners, Web 2.0 technology tools can encourage various degrees of collaboration among learners who now can overcome time and location constraints and collaborate in writing outside traditional face-to-face classrooms. For example, unlike in traditional school settings, students can write, read, edit, and respond to others' texts at their convenience. They can revisit texts and rethink their responses. In online collaborative writing, students can utilize spell check and other editing tools to evaluate their language choices. Writers can communicate with each other and negotiate

meaning using different communication tools enabling chats, discussions, and comments. Therefore, CMC, and wikis in particular, can offer various online spaces where writers can engage in social construction and collaborative co-authorship (Godwin-Jones, 2005).

With the development of a wide range of Web 2.0 technology tools that afford users' participation and collaboration, collaborative writing has gained greater research attention (Godwin-Jones, 2018; Li, 2014). In particular, the wiki has been acclaimed as a major online space for collaborative writing (Li, 2014; Li & Zhu, 2011; Parker & Chao, 2007). Although there has been a growing awareness of the educational possibilities of wikis and an expanding body of research on their use, there still seems to be only a limited amount of published research on the use of wikis in L2 learning contexts.

Using wikis. “Wiki” is a Hawaiian word that means “quick,” “fast,” or “in a hurry” (Leuf and Cunningham, 2001). A wiki is mainly a collaborative website whose content can be edited by anyone who has access to it. Further, it is a software program that permits users to freely create and edit the content of its web pages (Mak & Coniam, 2008). A well-known definition of wikis calls it a “freely expandable collection of interlinked webpages, a hypertext system for storing and modifying information – a database, where each page is easily edited by any user with a forms-capable Web browser client” (Leuf & Cunningham, 2001, p. 14). Because of their technical features, wikis have emerged as valuable collaborative tools providing a method of virtual collaboration that helps establish contact, maintain dialogue, and share information in joint projects, as well as engaging learners in collaborative learning and knowledge construction. In addition, writing in wikis can lead users to joining virtual communities of practice (Boulos, Maramba, & Wheeler, 2006). Perhaps the best example of a wiki in action today is Wikipedia (<http://wikipedia.com>), which is a free, online public encyclopedia that contains millions of articles in different languages, written and rewritten by volunteers from all over the world. This

study uses another widely used wiki, that is Wikispaces (<http://wikispaces.com>).

Using Wikispaces wikis. The wikis from Wikispaces (<http://wikispaces.com>) afford different work opportunities and tools for their users. They offer some user-friendly technical features, such as editing content, providing links, allowing track changes, and providing search capabilities. They also enable users to insert multimedia content, i.e., photos, sounds, and hyperlinks. In Wikispaces (<http://wikispaces.com>), the wiki's "Discussion" module allows users to communicate and negotiate their writing content via asynchronous messages. The "Edit" module enables users to change or revise content as they see fit. The "History" module, on the other hand, shows all the changes made to the pages in color codes that indicate deleted and inserted texts. The "Comment" module allows users to raise questions and provide specific comments by posting these in a pop-up box. These wiki functions are technologically enhanced tools that have a great potential to improve online collaboration (Parker & Chao, 2007) and facilitate student interaction (Wang, 2014). Therefore, the wikis' technical features make them useful educational tools that may provide a convenient format for valuable collaborative writing and knowledge construction.

Indeed, the wiki is one of the most convenient Web 2.0 applications available for educational contexts (Wheeler & Wheeler, 2009). It is often seen as an ideal tool for supporting the increasing amount of collaborative writing generated in educational and professional settings (Parker & Chao, 2007; Wheeler & Wheeler, 2009). This is largely due to its very low technological barriers and its rich and flexible functionality (McMullin, 2005). The power of a wiki for educational implications stems from its affordances and features, and from the actions that individuals can potentially perform in their environment. However, while a wiki offers great possibilities for collaboration and enhancing students learning, it does not automatically lead to positive learning outcomes. There is still a need to understand how wikis support learning

environments and exactly how each learner uses them (Borja, 2006). In education, wikis have made their way into various learning settings, and, specifically, in foreign language learning.

In foreign language learning settings, using wikis has facilitated L2 writing and autonomous learning (Kessler, 2009; Kessler & Bikowski, 2010) as well as collaborative learning and writing (Lund, 2008) by further promoting audience awareness (Ajjan & Hartshorne, 2008). One of the major advantages of the wiki is that writers can collaborate asynchronously in composing and editing a document, where they all have equal and constant access to the document. Writers can collaboratively build on one another's ideas. Unlike traditional face-to-face collaborative writing, wikis usually involve a group of writers, rather than pairs, who can work from any location and at any time. Moreover, wikis allow for student-teacher and student-student interaction, which is an opportunity for students to learn how to work with peers and others, and, thus, create communities of practice, which promote a dynamic and meaningful education as well as professional experience over time (Coniam & Kit, 2008; Saaty, 2015). In order to facilitate communication, some wikis offer discussion features. For example, Wikispaces offers a discussion forum to encourage communication among participant writers (<http://Wikispaces.com>). Such independent student-only interactions support knowledge construction and meaning negotiation in a student-centered learning environment.

Therefore, educational wikis can offer a self-sustained student-centered learning environment where students write without the customary presence or interference of a teacher. In a wiki, the teacher's role can be that of a facilitator providing needed feedback, or even of an observer providing little or no feedback. The measured presence or even absence of a teacher can help students to work, interact, and collaborate with one another, by commenting, suggesting, and discussing new ideas and edits (Reo, 2006). Such an independent, well-documented, and transparent writing process can empower students by allowing them to develop as autonomous

learners in and out of the classroom (Kessler, 2009). Furthermore, students can become agents in their writing processes by taking several active roles in that process as writers, readers, discussants, and editors. As a result, students can edit and revise their papers, as well as provide feedback on others' texts. Most importantly, in their joint writing projects, students could grow as skilled communicators and negotiators (Reo, 2006). Thus, the wiki-supported writing process could promote autonomous writing, learning, and even professional skills.

Using wikis in writing classes. Moreover, within wiki-enabled writing classes, students can experience and learn about different text types and diverse audiences, thus boosting their genre knowledge and raising their audience awareness (Alyouself & Picard, 2011; Kuteeva, 2011). Wikis that are set up as public forums permit access to page editing by anonymous users and enable students to write to a wide-range of audiences, indeed, to all who have access to the Internet. Otherwise, wikis that are set up for private course use still provide student writers with the opportunity to consider the knowledge and interests of their immediate audience, that is their teacher and classmates (Coniam & Kit, 2008). Student audience awareness can affect the topics that students select and the way they approach them in their writing. Thus, some students prefer to write for broad audiences. In fact, writing for a broad audience increases students' motivation to learn about their subject and build their L2 writing confidence (Lee, 2010). Conversely, some students may feel more comfortable writing in a private course environment (Coniam & Kit, 2008). Hence, it is important to carefully consider the security and privacy settings of educational wikis while keeping students' learning preferences in mind (Borja, 2006). Ultimately, depending on students' writing and audience preferences, it is important to note that genre knowledge and audience awareness could affect student motivation and interest in writing.

Beyond genre and audience awareness, educational wikis may afford other learning benefits. They may support collaborative writing but also collaborative learning in general as

well as promote deeper knowledge construction through an integration of learning experiences across and beyond the curriculum (Zorko, 2009). Specifically, for the purposes of this study, and in relation to the benefits of wiki-based writing, three main research themes are explored concerning the wiki utilization in ESL educational settings: wiki writing process and revision behaviors, wiki writing process and patterns of interaction, and students' perceptions of the wiki writing process.

In line with this study's focus and purpose, a review of the current literature on the use of wikis for collaborative writing in ESL educational settings explores two main themes: First, wiki-based ESL collaborative writing in relation to revision behaviors (e.g., Mak & Coniam, 2008; Li, 2013) and patterns of interaction in text construction (e.g., Bradley et al., 2012; Li & Zhu, 2013), and, second, perceptions of wiki-based ESL collaborative writing in relation to collaborative behaviors and interactions (Chao & Lo, 2011; Woo et al., 2011), their benefits (Lee, 2010; Zorko, 2009), challenges, and drawbacks (Alyousef & Picard, 2011; Lund, 2008). Below is a discussion of the major empirical findings concerning these two research trends.

Wiki writing process and revision behaviors. One emerging line of research on collaborative writing relates to students' wiki writing processes, mainly, the revision behaviors of the writing groups. Peer revision and feedback include corrections, deletions, insertions, suggestions, and opinions (Lin & Yang, 2011). In a wiki educational context, peer feedback involves students working collaboratively by co-revising their texts and their peers' texts through editing and redrafting (Lin & Chien, 2009). The use of educational wikis in collaborative writing enables the students to collaborate with their peers and learn from observing the creation of their collaborative texts (Kedziora, 2012).

In general, revisions are made to improve a piece of writing as part of a process required to complete assignments for L2 writers. Some studies investigate students' revision types in

general (e.g., Mak & Coniam, 2008). Others examine students' writing changes and their engagement with their own texts and with others' texts (e.g., Li, 2013). Yet others focus on students' changes in meaning (Kessler & Bikowski, 2010) or examine revisions in both text content and form (Arnold et al., 2012; Kost, 2011). Moreover, a study of a small group of Chinese ESL university students who co-constructed collaborative writing texts indicates five main categories of writing changes, that is addition, deletion, rephrasing, reordering and correction. It also categorizes revisions from a linguistic perspective as global (e.g., sentence and paragraph) and local (e.g., word, clause, and phrase) (Li, 2013). Additionally, this study distinguishes writing changes made by the member herself to her own text from those she made to other members' texts. Overall, this study reveals that with regards to their own texts as well as their peers' texts, students are equally engaged with revisions at both the global and the local linguistic levels. Moreover, all participants show equally consistent engagement throughout the wiki-based collaborative writing course (Li, 2013). To conclude, the above studies provide evidence that wiki-based collaborative writing enriches student collaboration skills and writing proficiency through the overall revision process (Kedziora, 2012).

Wiki writing process and patterns of interaction. Besides revision behaviors, the other emerging line of research on collaborative writing concerns students' patterns of interaction. The literature on CMC, particularly on wiki collaboration, concentrates on students' interaction in text construction and the educational benefits of collaborative writing. Specifically, students' interaction patterns during the collaborative writing process have become an emerging research topic within the wikis' collaborative modules, i.e., "Discussion" and "Comment." Some studies show that wiki-based collaborative writing has a positive impact on ESL students' patterns of interaction in the writing process. For instance, one study examines the patterns of interaction in texts that different groups of ESL students constructed based on the available data in the wiki

pages. It identifies three patterns of interaction, that is 1) no visible interaction, in which a complete text is posted only by one member; 2) cooperation, where the joint text was composed by members working in a parallel manner, and, 3) collaboration, where texts are jointly written by all members who are all equally engaged with each other's ideas (Bradley et al., 2012).

A more recent study, which analyzes the records from the wiki "Discussion" and "History" modules along with the wiki page records, derives three patterns of interactions in an ESL wiki writing group. Namely, these are 1) collectively contributing/mutually supportive, 2) authoritative/responsive, and 3) dominant/withdrawn. This study indicates that wiki interaction has influenced students' writing performance and learning experience positively. It also highlights the transfer of collaborative skills from the wiki-based writing interactions to students' other writing and learning experiences (Li & Zhu, 2013). Thus, the above studies indicate that wiki-based collaborative writing has a significantly positive impact on ESL students' patterns of interaction in the writing process. However, besides these positive reports on wiki-afforded interaction and collaboration patterns, it is important to recognize that these platforms do not guarantee collaboration. For that, there must also be a culture of collaboration and a classroom community that offers "a lens through which to explore, and potentially to pedagogically address, tool socialization and its variabilities and consistencies" (Thorne, 2016, p.188).

In the absence of a classroom community functioning in a culture of collaboration, there could be challenges in engaging ESL students in online collaborative writing. The latter include issues such as public writing, commenting on, and editing of other's work, which could involve overcoming complex cultural and interpersonal obstacles (Witney & Smallbone, 2011), such as inexperience in public writing, preference for writing for small audiences, and discomfort about editing peers' work. Thus, public writing could decrease their motivation and weaken their L2 writing confidence. Furthermore, students may feel uncomfortable editing and providing

feedback to others' writing as they may see it impolite (Coniam & Kit, 2008). That is evident from studies where, at the beginning of the collaborative writing composition process, students added new content to the joint writing product, but it was not until later that they felt comfortable enough to edit each other's work and provide feedback and comments (Mak & Coniam, 2008; Lee, 2010).

Wiki-Based Collaborative Writing Perceptions

The literature findings report no consistency concerning the perceptions of students' interactions in wiki-based collaborative writing. Many studies have reported positive attitudes towards students' collaborative writing experiences (e.g., Chao & Lo, 2011; Li, 2013; Lin & Yang, 2011). One of the studies emphasizes the students' acknowledgement of supporting and scaffolding each other in wiki-based collaborative writing experience. The students show appreciation of mutual support in resolving language issues in the process of peer review (Chao & Lo, 2011). However, other studies have recorded that students are not satisfied with their group interactions and report an inequality in general participation (e.g., Ducate et al., 2011; Li & Zhu, 2011). For example, some students prefer cooperative writing in which, first, they work individually and later combine their individual contributions into a single text (Donato, 2004). Also, in another study, some of the students mention that their group managed to communicate and collaborate quite well, whereas other students complain about the insufficient communication among group members (Ducate et al., 2011).

Moreover, a similar study reveals that students believe that wikis provide them with an opportunity to write in English, share ideas with their peers, and receive feedback about their lexical and grammatical choices. In addition, it reports perceptions of social benefits for shy students who are not active in class and explain that the wiki experience allowed them to communicate more freely and without embarrassment (Coniam & Kit, 2008). Furthermore, the

same study records perceptions of technological advantages, such as the wiki's ease of use (Woo et al., 2011). Further, students mention perceived benefits from writing for a broad audience in the wiki, which, they consider a factor increasing their motivation for learning. This study also reveals that students believe that writing in the wiki has helped build their confidence in L2 writing, enhance their organizational skills, and promote their critical reflection ability (Lee, 2010).

Perceptions of Wiki-Based Collaborative Writing Benefits

A number of studies report that students perceive considerable advantages in using wikis for collaborative writing (Chao & Lo, 2011; Lee, 2010; Zorko, 2009). Most students note that they find wikis enjoyable and interesting knowledge-sharing tools (Chao & Lo, 2011; Ducate et al., 2011; Lee, 2010; Lund, 2008; Zorko, 2009), in addition to valuable motivational environments to encourage learning (Chao & Lo, 2011; Lee, 2010; Woo et al., 2011). In example, Lee (2010) states that wikis seem to foster the motivation of students in their effort to be self-regulated because of group interaction and solitary accountability within collaborative writing tasks. Moreover, wiki-based collaborative writing is perceived to help students to build each other up through content development, and to achieve broader insights on the topic (Kost, 2011; Li & Zhu, 2011; Lund, 2008). Additionally, in wikis, students claim that this style of collaborative writing and peer feedback help them write better essays in terms of content, structure, and grammar (Chao & Lo, 2011; Elola & Oskoz, 2010; Lee, 2010; Woo et al., 2011). Besides their appreciation of peer feedback, students also demonstrate a positive attitude towards teacher feedback, which they credit with facilitating their wiki-based collaborative work (Zorko, 2009; Lin & Yang, 2011).

Furthermore, some studies report that the participants in wiki collaborative writing activities perceive them as enjoyable and enthusiasm-building due to the benefits of sharing

knowledge and gaining multiple perspectives on a topic (e.g., Chao & Lo, 2011; Kost, 2011; Lee, 2010; Lee & Wang, 2013; Mak & Coniam, 2008). Additionally, Chao and Lo's (2011) findings report students' satisfaction and positive perceptions of wiki-based collaborative writing. Their students praise the wiki technology and its ease of changing and editing texts. These students' perceptions are also backed by real facts: they revised more continuously and enthusiastically, and invested more time revising than in a traditional classroom. The study claims that wiki-based writing provides students with a better collaborative writing experience than traditional face-to-face writing tasks. Thus, for them, wiki-based collaborative writing appears to have been an excellent online learning environment (Chao & Lo, 2011).

Perceptions of Wiki-Based Collaborative Writing Caveats

In addition to the many perceived and real benefits of wiki-based collaborative writing tasks reported in the literature, some challenges and drawbacks have surfaced as well. Most of these are related to the wiki's technical glitches, including issues of formatting (Ducate et al., 2011; Lin & Yang, 2011; Lund, 2008; Woo et al., 2011). For instance, Lund (2008) reports formatting problems, e.g., his students note difficulties saving their edits in the selected font or color. Such technical problems may discourage students from using wikis as a collaborative platform. A few studies also reveal that some students are concerned with the unequal contribution among the participants (Alyousef & Picard, 2011; Li, 2013). The unequal commitment in collaborative writing affects all group members' writing and hinders their collaboration, and thus, disrupts the students' learning experience. For example, Li and Zhu (2011) explain that a student's withdrawal from participation could be disruptive to the collaborative writing experience of group members in a wiki-based collaborative writing task. Since the wiki is an asynchronous tool, some students prefer to use other synchronous CMC tools with it (e.g., Microsoft Messenger) to communicate and co-construct knowledge (Li, 2013).

The students state that for exchanging instant messages, the wiki is less convenient than some other chat-room applications (Lee & Wang, 20013; Lund, 2008). Whether based on perceptions and or facts, student opinions about wiki-based collaborative writing matter and can be better understood within the theoretical framework of this study.

Collaborative Writing Theoretical Background

Collaboration in general, and wiki-based writing collaboration in particular, can be analyzed and interpreted in the context of social constructivist theory.

Social Constructivist Theory in Education

The latter is based on the scholarly work of Vygotsky (1978), Bakhtin (1981), Bruner (1966), and Bruffee (1986). It focuses on understanding learning processes and knowledge-construction in educational settings (Wang, 2014). As a learning theory, social constructivism is based on the notion that learners actively construct knowledge through interaction, engagement, and collaborative learning activities. It emphasizes that students learn when they interact with each other (Vygotsky, 1978). Therefore, one of the foremost characteristics of a constructivist teaching and learning environment is to provide students with opportunities to interact with each other and work collaboratively (Jonassen, 1999). Thus, in a social constructivist educational setting, the use of pair and or group work, and collaborative activities is central.

Social constructivists, such as Vygotsky (1978) and Bruffee (1986), believe that social interaction is the driving force of knowledge construction and of individuals' cognitive development. As a theory, social constructivism suggests that human development is socially situated, and knowledge is constructed through interaction with others. Vygotsky (1978) believes that an isolated learning environment does not lead to cognitive development in the learning process, and that social interaction with others is essential to cognitive development and learning. In addition, Franklin (1996) indicates, "Knowledge is created and re-created in the

discourse between people doing things together” (p. 71). Therefore, knowledge is constructed when learning involves more than one person in interaction with others.

Social constructivist learning approaches seek to understand how students construct their knowledge as situated in a particular activity, where they work together to achieve a common goal (Freire, 1970). Thus, according to such approaches, knowledge building happens when learners collaborate in constructing common understandings. Such approaches also posit that students’ construction of knowledge is the product of social interactions and interpretations (Vygotsky, 1978), that is knowledge is not constructed in isolation. Rather, it is formed through a collaborative effort, generated by a community of active learners. Set in the social constructivist paradigm, the collaborative writing approach enables students to work together and to participate in evolving communities of practice (Bruffee, 1986).

Furthermore, social constructivist theory views students as active co-constructors of meaning and knowledge. Thus, learning is viewed as a process of active knowledge construction from social interactions and negotiation processes. The construction of new knowledge by active learners is an essential element of this theory. Therefore, social constructivism focuses on student-centered teaching and learning approaches, in which students interact and network with each other to construct knowledge. Elbow (1998) supports this notion by emphasizing that collaboration goes hand-in-hand with student-centered learning environments.

Moreover, the social constructivist theory approaches learning as a social process, which emphasizes the role of others in the individual construction of knowledge (Vygotsky, 1978). The social constructivist paradigm situates writing as a social act, rather than an individual one. Influenced by the social constructivist theory, many writing theories now understand writing more as a socially embedded activity (Hirvela, 1999), than an individual act. Even when a writer is composing an individual text by writing alone, she still communicates with an intended

audience, in other words, she is performing a social act.

Furthermore, the social constructivist teacher plays the role of a facilitator more than a teacher (Lambert, 2002). The role of the teacher in a social-constructivist learning environment is to help students build knowledge and encourage them to engage in collaborative learning activities. In collaborative learning settings, the teacher is generally a facilitator who provides opportunities for students to work collaboratively. This facilitator role is more appropriate in a social constructivist context (Lambert, 2002), in which the students are actively constructing knowledge together, rather than passively receiving information from the teacher. A teacher can serve as a guide and mentor, coaching students as they take on a central role in the learning process. According to Sims (2002), students can learn better by trying to make sense of the content on their own, along with receiving guidance from their teacher.

Overall, social constructivism does not eliminate the need for the teacher. Rather, it redirects the teacher's role from knowledge provider to learning facilitator securing a safe learning environment in which students can actively work together. Thus, social constructivism elevates the teacher's role from a self-centered follower of curriculum directives to a student-centered creator of effective learning opportunities. Currently, the latter almost necessarily require the effective application of technology in general, and of Web 2.0 tools, in particular, to provide advanced tools for designing and delivering instruction based on the social constructivist approach. Prominent among Web 2.0 technology tools, the wiki provides a space for the writing process that promotes social, collaborative, and user-centered interaction. Thus, it has emerged as a "very powerful digital tool for supporting student collaboration" (Vaughan, 2008, p. 48). Based on the discussion above, one can easily see that a wiki is an important tool for constructivist educators.

Social Constructivist Theory in Using Wikis in Education

Educational wikis are conceptualized as Web 2.0 technology tools that have provided a variety of functions to help teachers design and deliver instruction based on social constructivist principles. Along with other Web 2.0 technology tools, they are web-based utilities that focus mainly on social, collaborative, and user-driven content and applications (Paily, 2013). In implementing tools, such as wikis, and their technological features therein, teachers can guide, mentor, and coach their students who students take a central role in the learning process.

Supported by the social constructivist theory of language learning, the nonlinear approach to wiki process writing involves collaborative interaction, or learning that 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” (Duffy & Cunningham, 1996, pp. 181-182). This means that learning begins as a social process that involves members of a community who share and build knowledge together in order to accomplish a joint task (Pavlenko & Lantolf, 2000; Vygotsky, 1978). Therefore, meaning is shaped, and knowledge is collaboratively constructed through the negotiation of meaning (Higgs & McCarthy, 2005).

According to the social constructivist theory, learning occurs in students’ interactions in authentic learning experiences, as well as in their joint ownership of learning (Woo & Reeves, 2007). The collaborative and the interactive nature of wikis provides students with a learning environment that is closely aligned with the social constructivist approach (Su & Beaumont, 2010). Each user can take an active role in using wikis; a student can be a writer, an editor, and/or a reader. Thus, using wiki-based collaborative writing could translate learning pedagogy into practice. Hence, the use of collaborative writing wikis emphasizes the social aspects of composition. Overall, wiki collaborative writing embodies the social constructivist learning and teaching approach, as it encourages students’ interaction, engagement, participation, and

collaboration. It also advocates students' active construction of knowledge by supporting students' taking responsibility for their own learning (Su & Beaumont, 2010).

Taking responsibility for their own learning in wiki-based collaborative writing activities, students approach the state of ownership of the knowledge thus constructed. The latter evolves in an on-going community of practice fostering knowledge building with others. The wiki's flexible functionality and ease of use allows students to move closer to a fully social constructivist mode of learning by participating in collaborative learning settings (McMullin, 2005) where the role of others in the individual construction of knowledge is essential (Vygotsky, 1978). Thus, learning in this paradigm is an educational but also a social process (Shepard, 2000). In addition, using collaborative writing wikis encourages authentic communication and negotiation of meaning by providing students with a communicative goal and an intended message to convey to their team writers and to their audience. Last but not least, wikis as a form of social learning environments promote problem-solving activities that engage students in collaborative knowledge building through interaction with peers, outside sources, and the community, in which the teacher facilitates, manages, and provides guidance (Bruns & Humphreys, 2005).

In the context of wiki-based collaborative writing activities, the teacher-student partnership is built upon the idea of guidance but also of mutual cooperation, not as a one-directional process of instruction. Teachers offer but also negotiate possibilities of constructing knowledge that is both needed and desired. Thus, in line with constructivist learning pedagogy, teachers relinquish traditional forms of institutional control to some degree in order to help design truly authentic collaborative learning activities for their students. This requires teachers to change their role to facilitators and coaches, but also partners in the teacher-student collaboration in wiki-based environments (Lamb, 2004), thus abandon their traditional role as depositors of knowledge (Freire, 1970). Rather, knowledge is constructed and produced in a dynamic teacher-

student interaction where students and teachers alternate the roles of writer, reader, editor, partner, and discussant as appropriate for the situation.

In accordance with the widely accepted principles of social constructivist learning theory and as a result of the rapid growth of collaboratively oriented networked technologies in the West, wikis have the potential to advance and enhance collaborative writing (Bruns & Humphreys, 2005; Parker & Chao, 2007). However, in this respect, educational contexts differ significantly. For example, using wikis in Saudi educational contexts is relatively new and needs serious exploration, as Western-based studies do not reflect this particular context. Thus, in order to gain a deeper understanding of this study's context, it is important to understand the Saudi cultural and educational environment before utilizing wiki-based collaborative writing tasks in the Saudi female classrooms. The current study attempts to do just that. It adds to the growing body of research on online wiki collaborative writing from the lens of social constructivist learning theory, as specifically applied in Saudi educational contexts.

Social Constructivist Theory and Saudi Education

As evident from the review of the literature, by their origin, functions, and use, wikis represent social constructivist theory, that is a fundamentally Western technology and ideology. Furthermore, the collaborative practices that they afford constitute a complex cognitive but also a multi-faceted western-based socio-cultural phenomenon. As such, it is important to know the implications of their use in the Saudi context with regards to the country's historical, religious, socio-cultural, educational, and technological background, especially in relation to the role of women and gender in the country. Below, I will review the Saudi educational scene to emphasize major religious and sociocultural factors that characterize the Saudi educational system and may be in conflict with the provisions of social constructivist theory, and with wikis in particular.

Since the participants of this study are Saudi female TESOL graduate students, it is important to provide an in-depth view of Saudi Arabia, its culture and gender roles, especially given the fact that these are significantly different from the Western contexts where wikis are theorized and applied. Also, for this study's purpose and research paradigm, it is important to address the country's educational system, especially the status of English and technology in it. Most important, it is essential to understand Saudi women's roles in the broader socio-cultural scene and its specific implications for this study. Therefore, the last section of the literature review provides a brief account of those Saudi features that are relevant to this study. It reviews the Saudi religious, socio-cultural, educational, and technological backgrounds as they affect the teaching English in Saudi Arabia and the role of women and gender in Saudi Arabia.

Religious factors. To situate wikis as forms of constructivist learning pedagogies in Saudi Arabia, it is essential to get a glimpse at the drastically different Saudi context. The kingdom of Saudi Arabia is the largest country in the Arabian Peninsula. It borders on the Red Sea from the West, the Arabian Gulf, Kuwait, and Qatar on the East, Iraq and Jordan on the North, and Yemen and Oman on the South. Saudi Arabia is the homeland of the Arab people and the birthplace of Islam. Whereas the West harbors pluralistic and diverse ideologies, both socio-cultural and religious, Saudi Arabia is a monolithic cultural and religious center. It is the home of the two Islamic holy places: Makkah and Al Madinah. Arabic is the official language, and Islam is the official religion. The country was founded in 1932. Comparatively a young nation, Saudi Arabia has deep historical, traditional, tribal, cultural, and religious roots. It is a conservative country where the Islamic teachings and beliefs, as well as the Arabian cultural values, are dominant. Specifically, Saudi Arabia is considered to be one of the most controversial countries in the world, due to its conservative traditions, beliefs, religion, and norms. Islam, national traditions, and social norms mold its development. These factors regulate and influence the lives

and daily activities in Saudi Arabia, as well as the Saudi educational policies, practices, and beliefs (Al-Saggaf & Williamson, 2004). Islam plays a central role in shaping and reshaping the Saudi culture, education, and social life. To this day, tribal traditions also shape the Saudi people's way of life.

Due to the rapid changes in the 21st century, such as modernization, the influx of foreign educational and technology tools, and the general influence of the outside world, changes in Saudi Arabia have been taking place, slowly but visibly. At the same time, adjusting to change from outside while keeping traditions at home creates difficult juxtapositions as well as clashes of traditional and modern lifestyles and beliefs. In the struggle between the modern and the traditional ways of thinking and living in Saudi Arabia, the younger Saudi generations have had a broader exposure to modern developments through education, technology, and travel (Yamani, 2000). Thus, the younger generations are beginning to question some of the classical traditions, social norms, and educational policies.

Socio-cultural factors. The Saudi society is influenced mostly by Islamic religion and religious traditions and social norms. Mainly, this has resulted in a male-dominated country, where men have exorbitant power over women in all aspects of public and private life. Thus, most women depend on their fathers, brothers, and husbands for their life, educational, and professional choices (Alsweel, 2013). To be precise, framing Saudi women's lives as choices, even if highly limited, is just another way of using Western discourse to reference their situation. Indeed, they have no choices. Furthermore, the Saudi society has a lot of contradictions, which have even further exacerbated women's perceptions of their social status. It is worth noting that the Saudi society mixes tradition with religion (Yamani, 2005). Thus, some decisions and rules are made under the name of Islam, even though they have nothing to do with religion (Hamdan, 2005). For instance, banning women from driving in Saudi Arabia is not against the Islamic

religion. It is just a tradition, which is not religiously based but is presented as such (Alsweel, 2013). Today, the Saudi context is marked by the struggle to keep or to modify and abolish traditions. Both trends have their fervent supporters with small but important inroads made towards a more balanced view (Yamani, 2005).

The segregation of the sexes is one of the predominant Saudi contradictions as well as the norm in all public life domains in Saudi Arabia, whether in schools, universities, workplaces, or public places (Guta & Karolak, 2015). The practice of segregation has shaped the society. Saudi women are not allowed to approach, talk to, or have anything to do with any men other than their relatives, thus restricting their ability to act as independent citizens (Guta & Karolak, 2015). However, one should not generalize the notion of gender segregation in the country because the degree of segregation varies from city to city and from region to region. Main cities tend to be less strict than small towns or rural areas (Hamdan, 2005). Since Saudi Arabia is a large and diverse country, generalization is very difficult to apply. Even then, the segregation of the sexes is enforced as a religious rule that is firmly engrained in people's minds and in society as a whole.

Another powerful norm is the belief that the main role of a woman is to be homemaker, mother, daughter, and/or wife (Amoudi & Sulaymani, 2014). Therefore, society expects a Saudi woman's main role and mission in life to be a housewife who takes care of her children and husband (Alsweel, 2013). Nevertheless, with the rapid modernization, women have become very active at female-only schools, universities, workplaces, banks, businesses, and elsewhere. In addition, Saudi women currently work with men in certain places, e.g., hospitals, companies, and shopping malls, without being seen as transgressing national traditions and social norms (Yamani, 2002). Still, the generational clash of values persists, with younger generations becoming more open-minded and accepting of change and older generations remaining

recalcitrant about it (Yamani, 2005). Technological innovations, foreign travel and education, and global developments affect and facilitate cultural and social change (Alsweel, 2013; Hamdan, 2005). Nonetheless, the demand for change in the social role of Saudi women remains critical.

Today, Saudi women's social roles and rights are changing. For instance, in 2001, women were issued independent identification cards (Alsweel, 2013). Before that, women were listed under their fathers', brothers', or husbands' identification cards (Hamdan, 2005). Also, in 2011, women were given the right to vote and run for municipal elections. Before that, they had no right to be active in municipal elections (Masoud, 2015). This is evidence of changes in women's social roles and in the power dynamics in Saudi Arabia. Women who are educated and socially active can be agents helping in the country's overall development (Alsweel, 2013). This is a positive development towards empowering Saudi women and a promising beginning of a long and difficult struggle for their emancipation.

Educational factors. As seen in the previous sections, all domains of Saudi Arabian public life including education are different from most educational systems in the world, especially from the Western world. Although the country provides equal educational opportunities for both genders, most educational institutions (e.g., schools and universities) are segregated by gender (Al-Hariri, 1987). This separation is influenced by religion and traditions, but it leans more towards traditions and norms (Al-Kahtani et al., 2006). Therefore, the educational system is based on a complete separation of students and staff by gender. Educational institutions provide separate buildings and staff for male and female students.

The educational segregation in Saudi Arabia is considered "equal but different as women and men are intrinsically different but this does not necessarily mean that women are inferior" (as cited by Kubota, 2004, p. 29). Thus, both males and females have equal educational

opportunities and rights. The Saudi government makes sure that all citizens have equal educational rights, without any discrimination (Al-Banawi & Yusuf, 2011). The Ministry of Education (MOE) states on their website that the kingdom is ahead of many countries in providing equal education free of charge for both genders and at all levels (Saudi Arabian

The Saudi educational system encourages the reverence of the teacher, which contradicts social constructivist perspectives. Thus, the students should receive knowledge from their teacher (Elyas & Picard, 2010). They are not used to interacting with each other, nor are they used to interacting with the teacher. They only serve as containers of knowledge. They do not create knowledge. The teacher and the assigned books are the prime sources of knowledge. The teacher's main role is to import knowledge; and the student's role is to listen (Jamjoom, 2010). Lecturing, rote learning, and memorization are the norm. Class discussions may happen, however, under strict parameters. The teacher provides knowledge to her students, and, in turn, they demonstrate their conviction in and unconditional acceptance of the validity of their teacher's knowledge (Elyas and Picard, 2010). Mostly, classroom instruction is teacher oriented. The teacher is at the center and in control of the classroom with her statue-like students following instructions. Thus, the reverence for the teacher is deeply rooted in the Saudi educational system (Elyas & Picard, 2010). These characteristics of the traditional Saudi educational system strongly conflict with the provisions of social constructivist learning theory. In the context of the current study, that might be problematic for its participants.

The traditional Saudi educational system is typically based more on rote learning and memorization than on critical thinking, problem solving, analysis, learning how to learn, or how to produce knowledge (Elyas & Picard, 2010). In a typical Saudi classroom, rote learning and memorization are emphasized over invocative thinking techniques, thus hindering the development of problem solving and critical thinking skills (Cassidy & Miller, 2002) which is in

contrast with social constructivist theory's focus on learning how to learn. Moreover, Saudi traditional teaching methodology leans towards lecturing, thus being more teacher- than student-centered, which also conflicts with the principles of constructivist pedagogies. Students are seen as passive objects rather than active learners. They are not used to working in groups or giving presentations. Therefore, working in group activities, which is highly valued in constructivist pedagogies, may be problematic for Saudi students (Elyas & Picard, 2010). Hence, collaboration, as an essential element in constructivist pedagogies, might be problematic for this study's participants.

This traditional way of teaching mirrors literacy traditions in the Arabian Peninsula, where reciting the Quran and poetry are considered as the pinnacle of good education (Elyas & Picard, 2010). In the past, lecturing, rote learning, and memorizing were the norms in teaching and learning. This is still evident in Saudi L2 teaching methodologies that require the memorization of pre-written English essays. To prepare for exams, students are usually asked to memorize a number of pre-written essays from their textbooks (Elyas, 2008). Therefore, the students are evaluated on how well they have memorized the sentences and structure of the essay on a particular topic, rather than on how they can use the language to create knowledge. Students are not taught how to write; rather, they are encouraged to memorize.

In the Saudi educational system, all educational policies are generated and conducted by the government and supervised by The Ministry of Education (MOE). Curricula, syllabi, and books are streamlined following a core-curriculum throughout the kingdom (Saudi Arabian Cultural Mission, 2006). Thus, it is not easy for teachers to encourage students to develop critical thinking skills, a central focus of constructivist pedagogies. Teachers are strongly restricted from implementing their own teaching ideas, approaches, and interpretations of the curriculum. However, more recently, the Saudi government seems to support shifting teaching methods from

traditional memorization and rote learning towards encouraging students to be active learners through the implementation of problem-solving techniques (Elyas & Picard, 2010). Collaborative and group activities are strongly encouraged. Also, the emphasis on student-centered classes is becoming more common; students are being considered active learners rather than passive ones (Mahboob & Elyas, 2014). Thus, the MOE is taking special measures to integrate new teaching and learning practices and pedagogies in the educational system (The Ministry of Education, 2016) in support of social constructivist pedagogies.

ESL-related factors. English language education is flourishing in all domains. English is taught as a core subject in public and private schools and universities (Mahboob & Elyas, 2014). It is also the medium of instruction in most medical and engineering classes. The main goal of teaching English, as stated by the MOE, is to “furnish the students with at least one of the living languages, in addition to their native language, to enable them to acquire knowledge, learn about the arts and about useful inventions, [and] transmit that scientific knowledge to other communities” (Ministry of Education, 1974, p. 13). However, English language teaching and learning in the Saudi educational system mostly follows the grammar-translation approach (AlJamhour, 1999). This approach, as Abalhassan (2002) indicates, has limited Saudi students’ communication skills in both spoken and written forms. Because of the globalized status of the English language, the Saudi government believes that English is essential for the country’s development (Nouraldeen & Elyas, 2014). Jan (2006) states that in Saudi Arabia, “English is taught not only as a major in English language and literature, but also as a medium of instruction and education for students from other majors to enable them to read field-related books and research written in English” (p. 5). English is used in many companies and corporations, such as Saudi Aramco and Saudi Airlines.

In present Saudi Arabia, English has attained high priority as a means of obtaining jobs, gaining knowledge, understanding other cultures, as well as in reparation to study abroad, and even to travel for pleasure (Nouraldeen & Elyas, 2014). In fact, “As a global language, English has become a requirement for decent employment, social status, and financial security in various parts of the world” (Guo & Beckett, 2007, p. 121). Nevertheless, Saudi Arabian educators are working on localizing English to meet the country’s local needs. English has become the “gateway” to education and to the country’s development (Mahboob & Elyas, 2014). It is becoming a privilege for those who know it, and a disadvantage for those who do not. However, the uncritical adaptation of foreign curricula, content, teaching methods, and practices in the Saudi educational system do not always meet the learners’ needs (Elyas & Picard, 2010). Therefore, English teachers are advised to think globally and teach locally to develop culturally appropriate curricula and teaching pedagogies (Mahboob & Elyas, 2014).

Although English is essential in the Saudi education system, the teaching and learning of writing has many drawbacks. Writing teachers usually rely on rote learning and memorization approaches (Elyas & Picard, 2010). For example, the majority of the writing teachers at Saudi Universities teach writing by emphasizing the essay form with a focus on grammatical correctness (Jouhari, 1996). Similarly, Al-Hozaimi (1993) explains that in English writing classes, students write following only one single procedure, in which the teacher outlines a topic on the board, and then asks students to write about it. Students write individually in the classroom; they are required to finish their essays during the class period and are not allowed to take them home. Thus, Saudi students are puzzled if they are asked to write about a topic that they did not memorize at home in advance. They are not trained to write about new topics, or about topics that they did not prepare ahead of time. Most likely, students memorize what they have to write about to pass exams. Moreover, students write for their teachers only; they are not

taught how to write to real audiences. In most writing settings, students write individually. They do not read their peers' writing, nor do they peer review each other's texts. In some educational settings, students are not even allowed to negotiate or discuss their topics with each other. The audience concept, as well as the concept of collaborative writing is never taught in a writing class (Jouhari, 1996). In all, even though teaching English language and English writing are essential in the Saudi educational system, they follow outdated and ineffective teaching methods and pedagogies.

Educational technology-related factors. Since this study explores the way Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task and investigates students' perceptions of such a writing experience, it is important to address the technology status in Saudi Arabia where some conservatives still view technology as dangerous and erosive to Saudi culture and beliefs; they disapprove of the use of technology, even if it is widely available. These individuals may not object to the use of technology per se, but they fear the negative impact of what technology might bring from other cultures (Al-Kahatani et al., 2006). They might also see technology as an invader that might affect cultural values and social norms. The lack of knowledge about the use of technology could be the main reason behind the conservatives' fear of technology (Amoudi & Sulaymani, 2014). Since most Saudis in the rural areas of the country have a backward way of thinking, females in those areas are subject to even more restrictive and outdated rules. They are not allowed to use technology as it is deemed an intrusion of Western civilization (Al-Kahatani et al., 2006). These technology opponents believe that technology will bring on immoral and shameful behaviors (Amoudi & Sulaymani, 2014). More recently, the Saudi government began educating all citizens on the importance of technology use in education (Amoudi & Sulaymani, 2014).

Today, in larger metropolitan areas, the Internet is shaping nearly all aspects of life. Saudi educational institutions are now wired to the Internet. For instance, the use of Blackboard, email, online activities, online testing, and distance learning are commonly used in educational settings. Moreover, today, most of the students are considered to be exposed technology and Internet. This is evident in Saudi Arabia where the use of technology has rapidly increased among the new Saudi generations (Prensky, 2006; Amoudi & Sulaymani, 2014; Al-Kahtani, Ryan, & Jefferson, 2006). Thus, the use of technology for Saudi women is shaped by the country's strict traditions and norms but also by newer technological developments (Al-Kahtani et al., 2006).

The Saudi educational system is facing tremendous changes by utilizing new technologies in education and by integrating new educational approaches and pedagogies that improve teaching and learning (Al-Maini, 2013). Using technology in education can reach beyond the walls of traditional Saudi classroom contexts (Al-Maini, 2013). More specifically, networked writing environments can be used to foster students' interactions and participation, and further develop their writing processes (Alshalan, 2010). Today, communication technologies, along with Web 2.0 technology tools, have come to play a very important role in shaping and improving education, not only in developed countries, but also in developing countries (Al-Showaye, 2002). Just like other developing countries, Saudi Arabia has faced challenges in implementing the use of technology in education (Al-Maini, 2013). The application of technology began by teaching the "computer" as a subject in schools, rather than by integrating it as a learning tool (Amoudi & Sulaymani, 2014; Roblyer & Doering, 2013). Because of its specific Islamic and cultural traditions, the Saudi educational context presents a difficult situation for integrating technology, especially in women's contexts (Alenezi, 2014).

Currently, teachers are advised to inform female students about ways of protecting their privacy and personal information in an online platform (Amoudi & Sulaymani, 2014).

Furthermore, the Saudi government has invested a lot of money in modernizing the educational system to be on par with technology-based modern teaching approaches (Al-Maini, 2013). However, as the Saudi educational system is still focused on traditional teaching approaches, the adoption of educational technology is still slow (UNESCO, 2011). Nevertheless, the Saudi government is continually modernizing and developing the educational system. There is an ongoing effort for adopting some modern Western teaching methods, but also keeping cultural and religious values, which can be facilitated through the use of educational technology (Smith & Abouammoh, 2013).

The Saudi government spends billions of dollars to provide technology in educational institutes and to establish and maintain an updated technological infrastructure in the kingdom (Amoudi & Sulaymani, 2014). Nevertheless, cultural and religious beliefs make the application of technology in education challenging, especially in female educational institutions. However, attitudes towards educational technology are changing due to globalization (Amoudi & Sulaymani, 2014). Today, the Saudi educational system has changed considerably to accommodate female use of technology in all educational settings and fields. Yet, a lot more remains to be done.

Women-related factors. It is clear from the above review of the religious, socio-cultural, educational, and technological background of life in Saudi Arabia, that the role of women in the country is strikingly different from that in many other places. Women are victims of a gender inequality bias that impacts their private and public, their social and professional selves. Specifically, female use of technology serves as one of the foci of the various societal fears of

loss of national, religious, and cultural identity through the greatest loss of all, that of control over women.

Gender inequality bias. It is essential here to state, that in Saudi Arabia, the question is not how to educate women as equal members of society but how to educate them to uphold traditional power and gender imbalances. In that situation, the introduction of wiki-based L2 writing might seem as a subtle and even subversive form of Western-inspired education that runs counter to established traditions.

Issues of gender bias represent the inequitable social scaling in Saudi Arabia. On an educational scale, some conservative Saudis claim that continuing education after high school is not important for females (Guta & Karolak, 2015). Thus, these individuals believe that females do not need higher education degrees because finding a job is not essential in a female's life. Some may even see it as inappropriate for a female to work outside her house and stay in the workplace for hours. Furthermore, conservative families hold that it is more important for males to be well educated, because they are the ones to find jobs, get married, and support their family financially. Therefore, the Saudi society and culture place greater emphasis on males' education than on females', which is a socially perpetuated gender bias (Amoudi & Sulaymani, 2014).

In Saudi Arabia, gender discrimination serves to perpetuate social inequality. On the positive side, there are some signs of emerging change (Alsweel, 2013; Yamani, 2005) but it is still challenging for women to have their voices heard over those of men, whether in education, or in society. Thus, it is important to give voice to those traditionally silenced and make them heard through the power of education (Alsweel, 2013). Education may be the steppingstone to female empowerment and to an active female citizenry.

Female use of technology. Saudi females' exposure to the world outside their homes is limited. Their behaviors are controlled by their family and by society at large. Families that believe the Internet to be evil can banish it from their homes (Amoudi & Sulaymani, 2014) to avoid exposure to foreign worlds and values that might divert them from their cultural values and religious beliefs (Al-Kahtani et al., 2006). They are particularly strict towards their female family members who are not allowed to use social media and Web 2.0 technologies to prevent them from exposure to the immoral West that purportedly encourages deviant behaviors. Such families restrict their daughters from using the Internet in an attempt to protect the family's reputation (AlSaggaf, 2004; Oshan, 2007).

Thus, the Saudi social traditions, norms, culture, and beliefs shape dominant attitudes towards female activity in online spaces (Al-Kahtani et al., 2006), which could often be problematic (Amoudi & Sulaymani, 2014). In spite of this, with the rapid development of technology and the Internet, it has been almost impossible to prevent, or even control, females' exposure to the world.

Chapter Summary

This chapter discusses the background of collaborative writing and the theoretical framework that underpins this study. For that, it reviews theoretical perspectives on social constructivism theory in its relation to collaborative writing, especially in wiki-based collaborative writing contexts. Further, it reviews the current body of literature on collaborative writing in ESL/EFL settings by synthesizing the research on wiki collaborative writing and by identifying research gaps that this study aims to fill. Since the participants in this study are Saudi female TESOL graduate students in a Saudi context, this chapter devotes a separate section on the Saudi Arabian background of this study. To enable a deeper understanding of the complexity of using wikis with Saudi female students, it emphasizes relevant aspects of the Saudi religious,

socio-cultural, and educational background, the nature and problems of teaching English in Saudi Arabia, and the unequal status of women in the country. Additionally, it addresses some controversial issues regarding the use of educational technology in the kingdom, especially by Saudi females, as well as the use of technology in Saudi education at large.

The following chapter describes this study's research methodology by providing a detailed map of its research design, participants, and setting, the researcher's role, the research instruments, the data collection methods, and the data analysis procedures that are incorporated in this study.

CHAPTER 3
RESEARCH METHODOLOGY

Introduction

This study aims to explore the ways in which Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task and the way in which they interact throughout the completion of that task. Additionally, it investigates Saudi female TESOL graduate students' perceptions of their use of wiki-based collaborative writing when completing the writing task. This chapter describes the methodology employed by providing a detailed map of the research design, participants, and setting, the researcher's role, the research instruments, the data collection methods, and the data analysis procedures that are incorporated in this study.

Research Questions

The following three research questions and their related sub-questions guide the present study:

1. How do the participants collaborate during the discussion of the co-construction of their asynchronous, wiki-supported task-based essay afforded by the wiki "Discussion" module?
 - a. What topics do they consider for their essay?
 - b. What discourse practices do they employ in negotiating the content and organization of their essay?
2. How do the participants collaborate during the actual writing of their asynchronous, wiki-supported task-based essay afforded by the wiki "History" module?
 - a. What writing activities do they engage in co-creating their collaborative essay?
 - b. What writing strategies do they employ in co-creating their collaborative essay?
3. How do the participants perceive their asynchronous wiki-supported task-based collaborative writing experience?

In order to achieve the goals of this study and to answer its research questions, the main data collection methods were as follows: pre-task questionnaires, the wiki records in the “History” and “Discussion” modules, and the individual face-to-face semi-structured interviews and reflection letters (Creswell, 2007; Denzin & Lincoln, 2008; Marshall & Rossman, 2011; McKay, 2006; Perakyla, 2008; Stake, 2010). The pre-task questionnaire data documented the participants’ responses to create the participants’ profiles that could assist in the data analysis and discussion. The wiki records data were analyzed and transcribed to find how the students work together to complete the wiki-based collaborative writing task. Interviews data were digitally audio-recorded and then transcribed to facilitate finding patterns or emerging themes among the participants’ responses. Reflection letters were subject to content analysis. Once the data was collected, it was clustered, themed, sub-themed, analyzed, and explained quantitatively and qualitatively. Then, findings were discussed in relation to the research questions.

Research Design

Having articulated my study’s focus, research questions and approach, it is logical to state in detail the research procedures followed throughout the study. I employed a mixed method inquiry to explore the way Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task and the way they interacted throughout the completion of that writing task. Additionally, the mixed method design aimed to investigate Saudi female TESOL graduate students’ perceptions of their own use of wiki-based collaborative writing when completing their writing task. This study mainly explored a wiki-based collaborative writing task in its naturally occurring context. It also helped understand the complexity of utilizing wikis in a Saudi female TESOL graduate educational setting. This study drew on multiple data sources: a pre-task questionnaire, the wiki records of the “History” and “Discussion” modules, post-task semi-structured interviews, and reflection letters. As this

research design is chosen to provide answers to the research questions, the next section explains the rationale of this study.

Rationale for Mixed-Method Research

The study's research design was based on the use of the mixed-method approach which is defined by Greene, Caracelli, and Graham (1989) as the use of at least one quantitative method (use of numbers) and one qualitative method (use of words and text) together. According to Creswell (2009), the mixed method is "an approach to inquiry that combines or associates both qualitative and quantitative form of research. It involves philosophical assumptions, the use of qualitative and quantitative approaches, and the mixing of both approaches in a study" (p. 4). Established scholars and researchers have supported the use of mixed method designs. For example, Frechtling, Sharp, and Westat (1997) report, "the best results are achieved through the use of mixed method evaluations, which combine quantitative and qualitative techniques" (p. 10). They also emphasize that the mixed method design "frequently provides a more comprehensive and believable set of understandings about a project's accomplishments than studies based on either quantitative or qualitative data alone" (p. 5).

In addition, Tashakkori and Teddlie (1998) argue that incorporating a mixed method approach assists researchers to gain deeper insights from their answers. Similarly, Creswell (2009) states that using this approach enables researchers to make the best of the quantitative and qualitative paradigms by obtaining rich information from different perspectives. He also claims that there is more insight to be gained from the combination of both research paradigms than from either form by itself. More specifically, many researchers in the area of wiki collaborative writing, such as Alyousef and Picard (2011), Elola and Oskoz (2010), Kessler (2009), Li (2013), Li and Kim (2016), and Mak and Coniam (2008), have used mixed-method design to find rich

data, to balance the limitations of both quantitative and qualitative methods, and to obtain more reliable data.

In this study, a mixed method was used to provide a richer and fuller picture regarding the way in which the participants co-construct a collaborative writing task and regarding their perceptions about such a writing experience. On the one hand, the quantitative data mainly illustrated how the participants co-constructed their essays in the wiki “Discussion” and “History” modules. Specifically, quantitative data focused on the types of writing changes that the participants made to the writing product as evidenced in the chronology of text development in the wiki’s “Discussion” and “History” modules. It also focused on the types of writing changes each participant made to her or to her peers’ contributions to the writing product as evidenced in each participant’s “History” records. On the other hand, the qualitative data analysis focused on the participants’ strategies employed in their writing activities and on their perceptions about the writing changes they made during the co-construction their essays. Particularly, the participants’ responses to the interview questions provided insight into their perceptions of their own and their peers’ writing changes made to their collaborative writing product. Exploring the perceptions of the participants provided a deeper understanding of their opinions about and attitudes towards their collaborative writing experience in the wiki. The latter also helped in explaining the quantitative data. The mixed-method approach was chosen as the most appropriate means of understanding the way the participants co-construct a writing product using the wiki, as well as of understanding their perceptions of their experiences. Quantitative and qualitative approaches are discussed below regarding each of the research questions and the data sources.

Quantitative approach. In this study, the quantitative approach, which deals with the collection and analysis of data in numeric form (Creswell, 2009), was used to answer questions

about the topics the participants generate and choose for their essay, the types of writing changes they make, and the types of writing strategies they employ in their writing activities in the wiki “Discussion” and “History” modules. To answer these questions, the data was collected from the wiki “Discussion” sessions (e.g., the notes participants post in the threaded discussion of their essay’s content and organization, that is by brainstorming and outlining) and from the wiki “History” module (e.g., the changes they make to the developing essay, that is by drafting, revising, and editing). In both cases, the quantitative approach, which uses frequency counts to quantify the participants’ discussion notes and writing changes in the wiki “Discussion” and “History” modules, was supplemented by a qualitative discourse analysis which allowed the researcher to understand the meaning of these quantifiable data.

Qualitative approach. In this study, a qualitative approach was used in interpreting and discussing the data. It sought to reveal the negotiation strategies the participants used in the wiki “Discussion” module, the writing strategies they employed in their collaboration on this project, and the perceptions they have about completing the study’s wiki-based collaborative writing task. The latter can be socially and culturally constructed and reconstructed. For example, established scholars (e.g. Creswell, 2007; Denzin & Lincoln, 2008; Marshall & Rossman, 2011; Patton, 2002) indicate that the qualitative approach is most effective when researchers intend to examine participants’ perceptions in certain contexts influenced by other factors that may interact in their cultural and social surroundings. Hence, qualitative research is subjective in its approach of examining and reflecting on the participants’ perceptions of understanding social and human activities (Creswell, 2009; Hussey & Hussey, 1997).

Additionally, a qualitative approach is used as effective and appropriate for interpreting and discussing research data. Thus, it is appropriate for the context of this study, and, specifically, for analyzing the participants’ perceptions of their educational experience

completing a wiki-based collaborative writing task because a qualitative research design approach helps to understand the context of “specific situations or people” (Maxwell, 1996, p. 17), placing an emphasis on words rather than numbers (Maxwell, 1996). Therefore, the qualitative approach is effective in gaining insight into the participants’ perceptions about using wiki-based collaborative writing tasks in their learning contexts. Further, the qualitative approach supports the development of a holistic and complex picture of the issue under study. This includes reporting multiple perspectives, identifying many factors involved, and delineating the larger picture. Hence, researchers are not bound by tight cause-and-effect relationships among factors, but rather by identifying the complex interactions of factors in any situation (Creswell, 2007). Accordingly, the qualitative research approach in this study sought to develop a holistic picture of the participants’ negotiation strategies, collaborative writing experiences and collaborative writing perceptions. Therefore, participants from similar personal and educational backgrounds were chosen for this study as a representative sample.

Participants

Choosing a particular group of participants who share certain features, qualities, qualifications, and capabilities is a critical step in qualitative-oriented studies (Creswell, 2007; Marshall & Rossman, 2011). In addition, Patton (2002) indicates that qualitative research should be built on purposeful selection of participants in order to examine a particular phenomenon comprehensively. As Creswell (2007) states

The inquirer selects individuals and sites for study because they can purposefully inform an understanding of the research problem and central phenomenon in the study. Decisions need to be made about who or what should be sampled, what form the sampling will take, and how many people or sites need to be sampled (p. 125).

Accordingly, I chose a purposeful sample of participants who meet the purposes of this study. Therefore, I chose Saudi female participants who are currently in their first/second year of graduate studies in their university.

This study investigates utilizing a wiki-based collaborative writing task for a specific group of people who are preparing to become ESL teachers. Thus, I used a purposeful selection of participants who are students in a graduate TESOL program. All participants are Saudi female students whose first language is Arabic. They are in their first or second year in the program. All students are enrolled in the same graduate courses in the fall of 2017. Most of the students have teaching experience. All participants have demonstrated an advanced English language proficiency level by scoring 6 or higher in the IELTS test or in its TOEFL equivalent. I selected these participants because of their advanced command of English, which would allow them to focus on the content, and on constructing knowledge collaboratively without being distracted by language issues. Furthermore, I chose to study Saudi females because this is the population that I care about and that I will be teaching. Thus, studying this population will help me to further grow as a teacher-scholar by implementing new teaching methods of English academic writing.

Academic Setting

The academic setting for this study involves Saudi TESOL graduate students currently studying in the US. More specifically, the study was conducted within the Wikispaces website (<http://www.wikispaces.com>), i.e., its “Discussion” and “History” modules.

The Wikispaces website. A variety of wiki websites (Wikipedia, Wikispaces, MediaWiki, Wetpaint) have been used in language classes in previous research studies (Alshalan, 2016; Chao & Lo, 2011; Li, 2013; Li & Zhu, 2013). Selecting a wiki that is easy to use is important, therefore, I selected Wikispaces (<http://www.wikispaces.com>), a hosted service that allows users to register and create a free wiki website as a platform for students’

collaborative writing. I chose Wikispaces because it offers a set of easy and user-friendly features, is simple to incorporate into a course, and is popular in higher education, particularly in L2 learning settings. A number of researchers have also chosen Wikispaces in conducting research studies (e.g., Alshalan, 2016; Caho & Lo, 2011; Li, 2013; 2014; Parker & Chao, 2007).

Moreover, Wikispaces is easy to learn and use because it includes an editing toolbar that is similar to a common word processing edit menu. It provides an easy way of writing and requires no knowledge of wiki syntax (Parker & Chao, 2007). Wikispaces offers many functional features that can assist students in writing collaboratively. It enables all edits to be traced back to the original author, which helps secure content creation. Users can use the “Discussion” module to communicate asynchronously, or even to leave comments. Further, its most noticeable feature, the “History” module, keeps all the edits, i.e., the deletions coded in red and the additions, coded in green (Li, 2013; 2014). These color-coded changes can help students to identify individual revisions easily. Also, the “History” module can help the instructor to monitor her students’ writing process.

Furthermore, Wikispaces enables the creation of educational wikis, which can be designed as a free classroom (Alshalan, 2016). While wikis can be public or private depending on the access they provide, the wiki used in this study is private, that is the permission mode for the wiki is available only to the participants who can access, read, write, and edit texts as well as comment on the posted texts. The instructor can view, edit, and provide feedback to participants’ wiki pages. In this study, the participants, working in groups of three, can only access and work in their designated wiki space. They cannot see the other groups’ work as each group’s wiki page is restricted to the teacher and its own group members. Given these functional characteristics, Wikispaces provide a suitable Web 2.0 collaborative learning environment for this study.

Wiki Design

For the purpose of this study, I created a wiki-based collaborative task in Wikispaces (<http://wikispaces.com>). Its main page contains a welcoming message that encourages participants to work together in their own wiki page. Each group has its own space where it co-creates their own text as its members interact with one another. Then, the participants can move to the task prompt page, which is listed under the main page. Next, each group has access to their group's page only. As mentioned, participants are divided into groups of three. Participants' names are listed under each group page (Figure 1).

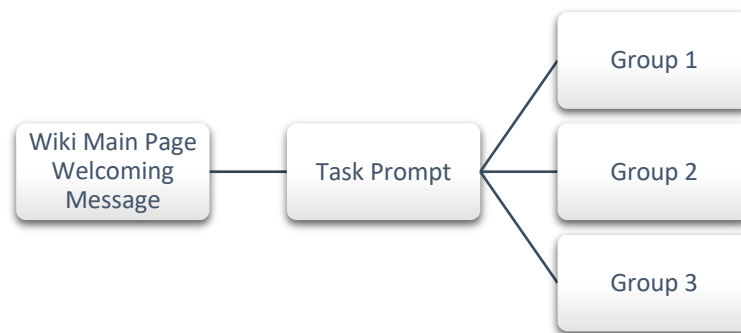


Figure 1. The wiki design.

Wiki-Based Collaborative Writing Task

The wiki-supported collaborative writing task designed for this study is an essential component of its research design. Its design is affected by the study's purpose, participants, topic, and wiki affordances. Additionally, previous literature studies have drawn attention to task design (Lee, 2010; Lund, 2011; Mak & Connian, 2008) stating that “the most effective tasks are believed to be those that promote meaning negotiation and target a single convergent outcome” (Wong & Waring, 2010, p. 260). Thus, the task instructions were developed to generate discussion between learners and require them to synthesize and consolidate their ideas together.

For this study, the wiki-based collaborative writing task prompt was provided on the main wiki page (see Appendix 1). In each group, the participants were required to compose collaboratively a 600-word essay. They were asked to discuss and agree on at least five major challenges, which they would write about. Then, they had to explain each of these challenges, provide examples, and suggest solutions for each challenge. In their collaborative essay, they needed to include a title, a brief introductory paragraph, body paragraphs, and a brief concluding paragraph. The participants were encouraged to provide a logical structure where the essay moves from point to point in a logical progression. They had to complete this task within three weeks. They were not required to meet face-to-face or do anything else outside of the wiki. Rather, they were encouraged to use the wiki “Discussion” module to communicate with each other. The participants had to work collaboratively as a group to complete the task. Each group member was required to visit the wiki at least once a day and spend at least ten minutes working on this task.

Researcher’s Role

In this study, the researcher was personally involved in the processes of investigation and interaction with the participants (Li, 2014; Patton, 2002). I developed a private educational Wikispaces account for the participants and helped students create personal accounts, where, in small groups, they worked asynchronously on the wiki-based writing task. I also prepared and conducted an orientation session to train the participants on how to join Wikispaces and how to use its features for collaborative writing and for interacting with each other. The training session mainly focused on how to create an account in Wikispaces, and how to discuss, write, edit, comment, and track changes.

Following that, I provided the participants with the pre-task questionnaire to learn more about their demographic information, English proficiency and technology experience, and their

work style preferences (see Appendix 4). Further, I acted as a technical consultant for those who needed help with any writing or technical problems they encountered. I directed, discussed, and provided them with the wiki-based task prompt. However, I did not provide feedback on their texts. Besides, I constantly checked in with the participants and their Wikispaces pages, observing their writing changes and interactions with each other. I carefully read the wiki's "History" and "Discussion" records. Mainly, I observed and coded the students' wiki writing changes and collaboration. Lastly, I conducted post-task semi-structured interviews with the participants to understand their perceptions of their writing experience (see Appendix 5).

Data Collection Procedure

After receiving the Institutional Review Board (IRB) approval for this study (see Appendix 2), I started the data collection. I used institutional email lists and social media to identify and invite participants, all registered graduate students in the Fall 2017 semester. After that, I screened volunteers to select those who met the criteria for this study. After selecting nine participants to be divided in three collaborative writing groups, I gave them an Informed Consent Form to read and sign prior to any data collection. The Informed Consent Form (Appendix 3) provided the participants with information about what I planned to do. To ensure their privacy, the Informed Consent Form stated that pseudonyms would be used for their names and guaranteed that the data collected will remain confidential and will be used for no other purpose than the study at hand. The students' participation in this study was voluntary, so they were assured they would not be penalized if they decided not to participate. Furthermore, they were informed that if one of the students requested to withdraw from the study during the data collection process, any data related to her would be excluded and destroyed, as explained in the Informed Consent Form.

After collecting all consent forms from the students, I administrated a pre-task questionnaire (see Appendix 4) to collect data about their demographic information, about their prior English learning and technology experiences, including wikis, about their preferred work style, and about their familiarity with peer/group work. This questionnaire helped me create a participants' profile to support the data analysis and discussion and in the discussion of the results and findings of this study.

For this study's purpose, I developed a private educational Wikispaces account for the study and helped students create personal accounts, where, in small groups, they worked asynchronously on the wiki-based writing task. The timeline of the data collection is displayed in Figure 2 (see Figure 2). Accordingly, I introduced them to the Wikispaces in a PowerPoint presentation, in which I explained and demonstrated how to join the site. The students were also introduced to a variety of Wikispaces menu items and features. More specifically, they were encouraged to focus on the wiki "Discussion" and "History" modules and use these for the purposes of collaborative writing. Also, a handout with the main points of my presentation was distributed to the participants.

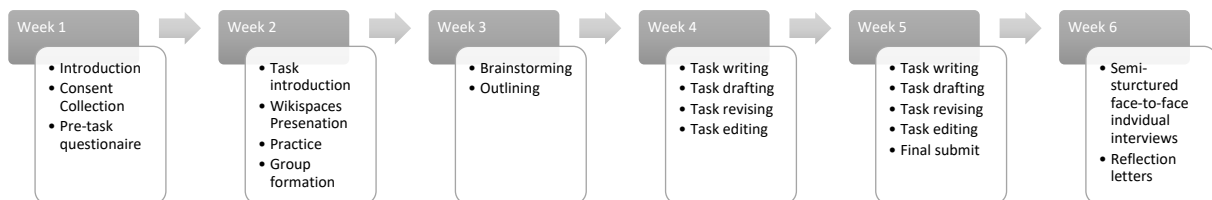


Figure 2. Data collection procedure: Timeline.

Additionally, before introducing the main task, I provided the participants with a brief wiki-based mock-task writing practice where they could practice the above Wikispaces (<http://wikispaces.com>) features to gain experience and confidence in using the wiki as a tool for

collaborative writing. Then, the participants were divided into small groups of three following research indicating that groups of such a size are most successful in collaboration to complete the wiki-based collaborative writing task (Dobao, 2012; Li, 2013; Morgan, Allen, Moore, Atkinson, & Snow 1987). Small groups were formed based on the participants' availability. Further, I discussed and provided the participants with the wiki-based task prompt. Throughout the study, I also served as a tech support assistant to those who needed help with the wiki. Mainly, I observed the participants' wiki writing behaviors and collaboration.

Lastly, based on the study's research purpose and needs, I conducted post-task face-to-face semi-structured interviews with seven of the participants in English (see Appendix 5). Each participant was asked the same set of interview questions. The duration of the interview with each participant did not exceed 45 minutes and a digital audio recorder was used to record each interview, which was then transcribed and analyzed. After these interviews, seven of the participants also completed reflection letters about their collaborative writing experiences (see Appendix 6).

Data Collection Instruments

In order to answer the study's research questions, multiple instruments were employed including a pre-task questionnaire, the wiki records from the "Discussion" and "History" modules, face-to-face semi-structured interviews, and reflective letters (see Figure 3). All instruments were tested in a pilot study with volunteered participants before the actual data collection process.



Figure 3. Data collection instruments.

Pilot Study

A pilot study was used to determine the credibility and trustworthiness of the study. The pilot study was conducted before the actual collection of data to field-test the instruments and their appropriateness for this study. In the pilot study, the volunteered participants were three Saudi female graduate students. They were asked to complete the wiki-based collaborative writing task and report any difficulty or challenges they faced, or if any technical problems occurred. I created a Wikispaces page for the pilot study and helped the participants to create accounts in the Wikispaces site. I explained some of the wiki features and provided them with a handout on using this wiki site. Then, the participants were asked to respond to the pre-task questionnaire and report any ambiguous or unclear items. After that, they worked collaboratively to complete the wiki-based writing task in the Wikispaces site. Further, they went over the interview questions and reported if they had difficulty in understanding the questions, or if the questions needed to be rephrased or explained further. The pilot study also helped in developing follow-up questions.

In the pilot study, time was one of the factors to pre-test in completing the wiki-based collaborative writing task, the pre-task questionnaire, and the interviews. It helped me to better modify the aforementioned data sources. Therefore, the pilot study also tested and verified the reliability of the research instruments and the research design. Nonetheless, the results of this pilot study are not reported in the results of this study following Secomb and Smith (2011) who state, “The results of this pilot study may not be meaningful and have not been reported, [but] the outcomes and experiences are” (p. 35). Thus, the pilot study was mainly conducted to refine the wiki-based collaborative writing task, the pre-task questionnaire, and the interview questions in order to improve the quality of the data and to check if the instruments were measuring what they are supposed to measure to answer the research questions. Below are descriptions of each of the data collection instruments used in the study.

Pre-Task Questionnaire

A pre-task questionnaire was given to the students to collect data about their demographic information, their prior English learning and technology experiences, including wikis. It also collected information about the students’ preferred work style and their familiarity with peer/group work (see Appendix 4). This questionnaire helped in creating a profile of the participants that could assist in the data analysis and discussion. My use of a pre-task questionnaire built on an existing study (Li, 2014) that utilizes a questionnaire to collect similar data. The questionnaire was modified and adjusted to meet the purpose of the current study and to accommodate the participants. The questionnaire items were field-tested in the pilot study. Responders in the pilot study stated that they had no difficulty in understanding the questionnaire items which they completed smoothly.

In my use of surveys in this study, I followed Brown (2001) who defines them as “any written instruments that present respondents with series of questions or statements to which they

are to react either by writing out their answers or selecting from among existing answers” (p. 6). I also drew on Dörnyei (2003) who assures that questionnaires are effective and valuable research instruments in terms of the researcher time and effort. In this connection, he states, “By administering a questionnaire to a group of people, one can collect a huge amount of information in less than an hour...processing the data can also be fast and relatively straightforward...” (p. 8). In this study, the demographic survey was not the main data source. It mostly assisted in my interpretation of the factors that influenced the participants’ wiki-based collaborative writing, and their perceptions about their experience. The demographic questionnaire helped in creating a participants’ profile which, in turn aided with explaining the study’s findings and their interpretation.

The demographic questionnaire took approximately five minutes to complete. The pre-task questions were divided into three sections. The first section asked about the participants’ basic demographic information and about their English learning experiences. The second section included questions about the participants’ technology learning experiences. The third section included statements about the participants’ learning styles. The questionnaire was written in English because the participants are advanced speakers of English.

Wiki Discussion and History Modules Records

This study explored the way Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task. It mainly focused on the students’ writing changes and on their interactions throughout the completion of that writing task. Therefore, the participants’ wiki pages in Wikispaces were considered as the main data collection instrument that meets the purpose of the study. Specifically, each group’s the “Discussion” and “History” modules records were analyzed. The former included each group’s threaded discussion of the content and organization of their essay and the latter provided evidence of the ways in which the

participants co-constructed their essay by making drafting, revising, or editing changes to their document, all recorded by the wiki “History” module as writing changes, that is as deletions recorded in red, and as additions recorded in green. Thus, the wiki “Discussion” and “History” records provided transparency in the participants’ writing processes, and, particularly, in their collaborative strategies and processes.

Oral Interviews

Based on this study’s research purpose and needs, and as a method of data collection to understand the students’ perceptions about their writing experience, I also conducted post-task semi-structured face-to-face interviews with the participants in English (see Appendix 5). My choice of face-to-face interviews as a major data collection method was inspired by its potential of providing rich and vital information on qualitative studies that seek to find or explore the way knowledge, interactions, attitudes, and perceptions are constructed and co-constructed among the members of a certain community (Fontana & Frey, 2008; Marshall & Rossman, 2011; Patton, 2002; Stake, 2010). I was also encouraged to use oral interviews as “one of the most common and powerful ways in which we try to understand a fellow human” (Fontana & Frey, 2008, p. 118). Moreover, I appreciated the significance of interviews as data collection methods as they assist the researcher to obtain “unique information or interpretation held by the person interviewed [and find] out about a “thing” that the researchers were unable to observe themselves” (Stake, 2010, p. 95). Such a method grants the researcher effective access to areas of realities “that would otherwise remain inaccessible, such as people’s subjective experiences and attitudes” (Perakyla, 2008, p. 351). Therefore, as far as the focus of this study was concerned, interviews became a vital tool to explore how the participants co-construct a written text in a wiki-based collaborative writing task and how they interact throughout its completion. More

specifically, interviews in this study were the main data source to be mined for the participants' perceptions about their wiki-based collaborative writing experience.

The interview questions were field-tested in the pilot study. Respondents in the pilot study reported that they had no difficulty in understanding the questions, and that the questions were clear. The interview questions were formatted in a semi-structured manner to suit the purpose, focus, participants, and context of the study, especially knowing that “the semi-structured approach is most useful if you know in advance the kinds of questions you ask, feel fairly sure that you and the interviewees “speak the same language,” and want to do an analysis that requires the same information from each participant” (Adler & Clark, 1999, p. 249). Each participant was asked the same set of interview questions presented in the same order.

The interview consisted of ten questions and a couple of probing follow-up questions asked when needed. The questions asked about participants' perceptions of their wiki-based collaborative writing experience, its benefits and caveats, their group interactions and their suggestions for future wiki-based collaborative writing projects. In interviewing the participants, as the interviewer, I rephrased or explained some of the questions if they needed further clarification. I also restated or summarized their responses to confirm my own understanding of their responses.

Reflection Letters

For this study, the final data collection instrument were reflection letters. The participants were mainly asked to talk about what they found most memorable, important, or even life-changing for them when completing the writing tasks. The reflection letter prompt was provided in a Microsoft Word document and emailed to the participants (see Appendix 6). The prompt was designed in order to gain rich data about the participants' understating of their collaborative writing practices and group interactions. By having the participants complete these letters, this

study presents valuable results in terms of the opinions of students regarding wiki-based collaborative writing experiences. The reflection letter prompt was tested in the pilot study in which the participants reported no difficulty comprehending it. In this study, I collected via email seven reflection letters ranging from 300 to 500 words.

Data Analysis Method

The data analysis method for this study follows a mixed-method procedure. This section explains the selection and use of quantitative and qualitative methods in this study, as well as provides a brief summary of their use in each of the data sources collected for this study.

Quantitative Analysis

The purpose of quantitative analysis is mainly to process numeric data, such as frequency counts that facilitate the understanding of the phenomenon being studied. The quantitative approach focuses on objective measurements and on the statistical, mathematical, or numerical analysis of data collected through using quantifiable techniques. Reflecting on this, Creswell (2009) explains that quantitative approach is the process of collecting, analyzing, interpreting, and reporting the results of a study in a numeric form. In this study, the quantitative approach was applied to find how the participants collaborate in co-constructing a wiki-supported task-based writing product.

More specifically, it informed the analysis of the data from the Pre-Task Questionnaire Survey, where it helped develop the participants' profiles in relation to their participation in this study's task completion. It was also used to quantify the participants' discussion in the wiki "Discussion" module where the number, length, and frequency of participants' contributions was later mined for possible interpretations of their collaborative negotiation of their essays' content and organization and the specific negotiation strategies they applied in that process. In the wiki "History" module, quantitative data were used to qualify numerically the participants'

contributions, or “writing changes” which were automatically recorded by the wiki as deletions and additions. It was important in providing numerical information for the ensuing qualitative analysis making sense of the participants’ collaborative writing experiences. Finally, the quantitative analysis of the oral interviews provided information about the participants’ priorities in answering the interview questions.

Qualitative Analysis

In addition to using quantitative analysis, for the purpose of this study, qualitative analysis was used to interpret the collected data and to facilitate the understanding of the phenomenon being studied. I based my qualitative analysis on Creswell (2007), who defines the process of data analysis in qualitative studies as it

Consists of preparing and organizing the data (i.e., text data as in transcripts, or image data as in photographs) for analysis, then reducing the data into themes through a process of coding and condensing the codes, and finally representing the data in figures, tables or a discussion (p.148).

Moreover, my selection of the qualitative data analysis was based on its provision of a flexible set of tasks that are undertaken and re-undertaken until adequate representation of the information is found and effective interpretations and discussion are constructed. I also appreciated the possibility of going back and forth between the different aspects of research and working with the data, which in this study is “iterative rather than linear, so that a good qualitative researcher moves back and forth between design and implication to ensure congruence among question formulation, literature, recruitment, data collection strategies, and analysis” (Morse et al, 2002, p. 10). Most importantly, it was significant to me that in qualitative studies that there are no fixed procedures or prescribed tools, which researchers can follow and use to accomplish the task of data analysis and discussion, “the process of data collection, data

analysis, and report writing are not distinct steps in the process--- they are interrelated and often go on simultaneously in a research project” (Creswell, p. 150). Nevertheless, I was aware of the fact that qualitative researchers might experience difficulty in managing, sorting, and making sense of the gathered data, and of course in analyzing and discussing them (Patton, 1980).

In this study, I used qualitative data analysis as a way of applying discourse analysis to the study’s data derived from the wiki “Discussion” and “History” modules on the one hand, and, to the semi-structured interviews and reflection letters, on the other. In the “Discussion” module, the participants’ notes submitted as separate contributions to the wiki linear threaded discussion were analyzed to establish the types of collaboration and negotiation strategies applied in the brainstorming and outlining of their essays. Coding followed Grant’s (2013) and Galinsky and Mussweiler’s (2001) categorization of collaborative negotiation strategies and Lowry, Curtis, and Lowry’s (2004) taxonomy of the levels of collaborative writing. The discourse analysis of the data collected from the wiki “Discussion” module allowed the researcher to understand the participants’ patterns of collaboration during the discussion of their essays as they might relate to the actual writing of their essays, thus make predictions about the nature of the collaboration processes in their actual writing of their essays in the wiki “History” module. In the wiki “History” module, discourse analysis was applied to understand the nature and types of collaboration as evidenced by the participants’ consecutive writing changes to their essays. Following Lowry, Curtis, and Lowry’s (2004), the researcher was able to establish a flexible pattern of collaboration strategies that reflected the participants’ ability to respond to their essay’s current version. Using rhetorical analysis (Lowry et al., 2004; Kittle & Hicks, 2009; Godwin-Jones, 2018), I was able to analyze the collaborative writing process, that is drafting, revising, and editing, occurring in the “History” module” as it reflects, complements, and

completes the preliminary discussion of that process occurring in the wiki “Discussion” module, that is the brainstorming and outlining of their essay.

To gain a deeper understanding of the participants’ writing experiences, and, given the fact that the use of wikis as a collaborative writing tool focused on its “Discussion” and “History” modules is rather rare, even unique to my knowledge, I needed to examine the participants’ perceptions of their collaborative writing experiences. I applied a qualitative content analysis to glean information about their personal thoughts and feelings as expressed in their oral interviews and reflection letters. I coded both data instruments for recurring patterns, identified the most common ones, and was able to add to the understanding of the participants’ behaviors during the duration of this study, especially in areas where the data could be interpreted in multiple ways.

Thus, I chose and used a mixed-method analysis as the most appropriate means of understanding the way the participants collaborated in co-constructing a wiki-afforded task-based essay, as well as understating their perceptions about their collaborative writing experience.

Ethical Considerations

I aim to protect the rights of the participants in the following ways. The participants are treated in accordance with the Institutional Review Board’s (IRB) rules and requirements (see Appendix 2). To protect their identities, I use pseudonyms to refer to the participants in my study. The Wikispaces site is set up as private and password-protected. Its access is limited only to the participants in this study. The site itself is not visible to anybody else. Finally, the recorded interview data are stored on my password-protected laptop computer and on an external drive.

Chapter Summary

This chapter describes the research methodology adopted in this study by providing a detailed map of the research design, participants, setting, researcher's role, research instruments, data collection methods, and data analysis procedures that are incorporated in it. It also presents detailed information about the analyses of the data sources in relation to this study's goals.

The following chapters discuss the main findings regarding students' writing changes in the wiki-based collaborative writing task and summarize the data results as they relate to this study's research questions. They also report the results about the participants' perceptions of their wiki-based collaborative writing experience in the co-creation of their collaborative essays.

CHAPTER 4

DATA ANALYSIS

Introduction

Chapter 4 focuses on the data analysis performed as part of this study. It begins with a further discussion of the study's context, that is its participants, task, and the specially created Wikispaces wiki as these relate to the data analysis. Further, Chapter 4 focuses on the data analysis itself. First, it summarizes the requirements for successful collaboration that enable this study's effective data analysis. Then, it analyses the completion of its collaborative writing task in its two stages: one, the collaborative discussion of the task-based essay's content and organization as recorded in the wiki "Discussion" module, and, two, the collaborative writing of the task-based essay as documented in the wiki "History" module. Finally, it analyzes the participants' perceptions of their collaborative writing experience reflected in the information retrieved from their oral interviews and reflective letters.

Successful Collaboration Requirements

For an effective analysis of this study's data and in addition to the research I presented in Chapters Two and Three, here, it is necessary to make sure that the study's context meets the requirements for successful collaboration to avoid potential setbacks (Hewitt, 2001). For that, I explore further the rules for successful collaboration (Vicens & Bourne, 2007) which emphasize that to avoid failure in collaborative projects, it is important to decide from the beginning the task and the participants' readiness for collaboration, and the way collaborative work will be organized and delegated. I also considered the following factors for successful collaboration (Green & Johnson, 2015) (see Table 1), which were designed and implemented in a large-scale inter-institutional collaborative project. They strongly emphasize the importance of participants' selection factors, such as background, knowledge, motivation, desired diversity but also shared

common ground. Additionally, they point to important project-related factors, such as clear goal-setting, and most importantly, the selection of a task that yields itself to collaborative rather than individual completion (see Table 1).

Table 1

A Checklist to Assess for an Organization’s Readiness for Collaboration

Readiness for Collaboration		Yes	No
1	Would the situation (research, education, or clinical issue) of interest be best solved through collaboration?		
2	Who should be included in the collaboration? Are the appropriate collaborators (disciplines and professions) being considered and invited?		
3	Have you identified the benefits that each of the collaborators will gain from the relationship?		
4	Have you identified the potential barriers to working effectively (e.g., culture, vocabulary, approaches, distance, technology, etc.)?		
5	Have you developed a plan for how these barriers will be overcome?		
6	Have the following been assessed for key team members regarding collaboration: attitudes, environmental concerns, communications, resources and trust?		
7	Have you considered the intangible elements for each collaborator (e.g., tacit knowledge, social capital, transparency, motivation)?		
8	Have the organizational learning objectives been clearly stated and agreed upon (what do you hope to learn from collaboration)?		
9	Is the support and commitment across all levels for this collaboration to be successful, including administrators, collaborators and any involved staff?		
10	Have all members of the collaborative team agreed on the goals and the shared purpose?		
11	Does everyone in the collaboration have adequate and available time, resources, and skills in order to accomplish the goals?		
12	Is there an overt environment and culture of mutual respect amongst all members? If not, what is the plan to develop this?		
13	Have you developed and agreed upon the plan to manage and resolve the conflict or disagreement when it occurs?		
14	Have the collaborators agreed to share in all the following: planning, decision making, problem solving, responsibility, working together cooperatively, communicating, and coordinating openly?		

Note. Adapted from “Interprofessional Collaboration in Research, Education, and Clinical Practice: Working Together for a Better Future,” by Green & Johnson (2015), p.10.

Based on Green and Johnson (2015) (see Table 1), I created a checklist for readiness for collaboration that meets the goals of this study. In it, I excluded factors relating to cross-institutional collaborative work partnerships and focused on the participants and collaborative task salient factors that reflect the nature of this dissertation research situated within one specific educational institution and its TESOL graduate program. Below, Table 2 includes the factors that guided this study’s participants selection, task design, and wiki administration (see Table 2).

Table 2

A Checklist for Assessing the Participants’, Task’s, and Wiki’s Readiness for Collaboration

Readiness for Collaboration	
Participants	Who should participate in the collaboration?
	Does everyone in the collaboration have adequate and available time, resources and skills to complete the task?
	Is there an overt environment of common interests, culture, background, and mutual respect among the participants?
	Have the following been assessed for team members regarding collaboration (education, English proficiency, attitudes, computer use, wiki use)?
Task	What issue of interest would be best solved through collaboration?
	What kind of task would be best suited for collaborative completion?
	What kind of instructions would best set the task’s goal?
	What barriers might affect the collaboration and how can they be overcome?
Wiki	How could high-level collaboration be secured through interrelated convergent discussion wiki notes? (after Hewitt, 2001)
	How could the threaded discussion’s reply protocol affordances limitations be avoided?
	How could a linear wiki discussion be encouraged over a threaded one?

Note. Adapted from “Interprofessional Collaboration in Research, Education, and Clinical Practice: Working Together for a Better Future,” by Green & Johnson (2015) and “Beyond Threaded Discourse,” Hewitt (2001).

In Chapter 3, I discussed the participants' selection in relation to the study's research design. Here, in Chapter 4, I add to this discussion the information gleaned from the analysis of the demographic survey I conducted with the participants (See Appendix 4).

Participants

Participants were selected with the study's research goals in mind and with the above-mentioned criteria for readiness for collaboration. More specifically, participants were screened depending on their educational and computer use background and their working style attitudes. All participants had the same or very similar educational background. They are all students in the same TESOL graduate program. Their English proficiency reflects their educational background. As graduate students in an English department, they considered their proficiency in English to be advanced (seven of them) and high-intermediate (two of them) with all declaring positive attitudes towards English. That ensured that they have adequate availability, skills, knowledge, common interests, and shared culture and experience, all necessary conditions for successful collaboration (see Tables 1, 2, 3, 4, and 5). Their computer-use background and work style attitudes and preferences, however, showed some variations according to individual group members. These variations constituted another important criterion for readiness for collaboration, that is a level of diversity that encourages a rich discussion and possibilities for individual contributions and input (Green & Johnson, 2015). Below, I trace the differences in each group's members' computer background, attitudes towards and preferences of individual versus group work (see Tables 3, 4, and 5).

Group One members Huda, Dalal, and Reem all use computers for education and Google Docs in particular (see Table 3). Huda and Dalal use computers for a wider range of purposes, that is for education, but also for fun and social networking. Huda and Reem stated that they are very comfortable using computers whereas Dalal felt only comfortable. Huda and Reem also

reported a richer Web 2.0 tools repertoire including blogs and Facebook in addition to Google Docs. Dalal is the only one who had also used wikis prior to her participation in this study. Their attitudes towards doing individual work varied from very positive (Dalal and Reem) to positive (Huda). Regarding group work, Reem reported a very positive attitude, Huda – a positive attitude, and Dalal – a neutral attitude. It is interesting to note that their attitudes to individual and group work reflect their working style preferences. Huda and Reem prefer group work and Dalal would rather work individually (see Table 3).

Table 3

Group 1: Participants' Background and Attitudes

Group 1	Educational Background		Computer Use Background				Working Style Attitude	
Factors	Education. Program Degree	English Proficiency	Purpose for Using Computers	Level of Comfort Using Computers	Web 2.0 Tools Use	Wiki Use	Individual/ Group Work Attitude	Working Style Preference
Huda	M.A. in TESOL	Advanced	Education Fun Social networking	Very comfortable	Blogs Twitter Google Docs Facebook	No	Positive/ Positive	Group work
Dalal	M.A. in TESOL	Advanced	Education Fun Social networking	Comfortable	Wikis Blogs Twitter Google Docs Facebook	Yes	Very Positive/ Neutral	Individual work
Reem	M.A. in TESOL	Advanced	Education	Very comfortable	Google Docs	No	Very positive/ Very positive	Group work

Group Two participants Layla, Asma, and Maha all use computers for educational purposes and Google Docs in particular (see Table 4). Two of them, Layla and Maha, consider themselves advanced users of English whereas Asma believes her English proficiency is only

high- intermediate. Here, too, only one group member, Layla, uses computers only for educational purposes. The other two group members, Asma and Maha, reported using computers for other purposes, e.g., for fun (Asma) and for social networking and fun (Maha). Only one group member, Maha, felt very comfortable using computers. Her team mates, Layla and Asma, stated they felt only comfortable using computers. In Group Two, only one group member, Asma, uses Web 2.0 tools other than Google Docs, that is Twitter and Facebook. None of the participants had used wikis before this study. Their attitudes towards individual work varied: Asma defined her attitude as very positive, Layla – as positive, and Maha – as neutral. Regarding group work, two of the participants, Layla and Asma, reported neutral attitudes to group work whereas the third one, Maha, stated her positive attitude towards it. Relatedly, Layla and Asma preferred to work individually whereas Maha would rather do group work.

Table 4

Group 2: Participants' Background and Attitudes

Group 2	Educational Background		Computer Use Background				Working Style Attitude	
Factors	Education. Program Degree	English Proficiency	Purpose for Using Computers	Level of Comfort Using Computers	Web 2.0 Tools Use	Wiki Use	Individual/ Group Work Attitude	Working Style Preference
Layla	M.A. in TESOL	Advanced	Education	Comfortable	Google Docs	No	Positive/ Neutral	Individual work
Asma	M.A. in TESOL	High-Intermediate	Education Fun	Comfortable	Twitter Google Docs Facebook	No	Very positive/ Neutral	Individual work
Maha	M.A. in TESOL	Advanced	Education Fun Social networking	Very comfortable	Google Docs	No	Neutral/ Positive	Group work

Group Three members, Sara, Razan, and Lana, exhibited similarities and differences comparable to the other two groups (see Table 5). Two of them, Razan and Lana, deemed their English proficiency advanced, and the third one, Sara, considered herself to be of high-intermediate proficiency level. One of them, Sara, uses computers only for educational purposes. The other two, Razan and Lana, also use computers for fun and for social networking. Their background in Web 2.0 tools includes Google Docs as mentioned above. For Sara, this is the only one. Razan and Lana also use Facebook. Beyond these Web 2.0 tools, Razan uses Twitter and Lana uses wikis and blogs. Two of them, Razan and Lana, had used wikis before, whereas Sara had not. Finally, their attitudes towards individual work are unanimously positive. As for group work, only two of them, Sara and Razan, reported positive attitudes and preferred group work. Lana reported that her attitude towards group work is neutral and that she prefers to work individually.

Table 5

Group 3: Participants' Background and Attitudes

Group 3	Educational Background		Computer Use Background				Working Style Attitude	
Factors	Education. Program Degree	English Proficiency	Purpose for Using Computers	Level of Comfort Using Computers	Web 2.0 Tools Use	Wiki Use	Individual/ Group Work Attitude	Working Style Preference
Sara	M.A. in TESOL	High-Intermediate	Education	Very comfortable	Google Docs	No	Positive/Positive	Group work
Razan	M.A. in TESOL	Advanced	Education Fun Social networking	Very comfortable	Twitter Google Docs Facebook	Yes	Positive/Positive	Group Work
Lana	M.A. in TESOL	Advanced	Education Fun Social networking	Comfortable	Wikis Blogs Google Docs Facebook	Yes	Positive/Neutral	Individual work

Overall, in terms of their educational experience, computer background, and their attitudes towards and preferences for individual and group work, in their demographic survey responses, the participants confirmed their preparation and readiness for collaborative work. In that, they reported a high level of commonalities and slight but significant differences that indicate their readiness for collaborative tasks.

Task

In addition to the more general task description I provided in Chapter 3, here, I specify this study's task parameters further because along with the selection of prepared and willing participants for collaborative work, the task provided in such work is of paramount importance (see Table 2). The absence of a task, or the choice of an inadequate task that is better done individually might lead participants to complete a project individually rather than collaboratively

(Alyousef & Picard, 2011; Hewitt, 2001; Fu, van Aalst, & Chan, 2016). To prevent the collapse of collaboration due to task inadequacy, the researcher explored authentic professional tasks in the participants' field of study, TESOL. These included the collaborative development of products like these: TESOL syllabi, curricula, programs, professional reports, proposals and publications, program policies, event planning, and job descriptions, which focus on maximum input, different perspectives, shared knowledge, and document effectiveness (Ede & Lunsford, 1990; Duin, 1991; Loehr, 1995). With the availability of online collaborative tools, such as Google Docs, wikis, and Microsoft Word among others, collaborative writing is becoming the preferred medium in professional and institutional organizational practices. Naturally, I looked into a possible adaptation of these authentic professional products for the purposes of this study.

Given the participants' short-term voluntary participation and the absence of real-life institutional commitment, such products did not seem feasible. However, they provided useful hints to one of the constituent goals of all these professional projects, that is reaching consensus about a number of challenges/issues they need to address. More specifically, many of them incorporate an understanding of major ESL learning or teaching challenges. Furthermore, the identification and discussion of various ESL challenges is also a personal issue. Developing the identity of an ESL professional, which is the target goal for TESOL graduates, incorporates advancing an informed position about the most important ESL challenges in specific educational settings, especially in Saudi Arabia where English is a foreign language. Thus, this study's task's core component, its topic, was determined as the identification of major ESL education challenges and as a topic offering personal professional gains to its discussants (Green & Johnson, 2015; Mak & Conmian, 2008) (see Table 1).

Given the limited time for and the research focus of this collaborative task, it wasn't feasible to require preliminary research as some large-scale online collaborative projects do (Fu

et al, 2016). As the participants are ESL learners themselves, it was possible to focus the discussion on their personal experience, now enriched by their TESOL graduate education. Indeed, TESOL challenges are an often-discussed topic whether in personal or professional conversations and a major guiding principle in the participants' future ESL teaching assignments. Thus, it was reasonable to expect a vivid discussion of a personally and professionally significant subject. To avoid possible organizational barriers and following ESL task design preferences, the number of challenges was limited to five (Lund & Rasmussen, 2008). Furthermore, for a greater focus on collaboration, the task was facilitated with several prompts. Thus, the length of the collaborative essay was limited to 600 words and its structure followed a familiar rhetorical pattern for the content and organization of academic essays (e.g., introduction, body, conclusion). Its audience was defined as Saudi ESL teachers for whom practical solutions to these common challenges would be useful. Further clarifications were provided about the sub-tasks to be completed jointly and the strategies to complete them within the specially designed Wikispaces (www.wikispaces.com) wiki (see Appendix 1).

Wiki

Besides offering further specifications about this study's participants and task, here, I do the same for the Wikispaces wikis, the online medium for its collaborative task completed in two stages: one, in the collaborative discussion enabled by its "Discussion" module, and, two, in the collaborative writing recorded by its "History" module. Ultimately, as seen from the literature review in Chapter 2, the wiki's technical properties may or may not facilitate effective collaboration depending on what they afford and how its affordances are used (Lund & Rasmussen, 2008).

Asynchronous wiki discussion forums have been used for collaborative projects with varying results (Ducate, et al., 2011; Lee, 2010). Educationally, they have been credited with

enabling discussion through providing multiple conceptual perspectives in a hierarchically-structured text (Han & Hill, 2006). Socially, they have been referred to as a medium for constructing knowledge as a social activity (Han & Hill, 2006; Li & Zhu, 2013). Linguistically, they have been analyzed as written forms of spoken English showing features of both in unique online hybrid discourses (Han & Hill, 2006; Lee, 2010). However, in terms of their collaboration affordances, they have been criticized for their reply protocol structure, that is for conditioning discussants to connect their responses to a single note, usually the most recently posted one. Consequently, they generate mostly standalone notes (e.g., introducing new ideas) and add-ons (e.g., building on one other note only). Rarely, they might include multiple-reference notes referring to two or more previous notes. With regards to collaboration, unlike linear asynchronous discussions, the wiki threaded discussions reply protocol structure prevents discussants from seeing the whole discussion at a glance, thus, making it impossible to generate convergent notes that refer to but also discuss two or more previously posted notes (Hewitt, 2001; 2003).

As mentioned before, this study uses a Wikispaces (www.wikispaces.com) wiki which is a form of threaded asynchronous discussion that unfolds more like a linear asynchronous discussion than a typical threaded asynchronous discussion. Similar to other threaded discussion forums like Moodle (www.moodle.com), it allows participants to “Open a new discussion” or start a new thread as well as to respond to previously posted notes by clicking “Comment.” However, unlike other threaded discussion forums, it displays all posted notes as an ongoing conversation rather than as a chronological list of discussion topics only (see Figure 4). Figure 4 shows an excerpt from the participants’ preliminary wiki task where they were free to start new topics and respond to them as they wished. Specifically, it shows three discussion threads and the responses to each one. Most importantly, it keeps the whole conversation open so that

participants could, in fact, respond to any one or to any number of the existing posts. However, a closer look at the responses to the three different discussion topics shows that even though the conversation remained visible at a glance all the time, due to topic changes, the corresponding comments remained linked to the current rather than to any of the preceding threads.

With this in mind, this study's wiki-based task provided the participants with one single discussion topic, that is with one thread which enhances the possibilities for collaboration in terms of creating convergent rather than standalone and add-on comments (see Figure 5). Figure 5 shows a single thread with all comments linked to it and to other comments posted earlier. The latter is the most important technical affordance which allows for a number of convergent summary notes synchronically or across the discussion and for rich patterns of collaboration (Hewitt, 2001) in what unfolds as an asynchronous linear discussion. Thus, potentially, by preventing the rapid topic changes through opening new threads, the single-thread linear discussion supports an enhanced collaborative discussion cohesion (Hewitt, 2001).

Add Discussion

Thread 1. Post with no comments to it

A friendly note
 Jan 9, 2017

Hi..
 I just want to remind you that in this page you can click on Edit, and start writing your collaborative text. Don't forget to click Save after you finish writing or editing :)
 And of course, feel free to discuss any concerns. As I see you started so :)
 Enjoy!

Thread 2. Post and comments to it

Hi girls, I started writing something.
 Jan 8, 2017

Incorporating technology within MATESOL classes is vital to promote values of collaborative writing. While working collaboratively, students are able to construct knowledge collectively. This collaborative construction of knowledge enhances the opportunity for students to cooperate as writing to extend their ideas in a creative and productive ways. It is a processes of continuous co-construction of knowledge that helps students to explore different meanings. This is to say that collaborative writing is an opportunity to negotiate meanings, and, thus, to reposition their perspectives of what different meanings indicate and how these meanings can be elaborated to experience more thoughtful meanings. Such a writing collaboration would also reflect to promote a classroom environment, where values of cooperation and negotiation are enforced.

Accordingly, the main goals of the course might include: (1) Enhancing values of cooperation and negotiating meanings, (2) Encouraging collaborative construction of knowledge, (3) Promoting students' collaborative writing skills, (4) Collaborating in multiple peer-review activities.

"Technology in MATESOL" course fits the MA program because students need to learn the innovative ways of constructing knowledge through collaboration. In addition, it is essential for students to gain knowledge in regards to how technology can be incorporated in their classrooms as teachers. Such a course might be helpful to explain how technology can be used to enhance students' writing skills. This course might also be used to show that technology can be used as a way for students to share their work.

Hi Nouf good job. but what is your plan in working in this project?
 See Nawal post about the plan of dividing the work and tell us about ur view point so we can all have a plan and go with it

Hi Hind and Nawal,
 I started by looking at the first two questions.
 Why is the technology course needed?
 What are the main goals of this course?
 Do you want to continue from here?

Thread 3. Post and comments to it

Hi everyone,
 Jan 5, 2017

I hope you are having pleasant break. About the project, do you want us to divide the proposal into sections (may be three) and each one of us write one. Then, we revise for each other. other suggestions? or comments?

Now I am able to see your post.
 Yes I would like that you divided the work and then we can edit it as a whole group
 So, let's see what Nouf said and go then

Figure 4. Wikispaces wiki: Multiple-thread threaded discussion.

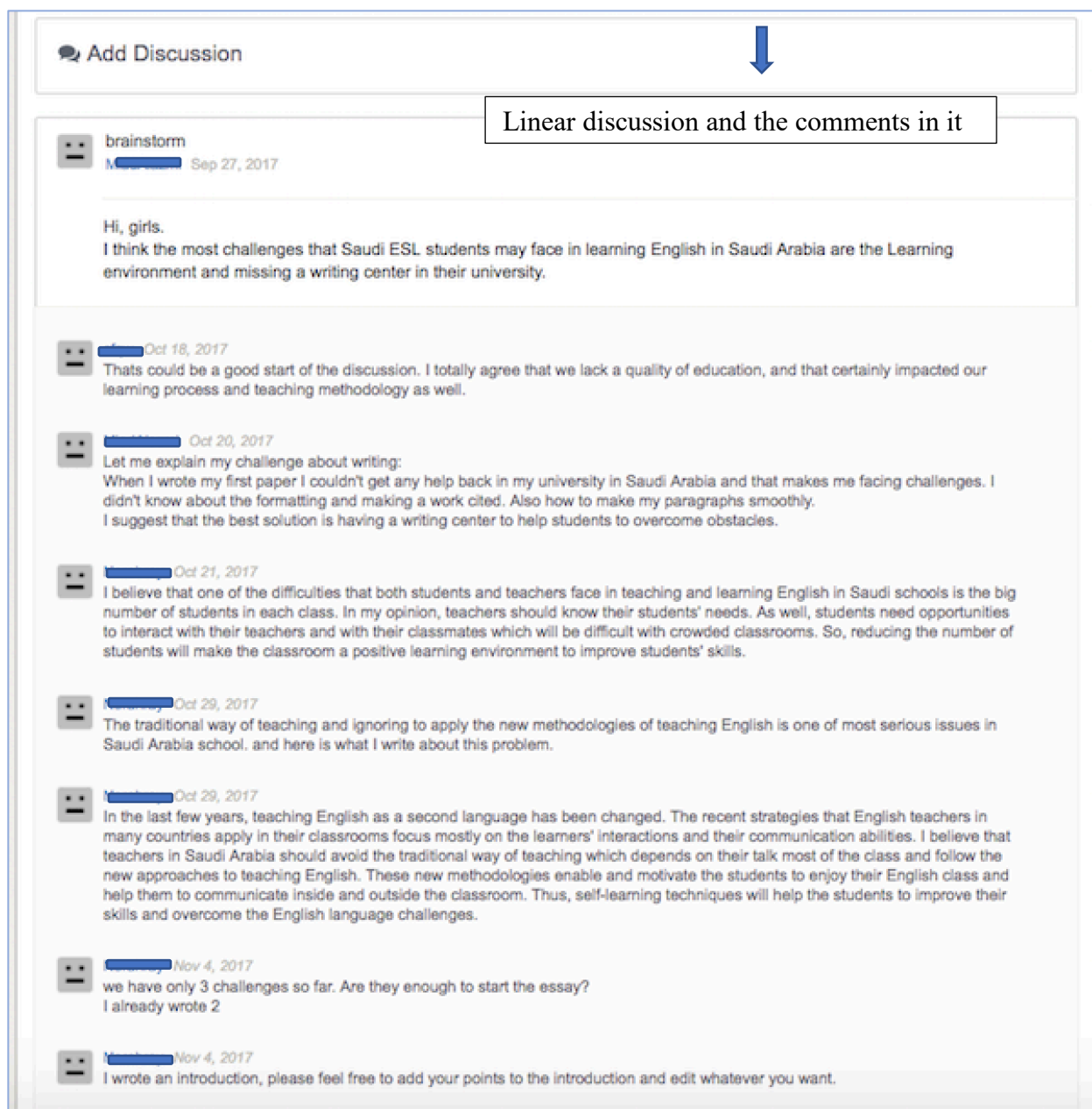


Figure 5. Wikispaces wiki: Single-thread linear discussion.

Furthermore, as a way of encouraging participants to maintain the discussion's cohesion by focusing on the task at hand, this study's task prompt addressed the above-mentioned threaded discussion forums' caveats by providing specific strategies for the completion of the study's collaborative writing task. It defined the task as comprising only one linear discussion or one thread with all comments related to it. The latter precluded the possibility for a threaded

discussion with any number of new threads with comments to individual notes. Given the participants' lack of previous background using wikis, as part of the task prompt, they also received specific strategies and tips for using the different wiki modules, for the frequency and joint nature of their contributions, as well as for appropriate collaborative projects.

The close examination and preparation of the context in which collaborative writing in this study occurs paved the way to its successful completion. Selecting participants with shared knowledge and background as well as with diverse attitudes and preferences regarding collaborative tasks, the design of this study's task as one that is best completed collaboratively but also enabled by the wiki's affordances, and the use of the wiki as an asynchronous linear single-thread discussion allowing for convergent comments created favorable conditions for this study's focus on collaborative writing.

Collaborative Writing: Participants' Experiences

Securing the requirements for successful collaboration addressed above constitutes a necessary condition for this study's participants' collaborative writing experience. It reveals the researcher's consistent effort to acknowledge and address the fact that wikis are not intrinsically collaborative tools and that, as previous research shows, multiple factors related to the participants, the task, and the wiki itself might be potentially disruptive in wiki-based collaborative writing. This section, investigates the participants' wiki-supported collaborative discussion and their wiki-supported collaborative writing.

Wiki-Supported Collaborative Discussion

Here, I focus on the wiki's "Discussion" module as the medium for the first stage of collaborative writing, that is the brainstorming and organization of the essay to be co-constructed later. In face-to-face contexts, brainstorming could be either an individual activity, or a

collaborative one (Storch, 2012). In both cases, it is essential for the logical organization of an academic essay (Chao, & Lo, 2011).

While the analyses of the wiki's Discussion-module-based posts address their collaboration enhancing or inhibiting affordances but also include frequent cognitive interpretations of their implications for learning (Ioannou, Brown, & Artino, 2015; Li & Zhu, 2013), the analyses of the wiki's History-module-based writing contributions are dominated by an exclusive focus on the wiki's affordances in the form of "changes," that is deletions and additions (Lund & Smørðal, 2006; Mindel & Verma, 2006). A more detailed account of the latter is provided later in this dissertation. For now, I'd just like to emphasize that as a departure from the aforementioned studies, this study examines the two, that is the activities within the wiki's "Discussion" and "History" modules in tandem as parts of one dynamic whole, as they complement each other, and as they alternatively serve as the foreground and the background of the collaborative writing task designed for this study. In that, it follows Lowry, Curtis, & Lowry's (2004) definition of collaborative writing which emphasizes it as an interactive social process in which a team of writers pursue a common objective by negotiating, coordinating, and communicating during the creation of a common document. Thus, this study's collaborative writing task differs from basic joint composition tasks by engaging participants in pre-writing (e.g., survey and mock task), in task execution activities in the wiki "Discussion" module (e.g., negotiating essay content and organization) and in the wiki "History" module (e.g., essay writing activities and strategies), and in post-writing activities (e.g., interviews and reflections) (see Figure 6).

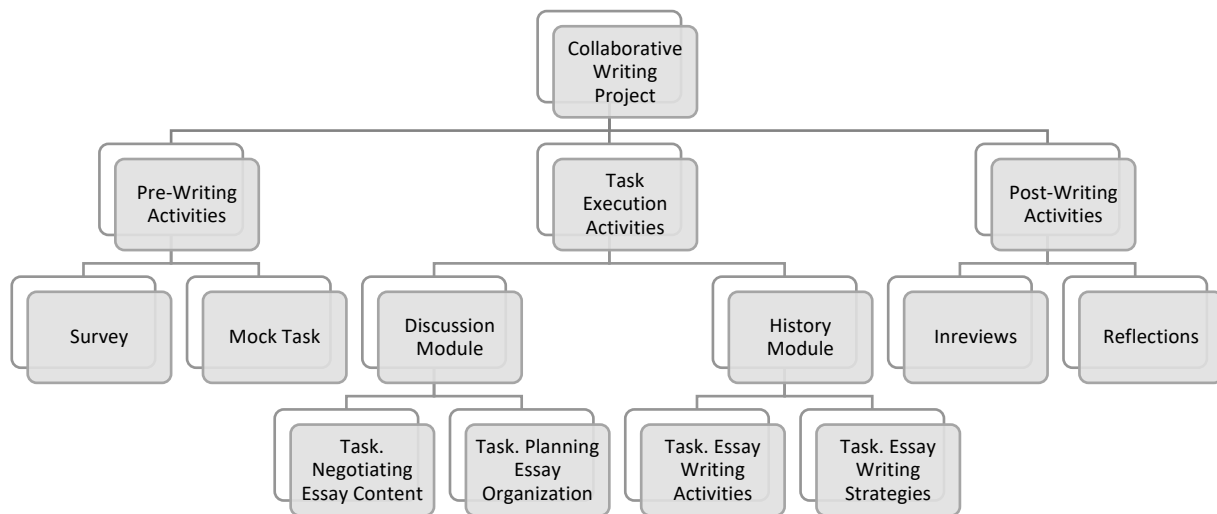


Figure 6. This study’s conceptual framework.

After referring to this study’s pre-writing activities earlier, in relation to this study’s data collection instruments in Chapter 3, below, I analyze the participants’ task execution activities. I begin with the data from their discussions in the wiki “Discussion” module where they lay the foundations for the co-creation of the task-based collaborative academic essay in the wiki “History” module. With the latter in mind, it is important to trace the participants’ discussion in terms of brainstorming, converging on brainstorming, and outlining (Lowry et al., 2004), or, specifically, in terms of thematic content through content analysis and topic negotiation through discourse analysis.

Generating topics: Brainstorming. Generally, content analysis investigates and reports patterns of meaning or themes within the data. It also organizes and describes the data set in rich detail (Braun & Clarke, 2006). The unit of the content analysis determines the granularity in analyzing transcripts in the online discussion (De Wever et al., 2006) by identifying consistent “themes” or “ideas” as units of meaning in a note (Henri, 1992). Each code is selected to include sufficient text and to provide enough information that is meaningful and understandable

(Coffey & Atkinson, 1996). Thus, in this study, the content analysis aims at identifying the main themes or topics addressed by the participants in the wiki “Discussion” module. Specifically, in line with the study’s wiki-based collaborative writing task that instructs the participants to agree and write about five challenges in learning English in Saudi Arabia, every challenge the participants mention in the wiki’s Discussion module is coded as a theme. Thematic units or units of meaning formed in this way are used as the unit of analysis.

Ultimately, the content analysis is important for preprocessing this study’s data for other subsequent analyses (Fu et al., 2016), first, here, in the wiki “Discussion” module for the discourse analysis of topic negotiation strategies, and, then, in the wiki “History” module, for the rhetorical analysis of the participants’ collaborative writing contributions. More specifically, it helps the researcher to identify the ESL learning challenges the participants considered in each group and the way they negotiated these challenges to reach consensus. It also traces the way the participants generated, evaluated, justified, and eliminated ideas so that, finally, they could jointly select about five ESL learning challenges to write about in their wiki-supported collaborative essay. For each of the three groups, the challenges or topics agreed upon in the wiki “Discussion” module are then used as the conceptual blueprint in the collaborative writing of the task-based essay in the wiki “History” module.

In this study, the content analysis of the groups’ interactions within the wiki “Discussion” module is conducted in two stages, one, coding and counting the participants’ contributions in order to register the various topics they generated within their groups, and , two, tracing the proposed topics as they were raised and ranked in the discussion, thus providing evidence of the participants’ collaboration and negotiation in reaching consensus on the final list of topics for their wiki-supported collaborative essay co-constructed in the wiki “History” module. Below, first, I trace all the topics that each participant suggested within her group. Then, I define

common themes shared among the three groups. The former allows me to gain a deeper understanding of each participant's writing contributions in the second stage of the wiki-based writing task, that is in the essay developed collaboratively in the wiki "History" module. The latter informs my understanding of the groups' overall collaborative writing contributions in this study as well as helps to identify the nature of the collaboration patterns exhibited in it.

Group one. In Group One, participants brainstormed seven topics (e.g., limited L2 practice, L1 interference, overemphasis on L2 grammar, outdated curriculum, absence of motivation, students' L2 biases, and unqualified teachers) as potential finalists for their target of five ESL challenges. At the beginning of the discussion, Huda suggested two challenges, that is limited L2 practice and L1 interference. Then, Dalal added three other topics, that is overemphasis on L2 grammar, outdated curriculum, and absence of motivation. Further, Reem reiterated the importance of absence of motivation suggested by Dalal earlier and also added two more ESL challenges, that is students' L2 biases and unqualified teachers. Finally, of the seven topics proposed altogether, the participants in Group One selected these five topics to write about in their collaborative essay: limited L2 practice, absence of motivation, unqualified teachers, L1 interference, and overemphasis on L2 grammar (see Table 6). Thus, in their final list of agreed upon writing topics, Huda, who spoke first, got both of the topics she suggested, Dalal, who spoke second, got two of the three topics she offered, and, Reem, who spoke last, also got two of the three topics she proposed.

Group two. In Group Two, the participants started with nine topics (e.g., outdated curriculum, using L1 in class, students' L2 biases, outdated teaching methods, unqualified teachers, limited L2 practice, L2 accent marginalization, lack of confidence, and absence of motivation) and ended with only four of these on their final list. At the beginning, Layla started the discussion by suggesting two ESL challenges, that is outdated curriculum, and using L1 in

class. Later in the discussion, she added lack of confidence. Asma followed that by confirming one of the topics that Layla suggested (e.g., outdated curriculum) and by adding three more topics (e.g., students' L2 biases, outdated teaching methods, and unqualified teachers). Finally, Maha listed three more ESL challenges, (e.g., limited L2 practice, L2 accent marginalization, and absence of motivation). In the end, from the nine proposed topics, the participants in Group Two selected only four topics to write about in their collaborative essay. The selected topics were ranked as follows: absence of motivation, outdated curriculum, outdated teaching methods, and unqualified teachers (see Table 6). Thus, Layla and Maha had only one of the three topics they proposed listed among the final four. Asma, on the other hand, got two of the topics she proposed as well as a third one she shared with Layla.

Group three. In Group Three, the participants started with an even longer and rather varied list of thirteen topics (e.g., L2 vocabulary, L2 pronunciation, L2 variation, fear of making mistakes, absence of motivation, weak writer's voice, cultural differences, L2 spelling, L2 idioms, overemphasis on L2 grammar, L2 phonetics, no focus on pragmatics, and L2 learning anxiety). Razan initiated the discussion by proposing four topics (e.g., L2 vocabulary, L2 pronunciation, L2 variation, and fear of making mistakes). After that, Sara added six more topics (e.g., absence of motivation, weak writer's voice, cultural differences, L2 spelling, L2 idioms, and overemphasis on L2 grammar). Lana concluded the discussion by emphasizing cultural differences, a topic that Sara had mentioned earlier, and by proposing three more topics (e.g., L2 phonetics, no focus on pragmatics, and L2 learning anxiety). Finally, from the thirteen proposed topics, the participants in Group Three selected four topics, one of which was a combination of two of the proposed topics (e.g., L2 vocabulary and L2 spelling) to write about in their collaborative essay. They ranked the topics they included in their final list as follows: cultural differences, L2 learning anxiety, fear of making mistakes, and L2 vocabulary and spelling (see

Table 6). Thus, despite the large variety of initially proposed topics, Group Three’s final list of ESL challenges included two of Razan’s four topics, two of Sara’s six suggestions, and, two of Lana’s four topics with Sara and Razan sharing the combined fourth ESL challenge (e.g., L2 vocabulary and spelling).

Table 6

Groups 1, 2, and 3: Ranked Discussion Topics, Final List

Group 1	Group 2	Group 3
Limited L2 practice	Absence of motivation	Cultural differences
Absence of motivation	Outdated curriculum	L2 learning anxiety
Unqualified teachers	Outdated teaching methods	Fear of making mistakes
L1 interference	Unqualified teachers	L2 vocabulary & spelling
Overemphasis on L2 grammar	-	-

Overall, the examination of each group’s initial and final topics list revealed some shared themes across groups (see Table 6). However, only one theme made the discussion topics list in all three groups, that is absence of motivation. Beyond that, Group One and Group Two shared several topics between them (e.g., limited L2 practice, outdated curriculum, unqualified teachers, and students’ L2 biases). Group One and Group Three had one topic in common, that is overemphasis on L2 grammar. Beyond the universally agreed upon topic of absence of motivation, Group One and Group Three shared no other topics from either group’s initial or final list of topics. Consequently, absence of motivation emerged as the number one topic in Group Two’s final list, the number two topic in Group One’s final list, whereas in Group Three, it was discussed but not included in the final list of ESL challenges. While the list of discussed ESL challenges across groups was relatively long and varied, it is important to note that most participants, six altogether, got about two of the topics they proposed (Huda, Dalal, Reem, Razan, Sara, and Lana) in their group’s final list of topics. Only one participant, Asma, got three

of the four topics she proposed on Group Two's final list. The other two members of Group Two, Layla and Maha, got one each. This may suggest a more balanced power dynamic in Group One and Group Three but will have to be examined further in the discourse analysis of the discussion transcripts.

The content analysis which helped to identify the generation and ranking of the topics raised throughout the participants' interactions in the wiki "Discussion" module provided a rich environment for exploring the themes underlying the negotiation of each group's final list of ESL challenges they would then write about in the wiki "History" module. However, embedded in the socio-cognitive tradition (Chi, 1997; De Wever et al., 2006; Krippendorff, 2004), content analysis has certain limitations in that it obscures the semantics of the discussion and the signals of collaboration (Cakir et al., 2009; Stahl, 2002). Thus, it does not reveal the nature of the collaborative process synchronically or over time (Strijbos et al., 2006; Suthers, 2006). For that, the three data sets from the wiki "Discussion" module were subjected to a socio-interpretive discourse analysis (Hmelo-Silver, 2003) to define the nature of the collaborative processes within each participant group in terms of the negotiation strategies they employed in the selection and ranking of their preferred essay topics.

Negotiating topics: Outlining. As one of the primary methods for analyzing asynchronous online discussions' transcripts (Han & Hill, 2016), discourse analysis is used to illustrate the way ideas are developed during asynchronous online interactions (Fu et al., 2016). While the content analysis above focused on text content alone, the purpose of discourse analysis here was to go beyond that by exploring the relationships between text content and the context where meaning is created through the connections among the messages (notes) contributed to the discussion. In other words, the text generated in the wiki "Discussion" module was analyzed as embedded in the context determined by the goal of the wiki-based task, that is the negotiation of

five ESL challenges as collaborative writing topics. Thus, for the purpose of this study, discourse analysis focused on the participants' collaborative efforts in the generation and negotiation of possible topics for their wiki-supported essay.

More specifically, the discourse analysis applied in the examination of this study's task-based linear discussion focused on the participants' collaboration revealed in the negotiation strategies they used to generate, rank, and agree upon five ESL challenges as the topics of their collaborative essay to be written in the wiki "History" module. Set by the wiki-based task, the participants' negotiation was enhanced, and negotiation challenges were minimized further by the wiki "Discussion" module's affordances, such as asynchronous posting, exchanging ideas and sharing knowledge, access to the revisions history and the negotiation stages record, integration of new information or new boundary object information, flexibility and convenience in time and location (Li, 2012; Yang, Wu, Koolmanojwong, Brown, & Boehm, 2008).

The discourse analysis applied in the treatment of the negotiation processes occurring in the three participant groups' discussions in the wiki "Discussion" module followed a conceptual frame based on Grant (2013) and Galinsky & Mussweiler (2001) (see Table 7). It interpreted the participants' contributions to the discussion in terms of these discourse negotiation strategies: making the first offer, focusing on the target, ranking priorities, sharing interest, making a counter-offer, and reaching agreement. For that, it used a diachronic approach following the chronology of events, from the initial offer, to the final agreement. It also emphasized the implications these strategies entail. Thus, making the first offer was interpreted as empowering its proposer, setting the stage for the discussion, and conditioning others to work around it; focusing on the target was seen as assisting participants in concentrating on their goals and in making better offers; ranking priorities was believed to encourage making better offers and evaluating a full set of options for better results; sharing interest indicated which of the offers on

the table are relevant or not; making a counter-offer was seen as contributing to back-and-forth suggestions that facilitate mutual agreement; and, finally, reaching a final agreement concluded the discussion by establishing a consensus on a collective opinion (Grant, 2013; Galinsky & Mussweiler, 2001). Below, I apply discourse analysis to trace the collaboration in the negotiation processes in the three participant groups. For clarity and convenience, in my analysis, I refer to the NVivo transcripts of these discussions with the codes assigned to individual group member notes on the right, and, their numbers, on the left, like this: Note one (01), note two (02), etc.

Table 7

Discourse Negotiation Strategies: Implications

Discourse Negotiation Strategies	Implications
Making the first offer	<ul style="list-style-type: none"> ○ Gives more power to the proposer ○ Sets the stage for the discussion ○ Conditions others to work around it
Focusing on the target	<ul style="list-style-type: none"> ○ Engages the participants in concentrating on what they hope and aim to reach/accomplish ○ Helps participants make better decisions and offers
Ranking priorities	<ul style="list-style-type: none"> ○ Sequences suggestions/offers/options for better outcomes ○ Enables participants to compare their rankings and determine the full set of options
Sharing interest	<ul style="list-style-type: none"> ○ Reveals information/ideas that are relevant/irrelevant to the negotiation to enhance the outcome
Making a counter-offer	<ul style="list-style-type: none"> ○ Enables back-and-forth suggestions ○ Contributes to reaching mutual agreement and satisfaction for all participants
Reaching a final agreement	<ul style="list-style-type: none"> ○ Concludes the negotiation by establishing the commonly shared ideas/opinions ○ Establishes a consensus on a collective opinion

Note. Adapted from “Give and Take: A Revolutionary Approach to Success,” by Grant (2013) and “First Offers as Anchors: The Role of Perspective-Taking and Negotiator Focus,” by Galinsky & Mussweiler (2001).

Group one. The participants took six days and fourteen notes to complete the negotiation of their task-based essay’s topics. Huda opened the discussion by making the first offer, but also by focusing on the target, and by sharing interest (see Figure 7):

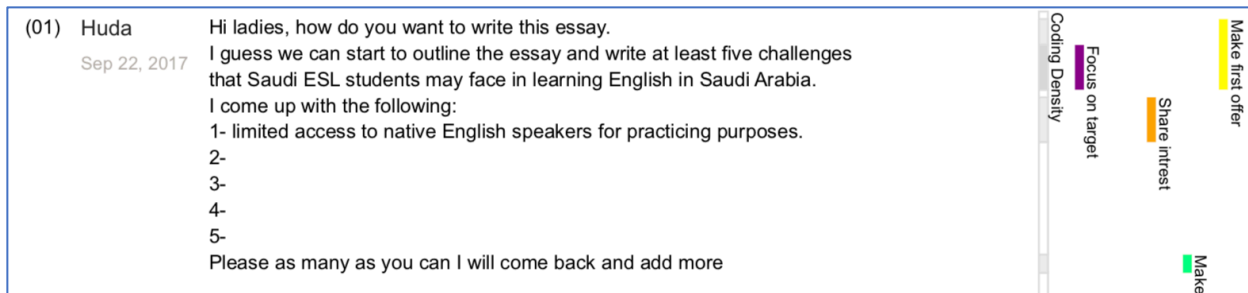


Figure 7. Group 1: Discourse analysis, negotiation strategies, discussion opening.

In her initial posting (01), she set the tone for a sustained focus on the target for the other group members in the ensuing six discussion notes (e.g., Dalal - 03, 10, and 11; Huda – 01, 09; and Reem – 08). She also modeled sharing interest, an important discourse strategy that enhances negotiation effectiveness and outcomes in the following ten notes (e.g., Huda – 01, 02, 06, 12, and 13; Dalal - 03, 04, 05, 10; Reem – 07). Another important discourse strategy, ranking priorities, further consolidated the cohesion and flow of the negotiation process in five discussion notes: Dalal (03), Reem (08), Huda (09), and Dalal (10, 11) all contributed new and newly rearranged priorities about the proposed ESL challenges. Along with a strong line of jointly sustained focus on the target, sharing interest, and ranking priorities, relevant counter-offers (e.g., Huda – 01, 09, 12, 13; Reem - 07, 08; Dalal – 10) moved the discussion closer to its conclusion. Finally, in notes 11, 12, 13, and 14, Dalal articulated the agreement reached as a result of the negotiation (11) and Huda (12, 13) and Dalal (14) confirmed the outcome (see Figure 8).

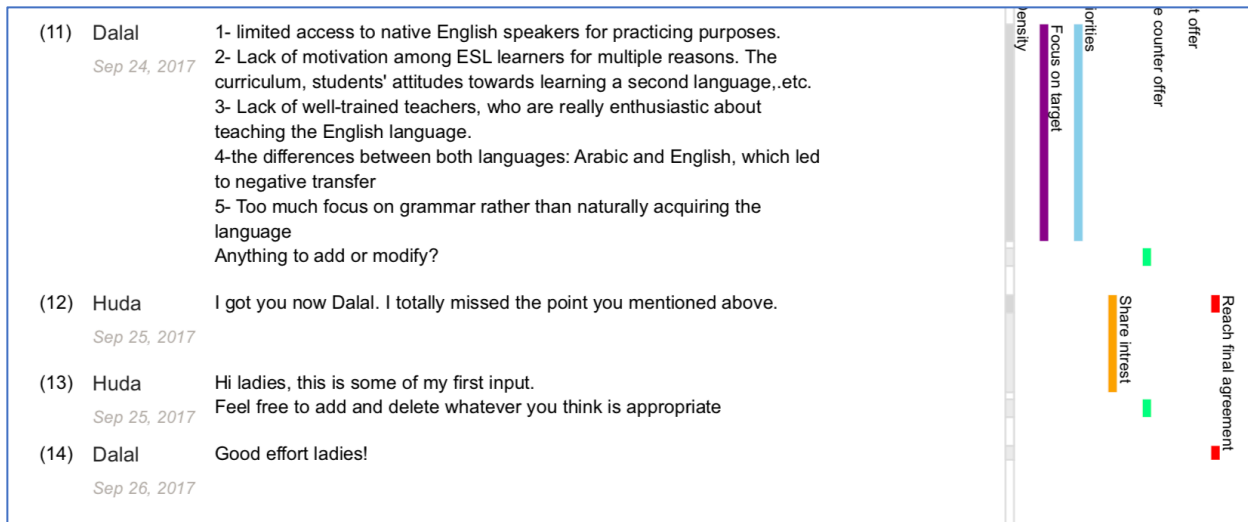


Figure 8. Group 1: Discourse analysis, negotiation strategies, discussion closing.

Overall, the discourse analysis of Group One participants' negotiation strategies revealed a strong shared interest at every stage of their discussion. It was recorded in ten out of the fourteen notes constituting the whole discussion. Their shared interest, however, was far from passive agreement. They indicated their engagement in focusing on the target consistently (6 notes) and, most importantly, on making relevant counter-offers in half of all notes (7 altogether). That was followed by a strong final agreement about the content and organization of the essay they were to co-construct in the wiki "History" module (see Table 8). Thus, the discourse analysis of Group One's discussion found high levels of collaboration in Group One's negotiation of their collaborative essay's topic. Such uniformly high levels of group coherence may be attributed to the fact that Group One's members also participated in this study's pre-task activity where they got to know the task and each other better.

Table 8

Group 1: Discourse Analysis, Negotiation Strategies, Results

Discourse Negotiation Strategies	Notes/ Total	Huda Note #	Dalal Note #	Reem Note #
Making the first offer	1	01	-	-
Focusing on the target	6	01, 09	03, 10, 11	08
Ranking priorities	5	09	03, 10, 11	08
Sharing interest	10	01, 02, 06, 12, 13	03, 04, 05, 10	07
Making a counter-offer	7	03, 10, 11	10	07, 08
Reaching a final agreement	4	12, 13	11, 14	-

Group two. Group Two participants took thirteen days and eleven discussion notes to complete the negotiation of their wiki-based essay’s topics. Similar to Group One, in the discussion’s first note, Layla made the first offer, suggested possible counter-offers, focused on the target, and, last but not least, shared interest in her team members’ forthcoming contributions (01). (see Figure 9).

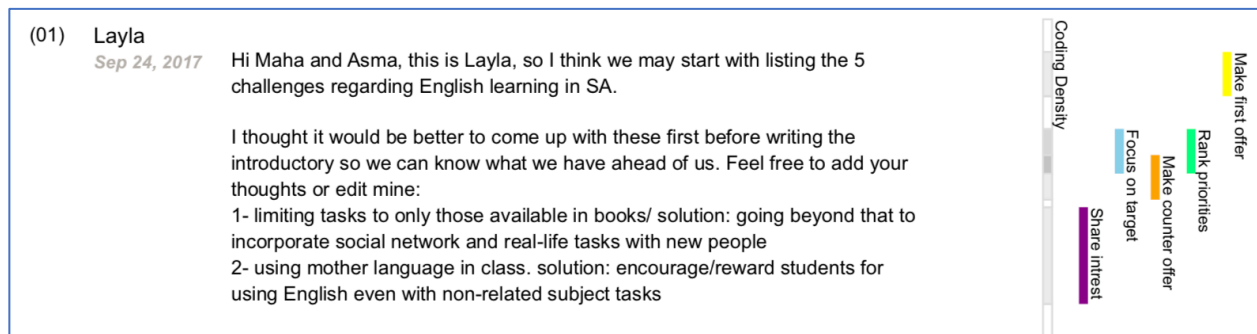


Figure 9. Group 2: Discourse analysis, negotiation strategies, discussion opening.

Group Two’s contributions exhibited a strong focus on the target of their discussion throughout. All participants contributed to it significantly (e.g., Layla - 01, 04, 09; Maha – 03; and Asma - 02, 06). They also demonstrated shared interest (e.g., Layla - 01,04, 09; Asma - 02,

06, 10; and Maha - 03, 05). However, Group Two members addressed ranking the priorities in their discussion in two notes only, both by Layla (01, 04). They devoted more attention to making counter-offers (e.g., Layla - 01, 04, 07, 09; Asma - 02, 06, 10; and Maha - 05, 11). Finally, Group Two participants concluded their discussion without a firm agreement on the exact content and organization of their collaborative essay with Asma taking over the responsibility for the essay's content (10) and Maha agreeing to such delegation of the collaborative task (11) (see Figure 10).

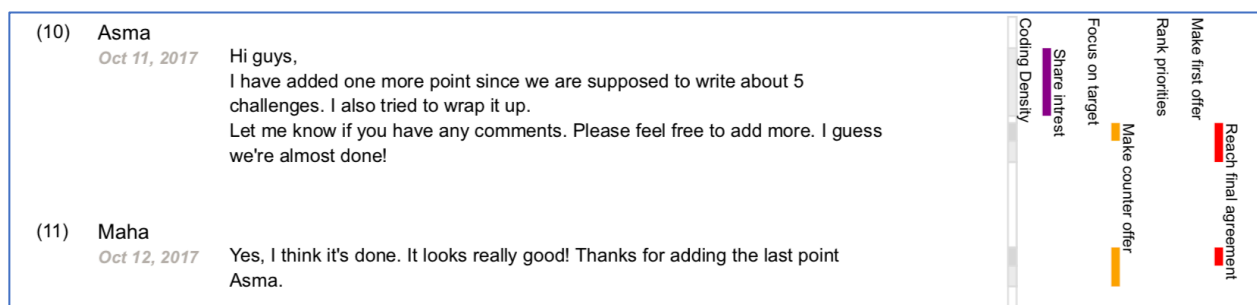


Figure 10. Group 2: Discourse analysis, negotiation strategies, discussion closing.

In their negotiation of the content and organization of their task-based essay, Group Two participants started with Layla's overreaching beginning (01), where in a single note, she simultaneously applied five negotiation strategies, that is making the first offer, focusing on the target, ranking priorities, sharing interest, and even suggesting possible counter-offers (see Table 9). Asma followed suit by applying in each of three of her notes (02, 06, 10) the same two negotiation strategies (e.g., sharing interest and making a counter-offer). Maha, less active than Layla and Asma, also combined two negotiation strategies in a single note, that is focusing on the target and sharing interest (03), sharing interest and making a counter-offer (05) to conclude the discussion (11). Thus, Group Two exhibited rather less-balanced group dynamics characterized by lots of counter-offers (9 notes) and expressions of shared interest (8 notes), an average focus on the discussion's target (6 notes), and little attention to ranking priorities (only 2 notes by one person). Consequently, they concluded their discussion without a finalized plan

with a specific essay content or organization and with one member, Asma, taking responsibility for the collaborative task, which could also be a predictor of either a group single-author writing or a sequential single-author writing collaborative strategy (Lowry et al., 2004) to be adopted in the wiki's History section following this discussion. Group Two members did not participate in the study's pre-task. That may account for their overall lower level of group coherence.

Table 9

Group 2: Discourse Analysis, Negotiation Strategies, Results

Discourse Negotiation Strategies	Notes/ Total	Layla Note #	Asma Note #	Maha Note #
Making the first offer	1	01	-	-
Focusing on the target	6	01, 04, 09	02, 06	03
Ranking priorities	2	01, 04	-	-
Sharing interest	8	01, 04, 09	02, 06, 10	03, 05
Making a counter-offer	9	01, 04, 07, 09	02, 06, 10	05, 11
Reaching a final agreement	2	-	10	11

Group three. Group Three completed their discussion in sixteen days and thirteen notes. Razan posted the first note in which she made the first offer of four possible ESL challenges by focusing on the target, ranking the topics she proposed, and sharing interest in further contributions and counter-offers by her team members (01) (see Figure 11).

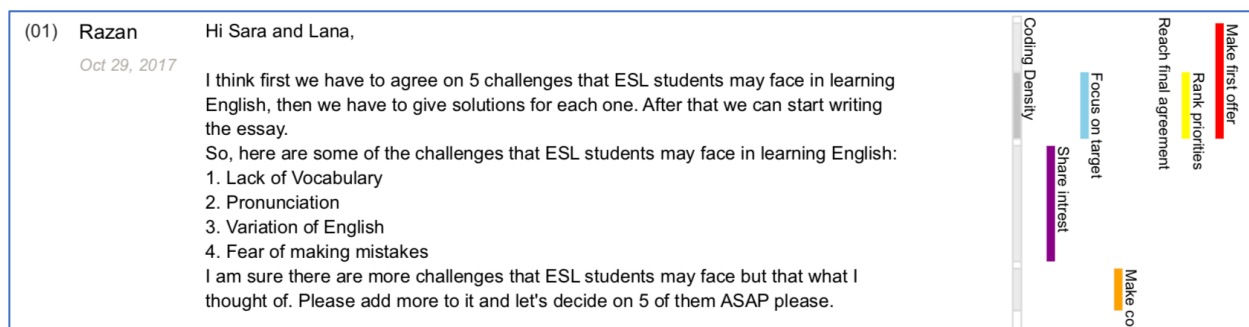


Figure 11. Group 3: Discourse analysis, negotiation strategies, discussion opening.

Adding to Razan's list of four topics, Sara proposed a ranked list of six more topics, all focusing on the target (02). With regards to focusing on the target ESL challenges as potential essay topics, Lana engaged in a lengthy mini-lecture in which she offered four more topics supported by detailed arguments in favor of each (04). Beyond topics, as a form of focusing on the target, Razan added one more topic (11) and Sara suggested adding a paragraph on vocabulary and spelling (12). All participants shared interest in the task completion by encouraging participation from others (Razan, 01 and 06; Sara, 02, 03, 05; Lana 07). However, one group member, Lana, diverged significantly from the task, especially from its stated collaborative provisions. In note 08, she copied and pasted two paragraphs from a paper she had written for a class. Thus, instead of collaborating on the negotiation of the essay's topics, with no prior solicitation, introduction, or comment she posted a finished text which had very little to do with the task or with the topics proposed by her team members (08). By doing that, she unilaterally opted for a group single-author writing strategy (Lowry et al., 2004).

Sharing interest was also an object of different interpretations: Razan (01, 06, 11) and Sara (02, 03, 05, 12, 13) posted notes that were inclusive and encouraging of others' participation whereas Lana, with one exception (07), tended to ignore others' contributions and impose upon them her own finished work (04, 08). The line of counter-offers, too, was affected by Lana's lengthy off-topic notes (04, 08). It started with Razan's invitation for further topic suggestions (01) and Sara's attempt to negotiate fewer topics out of a thirteen-strong initial list (03, 05), continued with Razan's agreeing to Sara's latest suggestions (06), and was interrupted by Lana's unexpected posting of a paper she had written prior to this conversation (08). The latter, in fact, put an end to the negotiation process by generating a few adjustments around it by Sara (09, 12, 13) and Razan (11). Thus, without a final agreement, the discussion closed with

delegating the writing of separate paragraphs to individual members (Sara – 09, 12, 13; Razan – 11). Thus, Group Three participants’ discussion started with Razan’s initial note (01), continued with Sara’s own ranked list of topics (02), and stopped there, interrupted by Lana’s lengthy self-initiated mini lecture (04). As a result, after the first two notes, the collaborative negotiation was seriously disrupted, and may have caused the lack of final agreement with a clearly articulated and ranked list of essay topics (see Figure 12).

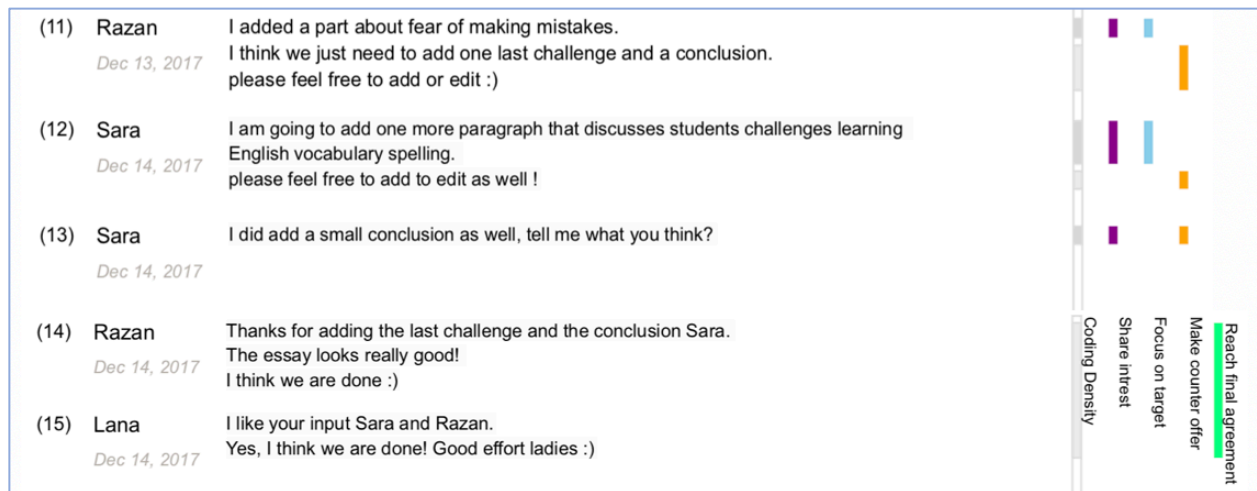


Figure 12. Group 3: Discourse analysis, negotiation strategies, discussion closing.

In terms of collaboration and negotiation, two group members, Razan and Sara, tried hard to maintain shared interest in the group in ten separate notes, whereas the third group member, Lana, directed interest to her own previous work (04, 08). The latter seemed to have diverted their discussion focus and cohesion away from the task and towards working around Lana’s suggestions (04, 08), away from ranking priorities registered in only two of the discussion’s thirteen notes, and away from consistent focus on the target (6 notes) and on relevant counter-offers (5 notes). As Lana’s divergence from the collaborative negotiation process constituted a significant disruption of this group’s task completion, it was important to investigate the incident further from the perspective of speech acts theory (Searle, 1969; 1979; Grice, 1975). Thus, two questions arose: why did Lana do it and why did not her team members object to it? A deeper

analysis into the discourse reveals that Lana seems to have had the best of intentions by offering her previous essay as an act of sincere help and not as an act of self- or power-assertion. Consequently, her team mates perceived it as an act of friendly generosity and responded accordingly, by accepting it unconditionally.

The final result from Group Three’s discussion conducted in the wiki “Discussion” module was an agreement on the number and content of paragraphs to be composed rather than on a list of topics to serve as the essay’s main ideas (4 notes) with no consensus reached on a joint essay content and organization. Thus, the collaborative negotiation process in Group Three’s discussion was negatively affected by one of its members’ well-intentioned but nevertheless a disregard of the task’s provisions and of her team members’ earnest but ineffective attempts at equitable collaboration (see Table 10). The adoption or rather the imposition of a single-author writing strategy (Lowry et al., 2004) to be adopted in the co-construction of their essay may also be partially attributed to weaker group formation processes due to the fact that Group Three members did not participate in the study’s pre-writing task.

Table 10

Group 3: Discourse analysis, Negotiation strategies, Results

Discourse Negotiation Strategies	Notes/ Total	Razan Note #	Sara Note #	Lana Note #
Making the first offer	1	01	-	-
Focusing on the target	6	01, 11	02, 12	04, 07
Ranking priorities	2	01	02	-
Sharing interest	10	01, 06, 11	02, 03, 05, 12, 13	04, 08
Making a counter-offer	5	01, 06	03, 05	08
Reaching a final agreement	4	11	09, 12, 13	-

As a result of their discussions conducted in the wiki “Discussion” module, all three groups were able to generate a list of topics to write about in their essays, and, to a certain extent, establish an outline of the topics to be developed in their essays (see Figure 6). Implicitly, throughout the course of each group’s discussion, and, explicitly, in particular group members’ overt statements about the distribution of writing responsibilities within the group, the groups also suggested the specific collaborative writing strategies they might apply in the writing activities afforded by the wiki “History” module. Group One opted for parallel writing in which a team divides the work in discrete units and works in parallel combined with reactive writing in which group members react and adjust to each other’s changes and additions in real time. Group Two indicated a preference for sequential single-author writing, in which each writer completes his/her task, then passes it on to the next writer who becomes the next single-author writer. Group Three seemed to suggest that they might follow the sequential single-author writing strategy, or the single-writer strategy, in which one person is directed or self-directs to write for the entire team. Thus, each group expressed preferences for a different kind of distributed collaborative writing strategy (Lowry et al., 2004) (see Figure 13).

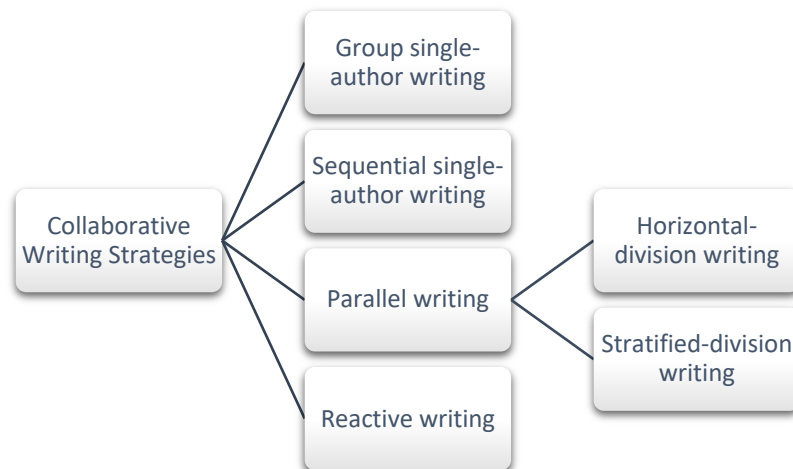


Figure 13. Collaborative writing strategies: Wiki Discussion and History modules. Adapted from “Building a Taxonomy and Nomenclature of Collaborative Writing to Improve Interdisciplinary Research and Practice,” by Lowry, Curtis, & Lowry, 2004, *The Journal of Business Communication*, 41(1), 66-99.

These collaborative writing strategies along with the resulting collaborative writing activities are discussed further below. There, as evidenced by the participants' writing contributions in the wiki "History" module, it will be possible to establish whether or not, or to what extent, each group followed the collaborative strategies they opted for in their discussion in the wiki "Discussion" module.

Wiki-Supported Collaborative Writing

Following the discussion and negotiation of their collaborative essays' content and organization in the wiki "Discussion" module, the participants in this study were directed to proceed to the wiki "History" module and, based on their discussion, co-create their task-based essays, and, thus, complete this study's collaborative writing task. Earlier in this chapter, the content analysis of each group's discussion identified the topics for inclusion in their collaborative essay. Furthermore, the discourse analysis of the three linear threaded discussions focused on the negotiation strategies applied in selecting and organizing the content of each group's essay.

Now, from a rhetorical perspective (Godwin-Jones, 2018), I analyze these and the writing activities that ensued as parts of a single iterative collaborative writing process where the discussion in the wiki Discussion module represents brainstorming and outlining, and the essay writing itself involves drafting, revising, and editing (see Figure 14).

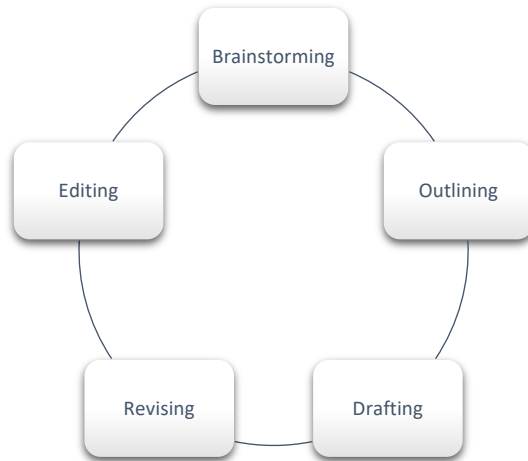


Figure 14. Collaborative writing as an iterative process.

Collaborative writing activities and strategies. After completing the first stage of their collaborative writing essays, that is brainstorming and outlining via an asynchronous linear discussion in the wiki “Discussion” module, to complete this study’s essay writing task, the groups engaged in the distributed collaborative writing of their essays, that is in the drafting, revising, and editing of a co-created text in the wiki “History” module. There, afforded by the wiki’s design, each group’s essay was co-constructed as a sequence or history of the recorded versions of the developing manuscript with changes to the previous draft marked as deletions (highlighted in red in the wiki “History” module) and additions (highlighted in green in the wiki “History” module), and with each draft dated and linked to its author. Figure 15 below shows an excerpt from one of Group Three’s essay’s drafts with the existing text without highlights and with the changes made to it highlighted in red (deletions) and in green (additions) (see Figure

15).

Cultural differences:
ESL students are often not conscious of the fact that the ability to Learn English requires much more than just learning the grammar rules which is also important, but students also needs to learn how to mold words into meaning. Learning English also includes the ability to be persuasive, to be able to know how you need to organize your ideas and also to know how to connect different perspectives together to come up with sufficient, useful, and useable ideas. All these factors make it harder and more challenging for ESL students to learn English as learning English a new language also means learning the culture. Addressing this issue in the ESL class is important as it helps students to realize the effectiveness of learning the culture language on improving their language skills . Therefore, teachers of ESL classes need to introduce for second language learners the culture of the English language. For that reason, English language teachers need to introduce the learners to the culture where English is spoken as a native language. Playing example, playing videos, reading stories about national holidays, represent presenting cultural food and outfits, and so on. can all help in improving the ESL

Figure 15. Rhetorical analysis: Writing activities, essay changes: Deletions and additions.

In the context of this study (see Figure 16), the writing activities at the first stage of the collaborative task completion in the wiki “Discussion” module were interpreted as follows: brainstorming refers to creating new ideas for a paper and converging on brainstorming is deciding what to do with these ideas as a group (Posner & Baecker, 1992), whereas outlining is the next organizational step that articulates the paper’s sections and subsections (Adkins, Reining, Kruse, & Mittleman, 1999). For all groups, the second stage of the collaborative task completion in the wiki “History” module, or, the actual writing of the essay involved participation in three kinds of writing activities. The first one, drafting, refers to writing the initial complete version of a document (Galegher & Kraut, 1994), or to composing the document (Odell, 1985). The second one, revising, refers to the participants’ making word-, sentence-, and whole-text level changes in terms of content, grammar, and style. Finally, the third one, editing, indicates the final changes intended to increase the document’s consistency (e.g., copyedits, spelling and punctuation, grammar, logic) (Posner & Baecker, 1992; Lowry et al., 2004).



Figure 16. Collaborative writing activities: Wiki Discussion and History modules. Adapted from “Building a Taxonomy and Nomenclature of Collaborative Writing to Improve Interdisciplinary Research and Practice,” by Lowry, Curtis, & Lowry, 2004, *The Journal of Business Communication*, 41(1), 66-99.

Group one. The participants in this group completed the writing of their collaborative essay in seven days. Thus, the co-creation of Group One’s essay began with drafting on the first day and ended with the last change made to the text on the last day. Huda started drafting the essay by using the outline from the group’s discussion in the wiki “Discussion” module and by providing researched argumentation for each of the five main topics (e.g., limited access to native speakers, lack of motivation, lack of well-trained teachers, first language negative transfer, and overemphasis on grammar). She ended her post, which is this essay’s first draft, with a list of the references she used. Figure 17 below, a snapshot from the NVivo analysis (an addition highlighted in green) of Group One’s writing activities shows the beginning of her post which continues as an expanded outline (see Figure 17). By providing most of the essay’s content in her initial post, Huda applied the group single-author collaborative writing strategy, that is having one person write for the whole group. The latter is still considered a form of collaborative

writing because what was written is the result of group discussion and consensus (Lowry et al., 2004).

The screenshot shows a document interface with a blue border. At the top left, the word "Inserted" is highlighted in green. In the center, the text "1- Huda Sep 25, 2017" is displayed. Below this, the heading "The five challenges" is highlighted in green. The first challenge is listed as "1. limited access to native English speakers for practicing purposes." Below the list, a paragraph of text is highlighted in green, explaining that people refers to students studying English in Saudi Arabia with EFL students, who have limited access to native English speakers for practice. It mentions that although universities attempt to hire native speakers, technology like websites and apps (e.g., Cambly) can help. The second challenge is listed as "2. Lack of motivation among Saudi EFL learners for multiple reasons." On the right side of the document, there is a vertical purple bar with the word "Drafting" written vertically, and the text "g Density" is visible at the top right.

Figure 17. Group 1: Rhetorical analysis, writing activities, drafting.

Next, another group member, Reem, continued with the essay's drafting by adding a clarification to the second outline point, that is lack of motivation, which she linked to the Saudi decontextualized ESL curriculum. She also added explanations to outline points three, four, and five. After Reem, Dalal expanded further on outline points one, two, three, and five by adding examples, arguments, and suggestions for improving ESL education along the lines of the five main ESL learning challenges emphasized in the essay. In the third addition to the essay, Dalal started the transition of the expanded outline to a connected essay by adding an essay title, "Challenges Faced by ESL Students in Saudi Arabia" and an introductory paragraph with a thesis statement. At the next drafting stage, Huda added a conclusion. Finally, drafting was completed by Reem who added content to the third challenge or the lack of well-trained teachers, now the essay's third paragraph, and, in two later posts, added text to the first and second paragraphs. After Huda's substantial contribution to the essay, Reem and Dalal chose to engage in parallel collaborative writing which was not partitioned initially (Lowry et al., 2004). In that,

they demonstrated good communication skills and convergent stylistic choices in contrast to some divergent writers who ignore the style of previous contributions (Ellis et al., 1991).

The review Group One’s different essay versions recorded in the wiki “History” module makes it clear that most of the essay was drafted in Huda’s first post, which was then complemented with shorter content additions contributed by Reem and Dalal. While contributing content, Reem’s and Dalal’s additions to the essay might also be viewed as whole-text level revisions in that they both inserted passages that fit the content and the syntactic structure of the existing text and used appropriate cohesive devices, such as “also,” “one of these ways,” “therefore,” “thus,” and “as a matter of fact.” The most important revision of the essay, also on the level of the whole text, consisted in rewriting the five main points from the outline into key paragraph sentences. Dalal did this by, for example, deleting the utterance “the five challenges. 1” (here in the wiki, highlighted as a deletion in red), and by adding “first challenge is that the students have” (here in the wiki, highlighted as an addition in green) to compose a complete sentence in its place, “The first challenge is that students have limited access to native English speakers for practicing purposes.” (see Figure 18). She did the same with the other four paragraphs at the stage when all were completed content-wise. By doing this, she applied a reactive collaborative writing strategy where one author reacts or makes adjustments to the existing text (Lowry et al., 2004).

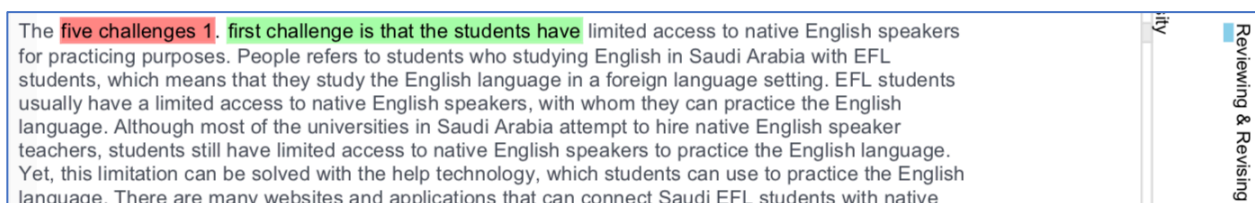


Figure 18. Group 1: Rhetorical analysis, writing activities, revising.

The participants in Group One followed a well-established practice in the chronology of essay composing. Thus, they started with drafting. When almost done with drafting, they revised

their draft, and, finally, they reviewed the manuscript for needed editing changes. As might be expected from advanced speakers of English, those editing changes were minimal. Huda started editing the group’s essay by capitalizing “these” at the beginning of a sentence, replacing “the” with a more precise determiner “Each” at the beginning of another sentence, replacing “both” with “two” in the phrase “these two languages,” and using precise vocabulary (e.g., “the English language” instead of “the language”). Besides word-level punctuation and imprecisions, such as “well-trained” instead of “well trained,” Huda and Reem also edited some sentence-level errors, such as a subject-object agreement error (Reem) (see Figure 19).

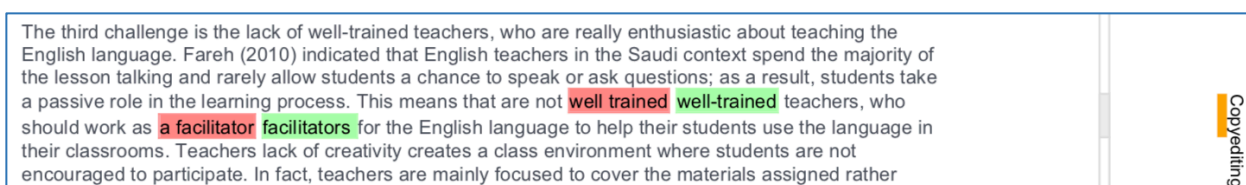


Figure 19. Group 1: Rhetorical analysis, writing activities, editing.

As editors, Huda and Reem applied parallel collaborative writing strategies, more precisely, they practiced stratified-division writing in which one or more group members play a particular role, such as a reviewer or editor, based on their core talent, or, as it is here, based on what’s left to do to finish their essay and complete the task (Lowry et al., 2004).

Overall, Group One completed their essay in twenty-nine recorded writing changes (see Table 11). The most important of these writing activities, drafting, was accomplished by Huda’s initial draft, and later, in subsequent expansions to the existing draft, by Dalal (7 altogether), Reem (6 altogether), and Huda (1 small addition towards the end). Even though Huda took over the drafting of the whole essay, the drafting contributions by Dalal and Reem integrated important content into the existing five paragraphs by offering examples, justifications, and clarifications to the issue under discussion. Revising was completed in five steps, all done by Dalal. And, finally, editing took nine separate changes (e.g., 7 by Huda and 2 by Reem). It

focused on few but important word-, sentence- and text-level errors. Thus, Group One used different writing activities to develop their essay at each drafting stage with a well-balanced approach focusing on the activity that was needed most at each stage. In that, they confirmed their high level of group cohesion and text awareness by prioritizing group discourse over personal stances.

Table 11

Group 1: Rhetorical Analysis, Writing Activities, Results

Collaborative Writing Activities	Changes/ Total #	Huda Changes #	Dalal Changes #	Reem Changes #
Drafting	15	2	7	6
Revising	5	0	5	0
Editing	9	7	0	2

Group One used appropriate writing strategies depending on the nature of the writing activity they engaged in (see Table 12). To give the group a head start, Huda drafted the whole essay by applying the group single-author strategy, but, later, she used a reactive collaborative writing strategy to add a conclusion to the co-constructed essay. Dalal and Reem also applied a reactive collaborative writing strategy to further expand the five paragraphs initially drafted by Huda. Parallel writing was Dalal's (2 changes) and Reem's (5 changes) preferred strategy in editing the essay. In their choices of preferred and dis-preferred collaborative writing strategies, Group One demonstrated a strong group orientation in following Huda's group single-author initial drafting strategy by expanding on that with a total of fourteen reactive writing contributions (e.g., Dalal - 7, and Reem – 6) and seven parallel writing changes (e.g., Dalal – 5 and Reem – 2). Most importantly, following Huda's group single-author strategy at the beginning, they did not engage in sequential single-author collaborative writing, which could

create group tension due to lack of consensus among the group members, and, ultimately undermine the collaborative writing process altogether (Duin, 1991).

Table 12

Group 1: Rhetorical Analysis, Writing Strategies, Results

Collaborative Writing Strategies	Changes/ Total #	Huda Changes #	Dalal Changes #	Reem Changes #
Group single-author writing	1	1	0	0
Sequential single-author writing	0	0	0	0
Parallel writing	7	0	5	2
Reactive writing	14	1	7	6

Group two. Group Two took fifteen days to write their essay. They started with Asma’s three-paragraph draft ending with a list of references on day one and completed their essay on the last day with the last drafting change, that is an addition to the end of paragraph two by Layla. In the essay’s initial draft, Asma wrote about all four topics the group had decided to focus on in their discussion in the wiki “Discussion” module. However, she combined two of the topics, that is ESL methods and curriculum, in one paragraph. She also numbered the three paragraphs she drafted as 2, 3, and 4, an indication that these were still more like an expanded outline than connected paragraphs (see Figure 20). Following that, Layla continued drafting by adding an example to the paragraph still marked as 2 (e.g., outline point 2). In the example she added, she emphasized the importance of providing a positive and pleasant learning environment. In a later post, Layla also added an introduction with a suggested place holder for a thesis, “...we have identified several issues... which include...” Maha’s only contribution to the drafting activity consists in adding the subtitle “Conclusion:” at the end of the essay above the

references. As a major drafting change, Asma separated paragraph two into two separate paragraphs focusing on ESL curriculum (now paragraph 2) and on ESL methods (now paragraph 3) and by adding a conclusion and one more reference entry. Finally, drafting was completed by Layla’s adding an elaboration to paragraph one focusing on ESL curriculum and emphasizing teachers’ roles in providing students with real-world practice through online activities.

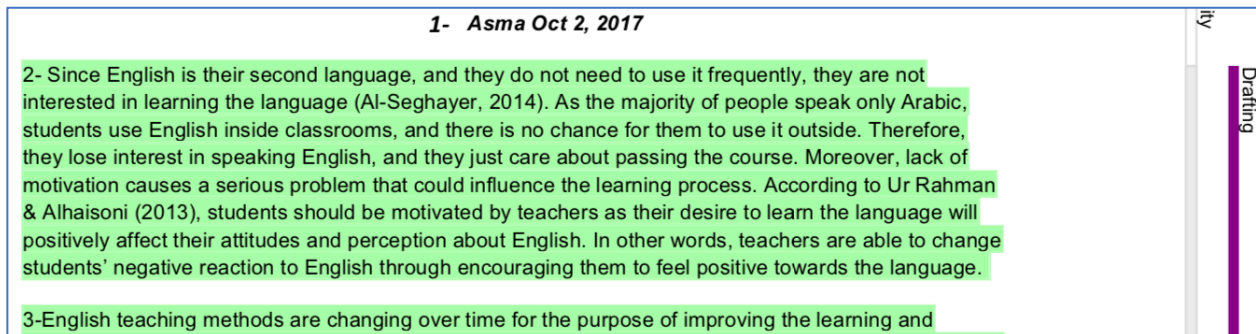


Figure 20. Group 2: Rhetorical analysis, writing activities, drafting.

Group Two started revising their essay after most of it was drafted. Maha began by rewriting the beginning of paragraph one marked as 2 (see Figure 21). She seems to have replaced the original language with one that is synonymous (e.g., “therefore” instead of “as a result”; “second” with “foreign” as in “foreign language”). The several sentence-level changes she made do not seem to focus on the original’s content or structure. The revised version is similar to the original at best. Indeed, in her single attempt at revising by deleting the in-text citation but leaving the content based on it, Maha’s revisions may have added a problem to the original draft. Revising continued with the seven changes Asma made in a single draft. She used precise language (e.g., “Challenges of Learning English in Saudi Arabia” instead of “learning English in Saudi Arabia”). She also articulated explicitly the essay’s thesis statement. She deleted irrelevant comments in the middle of paragraph one, added a transition to paragraph two (e.g., “Also, English ...”) and to paragraph four (e.g., “Furthermore, it...”). Layla’s only revision was deleting “beliefs” and replacing it with “motivation” in sync with the essay’s thesis

statement. Overall, Asma made seven revising changes in one draft, and Layla and Maha each made one revising change altogether (see Table 13). Just as in the previous drafting stage, Asma did most of the work. After revising was completed, the essay still needed further revisions.

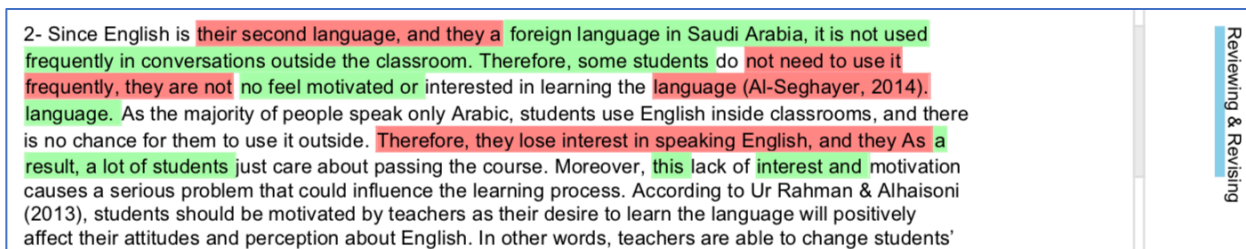


Figure 21. Group 2: Rhetorical analysis, writing activities, revising.

Along with the revisions she made in two consecutive drafts, Asma made three edits. The first one, first deleting, and then adding “For” in “For instance” could have been the result of an accidental deletion as nothing was changed as a result. In her second edit, she actually added an error by deleting the space between “program” and “for” in “program for.” Her last edit was the capitalization of “learning” in the essay’s title “Challenges of Learning English in Saudi Arabia.” Asma’s three edits constitute all the editing changes in Group Two’s essay. The other two group members did not contribute any edits. Their essay, however, would have benefited from further editing but maybe because it was not part of a graded course activity and only a voluntary activity, the members of Group Two did not feel obliged to commit to this task wholeheartedly.

Overall, Group Two completed their collaborative writing essay with one member, Asma, doing most of the drafting (e.g., 5 out 9 drafting changes), and with the other two members, Layla and Maha, offering only minimal contributions: Layla made 3 drafting changes but no edits, and Maha contributed only a small one-word drafting change and one revision. The collaborative activities in Group Two were built around one member’s substantial contribution to the essay’s first draft and fairly insignificant further developments in all three areas, that is in drafting, revising, and editing (see Table 13).

Table 13

Group 2: Rhetorical Analysis, Writing Activities, Results

Collaborative Writing Activities	Changes/ Total #	Layla Changes #	Asma Changes #	Maha Changes #
Drafting	9	3	5	1
Revising	9	1	7	1
Editing	3	0	3	0

Group Two used writing strategies that reflect the roles they assigned to individual members in their discussion of their essay’s content and organization in the wiki “Discussion” module. By drafting the whole essay, Asma applied the group single-author collaborative writing strategy. As the draft she provided reflected the topics Group Two members had decided to include in their essay, the other two members, Layla and Maha, did not continue adding to Asma’s draft by adopting a sequential single-author collaborative writing strategy. Layla and Asma also used a parallel collaborative writing strategy by expanding paragraph one and by adding an introduction (Layla), and by adding a separate paragraph two and a conclusion (Asma) during the drafting stage. All participants engaged in reactive collaborative writing during the revision and editing of their essay: Asma made ten changes, and Layla and Maha each contributed one change.

Table 14

Group 2: Rhetorical Analysis, Writing Strategies, Results

Collaborative Writing Strategies	Changes/ Total	Layla Changes #	Asma Changes #	Maha Changes #
Group single-author writing	1	0	1	0
Sequential single-author writing	0	0	0	0
Parallel writing	4	2	2	0
Reactive writing	12	1	10	1

Group three. Group Three took forty days to complete their collaborative essay. It began with Lana drafting an introductory paragraph (see Figure 22) and with Sara drafting the essay’s first two paragraphs on the first day and ended with editing changes by Razan on the last day. In her introductory paragraph, Lana claimed that learning English involves much more than learning its grammar. At this point, her addition to the essay reflected her personal thoughts rather than the topics from the group’s discussion in the wiki “Discussion” module. Drafting continued with Sara’s addition of the essay’s first paragraph on students’ anxiety learning English as a second language and a brief second paragraph on the difficulties of learning English grammar. In her next post, she expanded paragraph two by adding a clarification about the possibility of teachers making grammar more attractive and accessible by linking it to culture. In her next post, Sara added the essay’s title “English Language Learning Challenges.”

Next, Razan made small drafting changes at the end of the paragraph on anxiety by adding a comment about the need for teachers to consider individual learner differences in this context as well. Following quite a few revisions and edits, Razan added a fourth paragraph on the fear of making mistakes. Sara also drafted paragraph five on vocabulary and spelling and a

conclusion. Finally, Sara completed the drafting of Group Three’s essay by expanding its introduction and by adding a sentence at the end of paragraph two in which she suggested that teachers could introduce students to websites and apps where students could record themselves. Razan expanded the conclusion.

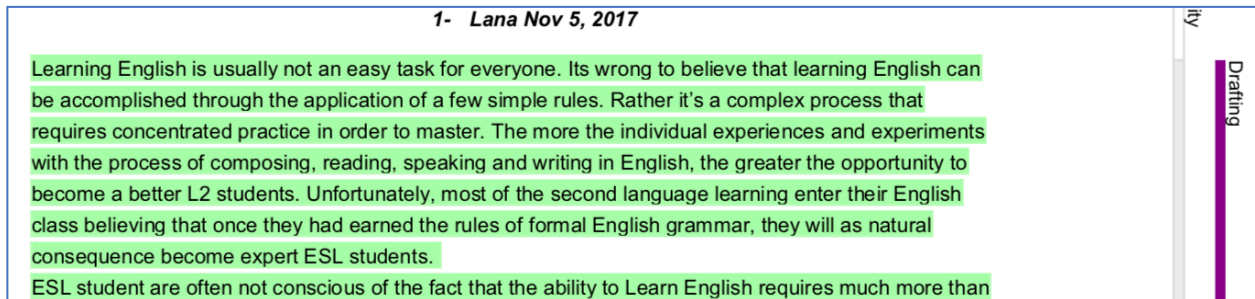


Figure 22. Group 3: Rhetorical analysis, writing activities, drafting.

Group Three members started revising their essay well before drafting was complete (see Table 14). Indeed, the essay only had two paragraphs when Sara made the first revisions by correcting a subject-object agreement error (e.g., “become a better L2 students”) which she changed to “become a better L2 learner.” She also used precise vocabulary by replacing “learners” with “learning” and “expert” with “professional” (see Figure 23). Next, Sara made several revisions on a whole-text level: She added subtitles for each paragraph (e.g., Cultural differences, Anxiety, Learning grammar). In a single post, Lana made revisions to the existing two paragraphs. She further specified the title from “English Language Learning Challenges” to “The Challenges of Learning English as a Second Language,” as well as added an explanation why learning the second language culture is important. She did this by making changes (e.g., deletions and additions) on both the word- and the sentence level which she integrated into the existing text.

Towards the end of the essay’s drafting, Razan revised the paragraph on anxiety. She replaced a sentence fragment “First, language learning difficulties.” with a complete sentence “Language learning difficulties can cause anxieties for learners.” She also revised a run-on

sentence by merging two simple sentences into one complex one. Sara made the last revision by revisiting the opening paragraph which she adjusted to reflect the main ideas of the essay in the thesis statement that she added. Thus revised, the essay’s introduction was transformed from a rather vague statement about ESL learning challenges to a focused one with a clearly defined thesis statement.

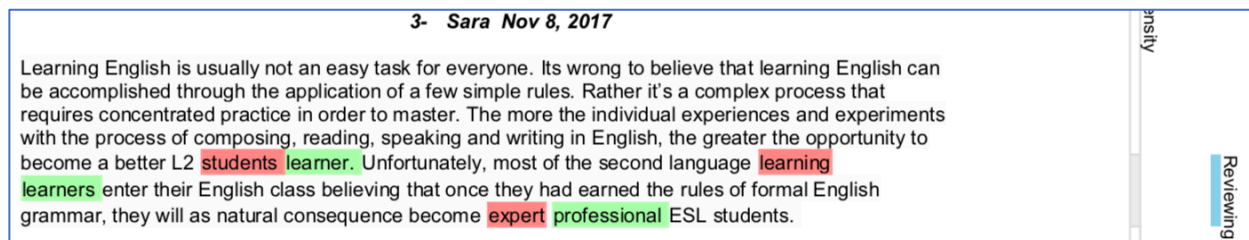


Figure 23. Group 3: Rhetorical analysis, writing activities, revising.

Similar to their revising practices, Group Three engaged in frequent editing activities from early on in the development of their essay (see Table 14). Along with revising, Sara began editing the essay in the same post where she replaced “student” with “students,” and “sometime” with “sometimes.” Later, Razan replaced “Rather” with “Rather,” by adding a comma after “rather” at the beginning of the sentence, by deleting “Learn” and adding “learn” in the middle of the sentence, and by correcting the spelling of “useable” which she changed to “usable.” Razan made three more changes by editing “SL” out and adding “ESL” in its place, by deleting the space between “grammar,” and the comma after it, and by correcting a possessive case error in “the students’ knowledge” by adding the apostrophe after students. Sara further edited the essay by editing its subtitles as parallel structures and by removing unnecessary punctuations. Finally, Razan corrected spelling errors in “spell,” “overcome,” and “these,” fixed two possessive case errors in “students’ needs” and in “students’ knowledge,” and used the appropriate preposition in “put the whole responsibility to the teachers” instead of “of the teachers.” She also corrected the possessive pronoun “its” to “it is” and used precise vocabulary

in “the following essay” where she replaced “section” with “essay” and “ways” with “methods” (see Figure 24).

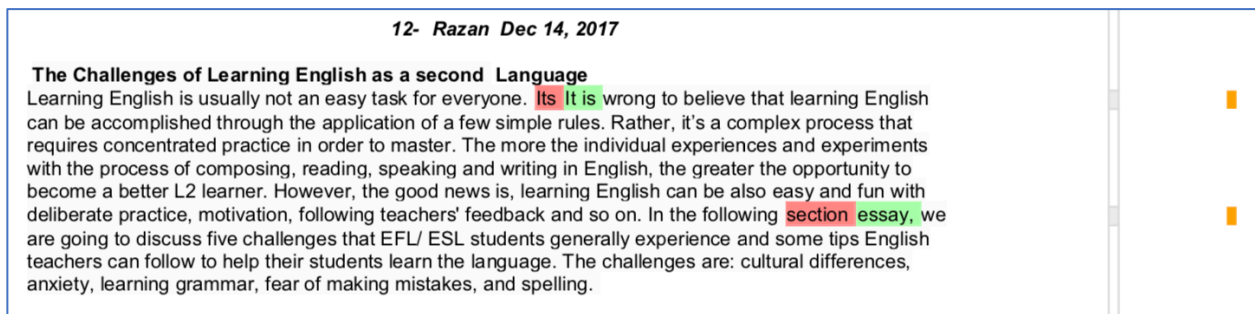


Figure 24. Group 3: Rhetorical analysis, writing activities, editing.

Overall, Group Three started writing their essay with the four topics they identified during their discussion in the wiki Discussion module but without any specific outline. However, during the drafting, revising, and editing of their essay, they engaged in frequent recursive rather than sequential collaborative writing activities (see Table 15). Thus, drafting was completed in seven changes made by Sara (7), Razan (3), and Lana (1). Revising was the work of Razan (6 changes), Sara (6 changes), and Lana (2 changes). Editing was particularly intensive: Razan made a considerable number of edits (15) and Sara added to these six more edits. Lana did not participate in the editing of the essay.

Table 15

Group 3: Rhetorical Analysis, Writing Activities, Results

Collaborative Writing Activities	Changes/ Total	Razan Changes #	Sara Changes #	Lana Changes #
Drafting	11	3	7	1
Revising	14	6	6	2
Editing	21	15	6	0

Group Three is the only group which did not start with one of its members drafting most of the essay even though during their collaborative discussion in the wiki “Discussion” module they had suggested this to be their preferred plan of action. In Group Three, no one was assigned or assumed the dominant collaborative writing strategy adopted in the other two groups, that is of group single-author writing where one person writes for the whole team (see Table 16). Instead, the drafting of their essay was completed partially as sequential single-author collaborative writing where Lana wrote the first paragraph followed by Sara adding a third paragraph, and later on, a fifth paragraph and a conclusion. However, even though Lana and Sara added several single paragraphs, it was not done sequentially. Therefore, it might be more appropriate to interpret their writing strategy as parallel.

Most of the remaining writing strategies used by Group Three, especially during the essay’s editing, are parallel collaborative writing, more specifically, stratified-division writing where one person plays a particular role whether assigned or assumed. The most prominent example of applying stratified-division writing strategies, however, is Razan’s fifteen, and Sara’s six edits. In Group Three’s essay, all three members revised actively by resorting to reactive collaborative writing strategies: Sara (6 changes), Razan (6 changes), and Lana (2 changes). Thus, Group Three members used varied collaborative writing strategies throughout the completion of their essay. They applied sequential single-author writing strategies three times, parallel writing strategies - an impressive twenty-one times, and reactive writing strategies – a just as impressive fourteen times. Overall, their essay is a co-construction of their multiple single contributions, that is of their thirty-five changes resulting from parallel and reactive writing strategies, and only three changes that might be qualified as sequential single-author collaborative writing.

Table 16

Group 3: Rhetorical Analysis, Writing Strategies, Results

Collaborative Writing Strategies	Changes/ Total	Razan Changes #	Sara Changes #	Lana Changes #
Group single-author writing	0	0	0	0
Sequential single-author writing	3	0	2	1
Parallel writing	21	15	6	0
Reactive writing	14	6	6	2

The data analysis shows that all three groups completed their collaborative writing task in different ways. In their discussion in the wiki “Discussion” module, Group One participants suggested that they might apply parallel writing strategies (e.g., divide the work among themselves) combined with reactive writing (e.g., have members adjust to each other’s changes). During their real-time collaboration recorded in the wiki “History” module, they focused more on drafting (15 changes) and less on revising (5 changes) and editing (9 changes). As far as the writing strategies they employed, they mostly followed their initial plan suggesting parallel writing (7 times) and reactive writing strategies (14 times). However, additionally, at the beginning of their first draft, maybe as a head start, they employed group a single-author writing strategy which determined the nature of all subsequent writing contributions.

Group Two members indicated in their discussion in the wiki “Discussion” module they might adopt a sequential single-author writing strategy (e.g., having each writer complete their portion of the essay, then, pass it on to the next writer). During the co-construction of their essay in the wiki “History” module, they completed their task with nine changes to their draft, nine revisions, and three small edits. Strategy-wise, they opted for group single-author writing rather than for sequential single-author writing, followed by parallel writing (4 times) and, mostly, by

reactive writing (12 times). As with Group One, here, too, it is evident that a substantial initial contribution by one group member completing a great part of the essay left all others with the possibility to practice reactive writing that works around the initial draft.

During their preliminary discussion in the wiki “Discussion” module, Group Three members implied that they might employ the sequential single-author writing strategy, or the group single-author writing strategy (e.g., have one person write for the entire team, or, alternatively, accept a self-selected single writer for the team). Maybe because they did not have a clear outline from their preliminary discussion, they completed their essay in eleven drafting changes, fourteen revisions, and twenty-one edits. Thus, they needed much more revisions and edits to shape their collaborative essay. Furthermore, the absence of a clearly defined plan of action made it impossible to follow their initial strategic plan of group single-author writing. Except for one instance of sequential single-author writing, they completed their essay applying parallel writing (21 times) and reactive writing strategies (14 times). The large number of parallel and reactive writing contributions suggests that Group Three members were organizing their essay while composing it.

Since all participants were new to wiki-based collaborative writing, and to wikis in general, and, since their participation was a short-term involvement that is entirely voluntary and non-committal, it is important to see how they perceived their participation in a wiki-supported collaborative task. Such perspective could inform the design of collaborative writing activities in specific educational contexts and help with all three aspects of wiki-based collaborative writing projects, that is participants’ selection, task design, and wiki implementation.

Collaborative Writing: Participants’ Perceptions

To examine this study’s participants’ perceptions of their wiki-supported collaborative writing experience, I conducted oral interviews with seven of the participants (three from Group

One, three from Group Two and one from Group Three) after the completion of the collaborative writing task. Seven of them (three from Group One, two from Group Two, and two from Group Three) also agreed to write reflective letters which were written after the interviews. Each interview had about twenty questions depending on the participant's responses (see Appendix 5). Most of the questions were prepared beforehand to focus on major aspects of the participants' collaborative writing experience during this study. Additionally, I also asked follow-up probing questions to enable participants to share specifics that allow for richer in-depth analysis. The seven reflective letters contributed further to capturing the participants' spontaneous feelings and intimate thoughts.

In their interviews, and, especially in their reflections, the participants covered various aspects of their powerful first-time wiki-based collaborative writing experience. Here, for the purposes of this study, I focus on their most salient perceptions of their collaborative discussion during the negotiation of their essay's content and organization in the wiki "Discussion" module, and of their collaborative writing experience in the wiki "History" module. To understand their perceptions of their collaborative writing experiences, below, I summarize their actual experiences as reflected in the number of discussion notes they contributed to the wiki "Discussion" forum, and, in the number of writing changes they made during the actual co-construction of their essay in the wiki "History" module. The latter helps to make sense of their perceptions in the context of their actual experiences (see Table 17).

Table 17

Collaborative Writing: Participants' Experiences in the Wiki Discussion and History Modules

Collaborative Writing: Participants' Experiences							
Participants		Discussion Notes (#)		Writing Changes (#)		Overall (#)	
Group One	Huda	14		9		23	
	Dalal	13	32	12	29	25	61
	Reem	5		8		13	
Group Two	Layla	13		4		17	
	Asma	9	28	15	21	24	49
	Maha	6		2		8	
Group Three	Razan	10		24		34	
	Sara	13	28	19	46	32	74
	Lana	5		3		8	

As mentioned before, this study's participants had no prior experience writing collaboratively using wikis or other online collaborative tools. However, they all mentioned participating in various face-to-face group activities, including writing. Naturally, in their interviews and reflections, they compared those frequently. Below, I examine each group's perceptions of their wiki-supported asynchronous collaborative writing activities. More specifically, for each group, I analyze their perceptions on, one, their collaborative writing as compared to individual writing, two, on the wiki as they see it now and in the future, three, on the study's task and its role in meeting the study's goals, and, four, on the actual co-construction of their essays (e.g., brainstorming, outlining, drafting, revising, and editing). Finally, I examine the participants' perceptions of their writing strategies as suggested during their discussion, and as implemented in the actual co-construction of their essays.

Group One

They submitted thirty-two discussion notes and twenty-nine writing changes in negotiating their essay's content and organization and in writing it, respectively: Huda (14 discussion notes and 23 writing changes), Dalal (13 discussion notes and 29 writing changes), and Reem (5 discussion notes and 8 writing changes) (see Table 17). They also submitted their interviews (3) and reflections (3). In their perceptions of writing this essay together versus alone, they emphasized that composing alone might be faster, "I was waiting for them to reply to me, to decide what we are going to do..." (Huda), but in many ways superior because of sharing ideas, gaining new perspectives, adjusting one's ideas to fit the common thread, accepting others' opinions of one's own work, creating a stronger paper (Huda & Dalal). Dalal summed it up by saying, "Generally, I like to work alone but I think the other girls brought new perspectives to the topic and to our work. So, I would say this time it was better working collaboratively" (Dalal). Reem, who contributed only five discussion notes, that is much fewer than her team mates, had a lot to say about it in her interview. She stated that working alone would just be different, "Just some of the ideas ... were stuff that I hadn't really thought about before ... and I'm not really interested in." Apparently, she didn't like one of the suggested essay topics about L1 transfer which she found irrelevant and rather broad. She felt that during the essay topic negotiation, she wasn't able to express her different opinion on that subject (Reem). Others, too, felt some constraints restricted their participation. Dalal was cautious not to offend others in her comments. Huda, however, felt fine about being able to express herself.

Being a new and a significant part of their collaborative writing experiences, the wiki itself seemed, first, challenging, but, overall, memorable. In their reflections, they found the wiki exciting, affording richer and more diverse experiences, liberating, complementary rather than additive. Huda said, "I have done such work before...when we divided the work among

ourselves. However, this was a much richer experience.” Dalal echoed Huda’s thoughts, “I needed some time to adjust to [the wiki’s] features. However, this challenge was good for me as it made me leave my comfort zone and face new things.” To this, Reem, who wasn’t very active during the discussion or the writing of the paper itself, added, “I knew it, but now I experienced how meaning is socially constructed.” Huda thought that the wiki is a “cutting-edge tool where students can communicate with each other. Using wiki as a site for collaborative writing is a memorable experience in itself” (Huda). In the future, they would use wikis, but also add preliminary face-to-face discussions to allow different group members to voice agreements as well as disagreements (Reem), to enable their students to talk freely and express themselves more openly (Dalal), and to get to know group members in advance (Huda).

As mentioned earlier, designing the collaborative writing task had to meet a number of requirements to manage various factors that might affect collaboration negatively (see Table 2). In that respect, the researcher’s efforts to design a task that is well-suited for collaborative completion paid off, once, in the successful completion of the task itself, and, a second time, in winning the participants’ approval. In their perceptions of the collaborative writing task, Group One members had high praises. “Being a part of this task was very enlightening for me in two ways. The first was this task’s setting... [which] allowed me to write freely according to my own schedule” (Dalal). “The directions in the handout and task prompt helped a lot” (Huda). Moreover, the participants were even aware of the problems that might have occurred if the task had not been so clearly stated (Dalal, Reem). Regarding designing similar tasks for their classrooms, they said they would replicate this task with slight adjustments to their environments. For example, they would add face-time discussions, divide participants in groups according to interests and proficiency (Reem), and, as in this study’s task, select a topic that is personally and professionally important for their students (Huda). Also, they would have the

teacher participate in the discussion and invite students to choose their own topic for collaborative writing (Dalal). Mostly, they would increase discussion time, whether face-to-face or online, “In the future, I think that I would be involved in more detailed verbal conversations about the writing that we are going to create” (Reem).

Unanimously appreciative of this study’s wiki-supported task and of the opportunity to write in collaboration with others, the participants deemed their collaborative discussion crucial in preparing them for the actual writing of their essay. Assessing their brainstorming and outlining through negotiating various aspects of the main topic, “ESL challenges in Saudi Arabia,” they considered the outline “a road map” for their ideas (Reem). It was “so helpful because it helped us brainstorm ideas” (Reem), and “the good thing about starting with an outline is that each one of us had the main idea to clarify with supportive details” (Huda). Discussing their essay’s content together, they appreciated the different perspectives brought in by their team members: “you see it from different angles,” “there’s kind of diversity in the ways at looking at a topic” (Dalal). They also found reaching consensus a positive experience. They didn’t have difficulties agreeing with others’ suggestions and were satisfied with that part of the discussion (Huda). However, in the future, they would add a face-to-face discussion prior to the one conducted on the wiki, “Writing in the wiki was not as spontaneous because I knew someone will read it and I thought more carefully about everything I wrote. Thus, for my future students, I will encourage them to meet in person to discuss the task and not depend only on the wiki to share their ideas” (Dalal).

Overall, in their interviews and reflections, Group One members confirmed the findings from the discourse analysis of their discussions in the wiki “Discussion” module focusing on their negotiation strategies applied during the brainstorming and outlining session. Then, and, now, they supported developing a clearly defined content and organization and a final outline

that they would follow closely when writing their essay. During their discussion in the wiki “Discussion” module, they suggested they would start their collaborative essay writing with a group single-author writing strategy initiated by Huda and followed by the team’s parallel and reactive writing strategies applied in the completion of their essay. In their interviews and reflections, they seemed satisfied with their decision and even willing to apply it to using wikis for collaborative writing in the future.

Group Two

Group Two participants submitted twenty-eight discussion notes and twenty-one writing changes in negotiating of their essay’s topic and organization and writing it: Layla (13 discussion notes and 4 writing changes), Asma (9 discussion notes and 15 writing changes), and Maha (6 discussion notes and 2 writing changes). They also submitted three interviews by Layla, Asma, and Maha, and two reflection letters, by Layla and Asma. They, too, thought about the differences between writing alone and writing together but their perceptions differed. Maha perceived the current collaborative writing task as benefitting from its joint completion, “I think, with the group it’s better because, you know, more ideas, more discussions, some girls said something I didn’t think about, like issues that I hadn’t really thought they were issues” (Maha).

Her two team mates, however, had a different perception of their collaborative discussions. Asma, described herself as a perfectionist preferring to work at her own pace, and, thus, work individually. Due to mostly negative previous experiences, she stated, “I don’t prefer to work in groups, and this is because most of the groups I worked with weren’t very cooperative.” However, she acknowledged the fact that her greatest problem is her personality and not collaborative work itself, “I like to do things my own way, which is not very good, because I should listen to others’ ideas and accept them also. But this is how I am.” Similar to Asma, Layla was not “a fan of group work.” She seemed overwhelmed by the group members’

multiple perspectives, “Everyone has their own perspectives. We cannot do it all. We cannot put all of these in just one piece of work. I mean, we can divide it but working together on one part doesn’t make sense. Like, the end product, I feel it’s not my product.” Thus, Group Two had one positive and two negative perceptions of their current collaborative discussions due to personality issues and past experiences.

For their collaborative discussion, Group Two members used only the wiki as a communication tool. They did not know each other beforehand. They had no experience working with wikis. Asma stated that “It was a bit difficult at first but as I wasn’t forced to do it, I took it easy...so, in general, it was a very nice experience.” Their perception of the wiki as a collaborative discussion tool included their perceptions of their contributions and of their team members’ contributions to the discussion. As mentioned above, the negotiation-focused discourse analysis of their discussion in the wiki “Discussion” module, revealed low group cohesion and a discussion that did not reach a consensus about the content and organization of their essay.

Their perceptions of the wiki seem largely affected by their experience in their wiki discussion. Maha, who contributed the smallest number of notes (6) and writing changes (2), felt that she had more to say but left it out because she didn’t think it was important, “I had more to say, but maybe because the time or the space...I had more challenges but I thought, “Okay, maybe they are not really as important.” She also admitted that she didn’t have much time to write as often as she wanted to. Her team mates, Layla and Asma, however, had a different perception of Maha’s irregular posts. “I remember one of them [implying Maha] ...was busy or something, she wasn’t very active. And I was a little bit... not upset, but I was wondering why she is not with us. Like, is she even interested in working with us? Is she even reading what we’re writing or not?” (Asma). Layla, too, found “lack of seriousness or devotedness among

participants.” Thus, Group Two’s interviews revealed how one member’s irregular participation in the wiki collaborative writing task seemed to have affected the other participants in the discussion, its outcome, and their overall perception of the wiki itself.

Maha’s irregular posts, largely, even though unfairly perceived as due to her lack of interest in the task, brought back a host of previous personal experiences with this and other tasks that failed to reach the students. Asma complained, “As an English teacher, I have suffered a lot from being unable to convince my students to change their negative attitudes toward English.” Now, she associated this with her annoyance at the task in which “not all group members were active.” Apart from that, she “really enjoyed being part of this task” and found that “it was good to have the wiki instructions before starting the task.” For the same reason, that is that voluntary tasks allow individuals to practically opt out of them, Layla believes that “the task would have been really successful if performed under actual class conditions, that is the task is graded, the students are supervised by the teacher and given a face-to-face meeting at the beginning of the task.” Consequently, Layla questioned the task itself as having problematic loopholes.

Even though Asma enjoyed participating in this task, for Group Two participants, one important condition for readiness for participation in collaborative tasks (see Table 2) was not met: not everyone in the collaboration had adequate and available time. In their opinion, that proved a significant disruption to the successful completion of their collaborative writing task. However, overall, overcoming previous biases and current concerns, Asma concluded that “...it was interesting to do this task, like to do something new and different. I always thought that working in a group is difficult and impossible, but after this task, I felt, maybe I can do this. ...I should let other people to express their ideas and I should accept it.” So, for Group Two, the task presented some challenges but, also, some transformative experiences.

Group Two members' perceptions of their collaborative writing experience were somewhat marred by some of their biases against group work and by one of their group member's minimal and seemingly casual participation. Beyond that, they seemed to enjoy and appreciate the discussion as it was. Thus, they shared some positive experiences, "I always have a problem working in a group because I am a very serious person... Most of the people I worked with were lazy and dependent, therefore, I do not usually enjoy working in a group. However, this experience was totally different. I found it easy and not very stressful. Maybe because I did it without worrying about grades or anything" (Asma). Layla, too, had an overall positive response, "Honestly, I enjoyed this voluntary experience." Regarding their collaborative discussion of their essay's main ideas and organization, they had many praises. Maha appreciated Layla and Asma's ideas, "Their [Layla's and Asma's] suggestions were very helpful. I didn't have a lot of ideas about the challenges, but when I read some of the challenges they wrote, I said, 'Oh yeah, that makes sense.'" Asma appreciated Layla's suggestion to have a list of challenges, "It was very helpful because this was the beginning and it helped us to arrange our ideas... her comments helped us to make, like, a very good essay... It was interesting working with her...she could come up with one idea that summarizes it all."

In their interviews and reflections, Group Two members confirmed the findings from the discourse analysis of the negotiating strategies they applied in brainstorming and organizing the content of their essay in the wiki "Discussion" module. They were aware of their overall uneven group dynamics, of the limited attention they devoted to the organization of their essay, and of ending their discussion without a consensus on how to co-construct their essay, "I think at the end [the consensus issue] wasn't resolved. I think Asma said, "Okay, I think we are done. Do you think we're done? So, I said, Yeah, we're done. And, then, Layla didn't comment...It was like not really having a solid agreement" (Asma). As the sole proposer of the essay's main points

or ESL challenges, Layla had a slightly different perspective on the group's reaching consensus, "I think it was easy to agree on things,... because maybe, like, I don't know, like each person adds an idea..." Obviously, she agreed with the ideas she herself proposed but had reservations about her team members, "They just agreed with the points I had. But, then, I didn't feel that they were taking it seriously...The main issue for me is the response...when you don't find other group members responsive, like agreeing on a meeting, or on a method of how to approach this, it's gonna be like kind of chaos" (Layla). Thus, their interviews and reflections explained why Group Two members achieved lower group cohesion and failed to reach a final agreement about the content and organization of their collaborative essay.

Group Three

Group Three members contributed twenty-eight notes and forty-six writing changes to their collaborative essay in the wiki "Discussion" and "History" modules, respectively: Razan (10 discussion notes and 24 writing changes), Sara (13 discussion notes and 19 writing changes), and Lana (5 discussion notes and 3 writing changes). For this study's participants' perceptions analysis, they contributed one interview (Sara) and two reflection letters (Sara, Razan). Lana, who contributed the smallest number of discussion notes and writing changes, did not participate in the interview and reflection feedback sessions. Even though Sara had not worked on a collaborative writing project before, or, at least, not like this one, she found the level of collaboration here, quite different. Previously, she had collaborated in a group where every member wrote her own section or paragraph. Now, she was convinced that writing this essay by herself would have been worse than what she experienced in Group Three. She found the whole process different, "The whole process would be different from something I would do individually: starting from the discussion, brainstorming together, adding or removing ideas that seemed irrelevant... It's nothing like if I would do it individually." In her reflection, she added,

“the collaboration in this project made me think about collaboration in a different way.”

However, she also had some reservation about collaboration in this project, “The project gets delayed if the work of one writer gets delayed...Collaborative writing can be really helpful, but it requires trust and commitment.” Razan pointed out another benefit of this project’s collaborative process. She believes that “students should get a chance to practice collaboration in educational settings, as they are going to need to apply it in their everyday life.” In her interview, Sara concluded, “To write collaboratively with two other writers was a new experience to me. And I like that experience. I would do it again.”

It seems that the participants from Group Three who volunteered to participate in the study’s post-writing activities (e.g., interviews and reflections) had a positive experience using the wiki “Discussion” and “History” modules. In her reflection, Razan stated, “From this experience, I believe that wikis are convenient tools for collaboration. The traditional way is time-consuming. A wiki saves time and is efficient. We do not have to make schedules or meet in person. Whenever we have ideas, we post them on the wiki.” Razan agreed, “The wiki gave us, as group members, opportunities to discuss at any time we want.” Furthermore, she pointed out the wiki’s potential for equitable participation by all members, “Each of us got an equal chance to participate...We did not have to wait for the teacher’s permission to participate.” Sara believed that wikis are “more for advanced writers than just novice writers. But it’s absolutely practical for experienced writers.” Razan seemed to agree that certain conditions must be met for the wiki collaboration to be successful, “I think that the wiki is helpful when small groups need to collaborate.” Like everyone else, Group Three members felt that wiki-supported collaboration would benefit from face-to-face meetings by the participants. Razan also compared using wikis to using Google Docs which could be synchronous, thus allowing participants to write simultaneously. Overall, the two participants from Group Three would use wikis as collaborative

writing tools in their teaching but under certain conditions, “We can do it in one class, as an in-class activity at the end of a lesson. I am not sure about applying it to my whole class” (Sara).

The success of wiki-afforded collaboration largely depends on the task and its specific provisions. One could assume that liking the wiki could suggest liking the task. Sara stated, “This collaborative writing task was a new experience to me...One thing that is memorable to me is feeling responsible about the task as a whole, not just about my part... It also made me think about the difference between this collaborative task and other tasks that I used to participate in.” She, then, compared cooperation, where she was responsible for one small part of the task, to collaboration which she prefers “because it provides an opportunity to work with others” all along, throughout the whole process of brainstorming, outlining, drafting, revising, and editing.

While the task offered specific provisions about its completion, ultimately, its success depended on the participants’ following the task. During their collaborative writing activities in the wiki “Discussion” and “History” modules, Group Three members appreciated the wiki’s role in the development of their collaborative essay, “discussing, brainstorming together...I would call it collaborative” (Sara). She also found Razan’s initial suggestion of five topics for their essay helpful, “I think it was reasonable as a first step before writing to get everybody to agree on the five challenges we wanna discuss in each paragraph.” Even though Sara and Razan highly valued the wiki-afforded equitability in their collaboration, that is being able to discuss and compose whenever they wanted, as much as they wanted, from wherever they happened to be, they found these same affordances somewhat problematic, “Sometimes, you have to tell people, ‘You have to work. We have a deadline’... Sometimes, you feel like you’re pushing them, and they are having excuses, or they are not really interested...”

Reaching consensus, however, was not easy in Group Three. Sara attributed it to the fact that everybody was contributing to the discussion at a different time. But there was another reason, too. While agreeing that it's possible for a group member to share their previous research as part of a collaborative project, she found the way Lana did this counterproductive. Sara felt uncomfortable about Lana's imposition of her previous paper upon the group, "I thought Lana was talking about the challenges in a very academic way," that is in a way that the other two group members disagreed about. She clarified, "Her [Lana's] way was very different from the way I think about English... So, I appreciated her point of view, but I made some changes to what she proposed." The single available interview (Sara) and the two reflections (Sara, Razan) revealed an important reason for Group Three's lack of consensus during their collaborative discussion and for the subsequent significantly large number of writing changes to their essay, that is one of the conditions for readiness for collaboration was not met because one participant had opinions that were significantly different from those of her team members (see Table 2).

Overall, the information retrieved from Group Three members' single interview and two reflections indicates that at least Sara and Razan were aware of the fact that at the end of their collaborative discussion, they had agreed on the number of paragraphs of their essay but not on much else. Thus, they had no list of main topics, no outline, or any other plan of action. With Lana's imposition of her previously written paper upon the group, it seemed that Group Three members had ended up adopting the sequential single-author writing strategy, or the single-writer strategy, in which one person is directed or self-directs to write for the entire team. One could also assume that Lana's disregard and oblivion of the collaborative task was a serious disruption of the whole collaborative process which could have affected Sara and Razan's cautious statements about adopting wiki collaborative tasks in their future teaching.

The Wikispaces “Discussion” Module adopted as part of the collaborative writing tool for this study’s project hosted the participants’ asynchronous collaborative discussion targeting the brainstorming and outlining of their task-based essay. The discourse analysis of the negotiating strategies the participants applied in their wiki-based discussions revealed the nature of their collaboration during the wiki-based discussion of their essay, that is during the brainstorming and outlining of their essay’s content and organization. Following that, the content analysis of the participants’ perceptions about their collaboration during their wiki-based discussion sessions further clarified and confirmed the findings from the negotiations-focused discourse analysis. Thus, the three participant groups, who experienced the wiki-based discussions differently, also had different but corresponding perceptions of their collaborative writing experiences.

Group One, who demonstrated substantial group cohesion and succeeded in agreeing upon their essay’s content and organization, proceeded to writing their essay following their overall positive experiences from and matching perceptions of their discussion. Group Two, who exhibited a weaker group cohesion and succeeded in determining their essay’s content but not its organization, had both positive and negative experiences and similarly matching perceptions of their collaborative writing experience. Group Three, very much like Group Two, had mixed experiences in their collaborative discussion. They proceeded to writing their essay without a plan for its content and organization. Their perceptions, based on one interview and two reflections, also confirmed the findings from the discourse analysis of their collaborative discussion. As they composed their essay, they seemed to make up for the lack of focused preliminary planning by making twice as many writing changes in the wiki “History” module.

The participants’ overall positive responses about their wiki-supported collaborative writing experiences testify to their different discussion outcomes in the wiki “Discussion” module, their different writing activities in the wiki “History” module, and their different writing

strategies both intended in their essay's brainstorming and outlining discussion, and, implemented in the drafting, revising, and editing of their essays. Thus, Group One preferred doing most of the work on this project during their brainstorming and outlining (32 notes but 29 writing changes) (see Table 17). They opted for the group single-author strategy which they applied in their first draft, then, followed it with parallel and reactive writing strategies. They were happy with their process and with their product. That strategy worked for them.

Group Two (28 notes and 21 writing changes) also began by applying a group single-author writing strategy and followed that with few parallel writing changes to their essay, however, not enough to make up for the lack of consensus about their essay's organization or provide the revising and editing still needed. The random and rare participation by one of Group Three's members was disappointing to them. They were not too pleased with their process or their product. Group Three, who finished their preliminary discussion without any consensus about their essay's content and organization seemed to be heading for disaster, especially as they, too, had one less active member. However, after a discussion marked by twenty-eight notes and no consensus, they completed their essay with forty-six writing changes by their two active members, that is twice as many as the other groups. Interestingly, their primarily parallel and reactive writing strategies allowed them to collaborate actively and equitably at all levels of drafting, revising, and editing, thus, co-create a satisfying product. These findings show that there isn't a best combination of collaborative writing strategies that might work well for all. It also shows that inactive team members may sometimes affect collaboration negatively, and, at other times, motivate their peers to work even harder.

In their Pre-Task survey answers, this study's participants mentioned using threaded discussion forums as part of Facebook, blogs, and other social media which meant they were familiar with online threaded discussions. They had also worked in groups, writing a paper

together. However, none of them had experienced collaborative writing in a distributed-authorship wiki-supported or another online format. Here, they completed their collaborative writing task in the wiki “History” module in what they state was their very first experience of its kind. Their reflections revealed an overall new but positive experience. They liked writing but also learning together, thinking about their essay as a whole, not just as their own, finding new aspects and perspectives on group work, and being part of a team targeting a common goal. Even those who were not fans of group work, found something to think about and maybe change about their attitudes towards wiki-based collaborative writing. To improve this experience for their students, they would add face-to-face pre-task discussions, divide students in interest-based or proficiency-based groups, take more active as teacher roles, and modify the task to fit their context. For them, this novel collaborative writing experience had worked, and they were already initiated into it.

Chapter Summary

After discussing the study’s methodology in Chapter 3, Chapter 4 presents the results from the data analysis. First, it offers a summary of successful collaboration requirements as they relate to this study’s goals, and, more specifically, to its participants, task, and wiki, spelling out the potential caveats in participants’ selection, task definition, and wiki utilization. Next, it presents the study’s data analysis itself, first, by focusing on the data retrieved from the wiki “Discussion” module to discuss generating and negotiating the essay’s topics (e.g., brainstorming and outlining) using content and discourse analysis, respectively. Then, based on the data from the wiki “History” module, it analyzes the wiki-supported collaborative writing activities (e.g., drafting, revising, and editing) via content analysis and the collaborative writing strategies via discourse analysis. With these findings in mind, it concludes with a content analysis of the

groups' collaborative writing perceptions retrieved from the participants' oral interviews and reflection letters.

CHAPTER 5

DISCUSSION AND CONCLUSION

Introduction

Chapter 5 concludes the work on this dissertation following the review of the literature in Chapter 2, the presentation of its methodology in Chapter 3, and the analysis of its data in Chapter 4. Based on the information from preceding chapters, and particularly, from the data analysis from Chapter 4, it offers answers to its research questions as they represent this study's research goals.

This study targeted the exploration of the nature of task-based wiki-afforded collaborative writing experiences as well as its participants' perceptions of their collaborative writing experiences. To this effect, the researcher designed an asynchronous collaborative writing task to be completed within the Wikispaces (www.wikispaces.com) wikis, more specifically, within the website's "Discussion" and "History" modules. To understand the ESL challenges/topics, the participants were instructed to generate and negotiate five topics for their essay, hence, the content analysis of their ESL challenges-related topics and the discourse analysis of their negotiation consensus-driven strategies during the brainstorming and outlining of their essay. To explore the nature of the participants' collaboration in this process, their discussion notes recorded in the wiki "Discussion" module were also subjected to discourse analysis and mined for particular collaboration strategies that the participants might be preparing to adopt in the writing of their essays. Further, to understand the collaborative process during the actual co-construction of each group's essay, the writing changes, that is drafting, revising, and editing, were subjected to rhetorical analysis. Finally, to fully understand the participants' collaborative writing experiences, it was helpful to apply content analysis in comparing their

perceptions of their experiences to their actual collaborative performance. Below, I discuss this study's findings in relation to its research questions.

Research Question 1

1. How do the participants collaborate during the discussion of the co-construction of their asynchronous, wiki-supported task-based essay afforded by the wiki "Discussion" module?
 - a. What topics do they consider for their essay?
 - b. What discourse practices do they employ in negotiating the content and organization of their essay?

Research Question 1a: What Topics do They Consider for Their Essay?

The collaborative writing task engaged the participants in the collaborative discussion of the aspects of "ESL Challenges in Saudi Arabia," a topic that was researched and found to be consistent with the requirements for successful collaboration, thus personally and professionally important to the participants, nine TESOL graduate students preparing to become ESL teachers in Saudi Arabia. Even though this was a short-term voluntary experience for the participants, they engaged in vigorous discussions about the challenges they had experienced as ESL learners, learned about as graduate students, and tackled as teachers. Overall, the participants proposed twenty-seven topics or ESL challenges focusing on language acquisition issues (e.g., overemphasis on grammar, no focus on pragmatics, vocabulary, phonetics, L2 idioms), on student-related issues (e.g., absence of motivation, L2 biases, fear of making mistakes, weak writer's voice, L2 learning anxiety, lack of confidence), curriculum-related factors (e.g., outdated curriculum, limited L2 practice, using L1 in class, L2 accent marginalization, cultural differences), and teaching-related issues (e.g., unqualified teachers, outdated teaching methods)

(see Table 18). Of all proposed topics, eleven were chosen as topics for the participants' collaborative essays.

Table 18

Participants' Topic Selection

ESL Challenges/Topics	Group 1		Group 2		Group 3		Overall	
	Proposed	Chosen	Proposed	Chosen	Proposed	Chosen	Proposed	Chosen
L1 Interference	◆	●					27	11
Overemphasis on L2 Grammar	◆	●			◆			
Outdated Curriculum	◆		◆	●				
Absence of Motivation	◆	●	◆	●	◆			
Students' L2 Biases	◆		◆					
Unqualified Teachers	◆	●	◆	●				
Limited L2 Practice	◆	●	◆					
Using L1 in Class			◆					
L2 Accent Marginalization			◆					
Lack of Confidence			◆					
Outdated Teaching Methods			◆	●				
L2 Vocabulary & Spelling					◆	●		
L2 Pronunciation					◆			
L2 Variation					◆			
Fear of Making Mistakes					◆	●		
Weak Writer's Voice					◆			
Cultural Differences					◆	●		
L2 Idioms					◆			
No Focus on Pragmatics					◆			
L2 Learning anxiety					◆	●		
Overall	7	5	9	4	11	4		

As seen from Table 18, one topic, absence of motivation was considered by all participants, and chosen by Group One and Group Two as one of their final topics. Next, issues

related to unqualified teachers were proposed and chosen by Group One and Group Two. Three other topics, that is limited L2 practice, outdated curriculum, and overemphasis on grammar were proposed by two groups and chosen by one. The participants' choice of aspects within the broader topic included in their collaborative writing task, whether proposed or chosen, revealed a vivid discussion and engagement in the topic and in the task itself. It set the tone for the ensuing collaboration during the actual writing of their essays and helped develop group dynamics favorable to collaboration. Most importantly, by determining a broader personally and professionally significant topic which allows for discussion and variation, the study's collaborative task enabled collaboration as well as secured the needed focus for such a short-term project.

Research Question 1b: What Discourse Practices do They Employ in Negotiating the Content and Organization of Their Essay?

While the content analysis of the wiki "Discussion" records revealed the topics proposed and chosen for inclusion in the participants' collaborative essays, the discourse analysis applied to the same records revealed the negotiation strategies throughout that process. Following Grant (2013) and Galinsky & Mussweiler (2001), the discourse analysis interpreted the negotiation of the above topics in terms of these discourse strategies: making the first offer, focusing on the target, ranking priorities, sharing interest, making a counter-offer, and, reaching a final agreement. In their use of these discourse negotiation strategies, the three participant groups exhibited different discussion dynamics and results. Following the analysis of the negotiation strategies for each participant group in Chapter 4, here, I summarize the results for all participants (see Table 19). Overall, to negotiate the topics of their collaborative essays, the participants employed these strategies: Making the first offer – three times, once in each group; Focusing on the target – 18 times, with two participants (Dalal and Layla) using this strategy

three times each, and with two participants (Reem and Maha) applying it only once each while all others used this strategy twice, each; Ranking priorities – 9 times, with Dalal (3 times), Layla (2 times), and all others using this strategy either once or not at all; Sharing interest was used actively by all participants (Dalal – 4 times, Layla, Asma, and Razan – 3 times each, Maha and Lana – 2 times, and Reem – once); Making a counter-offer was used 20 times (Layla – 4 times, Huda and Asma – 3 times each, Reem, Maha, Razan, and Sara – 2 times each, and Dalal – once); and, finally, reaching a final agreement as a negotiation strategy was used 10 times – (Sara – 3 times, Huda and Dalal – 2 times each, and Asma, Maha, and Razan – once each, and not even once by Reem, Layla, and Lana (see Table 19).

Table 19

Participants' Topic Negotiation Strategies

Negotiation Strategies	Group 1			Group 2			Group 3			Overall
	Huda	Dalal	Reem	Layla	Asma	Maha	Razan	Sara	Lana	
Making the first offer	1	0	0	1	0	0	1	0	0	3
Focusing on the target	2	3	1	3	2	1	2	2	2	18
Ranking priorities	1	3	1	2	0	0	1	1	0	9
Sharing interest	5	4	1	3	3	2	3	5	2	28
Making a counter-offer	3	1	2	4	3	2	2	2	1	20
Reaching a final agreement	2	2	0	0	1	1	1	3	0	10

The significance of using the above negotiation strategies lies in establishing group cohesion necessary throughout the collaborative writing project, in specifying the task to reflect group members' preferences, in organizing selected topics in a tentative outline, and, in some groups – dividing the task into segments for individual completion. The largest number of notes were intended to convey “sharing interest” (28). They revealed the participants' mutual respect

and positive attitude towards team members' contributions. The latter is a crucial factor for collaboration, for maintaining the participants' discussion held in the wiki "Discussion" module, as well as for sustaining and enhancing group cohesion. The next highest number of negotiation strategy use belongs to "making a counter-offer" (20). The healthy number of counter-offers suggests participants' overall active participation in and contribution to the collaborative process. The latter is significant given the fact that most of the participants did not know each other. A third negotiation strategy, "focusing on the target," (18 instances) enabled participants to stay on topic and lead the discussion to a successful completion, albeit with various results. "Making the first offer," (3) on the other hand, understandably, occurred at the beginning of each discussion and served to start the negotiation process. While paying enough attention to these strategies, many of the participants ignored another important negotiation strategy, "ranking priorities" (9 instances). The latter applies particularly to groups 2 and 3 where it resulted in the absence of a final outline. Similarly, "reaching a final agreement" (10 instances) was well used by Group One, and not enough used by Group Two and Three, hence, leading to lack of consensus about their essays' content and organization.

Research Question 2

2. How do the participants collaborate during the actual writing of their asynchronous, wiki-supported task-based essay afforded by the wiki "History" module?
 - a. What writing activities do they engage in co-creating their collaborative essay?
 - b. What writing strategies do they employ in co-creating their collaborative essay?

Research Question 2a: What Writing Activities do They Engage in Co-Creating Their Collaborative Essay?

After completing the brainstorming and outlining of their essays during their discussions in the wiki "Discussion" module, the participants proceeded to the second stage of their

collaborative writing project, that is the actual writing or co-creation of the essays themselves. For the purposes of the rhetorical analysis of the essays’ co-construction in terms of drafting, revising, and editing, the researcher used the wiki-afforded transcripts of the participants’ individual changes to their essays’ draft as recorded by the wiki “History” module. For each group, the latter provided the researcher with all created drafts and the changes in them marked in green (additions) and in red (deletions). The wiki “History” module transcripts were, then, subjected to an NVivo-coded content analysis to identify the number of drafting, revising, and editing changes (see Table 20).

Table 20

Participants’ Collaborative Writing Activities

Collaborative Writing Activities	Group 1			Group 2			Group 3			Overall
	Huda	Dalal	Reem	Layla	Asma	Maha	Razan	Sara	Lana	
Drafting	2	7	6	3	5	1	3	7	1	35
Revising	0	5	1	1	7	1	6	6	2	29
Editing	9	7	0	0	3	0	15	6	0	40

The participants contributed altogether thirty-five drafting changes to the three essays. Drafting activities were uneven among group members. In Group One, Dalal and Reem contributed most of the drafting changes (13 out of 15). In Group Two, Asma did most of the drafting by contributing five out of the nine drafting changes. And, in Group Three, Sara was responsible for seven of the eleven drafting changes. Maha (Group 2) and Lana (Group 3) contributed one drafting change each. While drafting produced the main body of each group’s collaborative essay, the twenty-nine revising changes were used to consolidate its cohesion, coherence, structural and content unity, and sentence style issues by focusing on word-, sentence-, and text-level errors. Substantial revisions in some groups (Groups 1 and 2) made it possible to have fewer edits, ten altogether. However, a haphazard drafting process (11 changes),

followed by many needed revisions (14), left Group Three with the greatest number of needed edits (21). Overall, the collaborative writing activities within and across groups testify to the different collaborative processes within groups that were initially shaped during the wiki-afforded discussions in the wiki “Discussion” module and affected each group’s collaborative writing activities in the wiki “History” module. A further insight into the participants’ collaboration during the co-creation of their essays can be gleaned from the collaborative writing strategies they applied in these writing activities.

Research Question 2b: What Writing Strategies do They Employ in Co-creating Their Collaborative Essay?

The collaborative writing strategies applied in the co-creation of each group’s essay account for the nature of the process of collaboration at the different stages of essay writing and for the different roles performed by individual members in that process (Lowry et al., 2004) (see Table 21).

Table 21

Participants’ Collaborative Writing Strategies

Collaborative Writing Strategies	Group 1			Group 2			Group 3			Overall
	Huda	Dalal	Reem	Layla	Asma	Maha	Razan	Sara	Lana	
Group single-author writing	1	0	0	0	1	0	0	0	0	2
Sequential single-author writing	0	0	0	0	0	0	0	2	1	3
Parallel writing	0	5	2	2	2	0	15	6	0	32
Reactive writing	1	7	6	1	10	1	6	6	2	40

To answer Research Question 2b, here, I summarize the collaborative writing strategies suggested during each group’s collaborative discussion in the wiki “Discussion” module compared to the actual collaborative writing strategies used during their essay’s co-construction

in the wiki “History” module. Thus, in their discussion, Group One members suggested they would apply parallel and reactive writing strategies, divide the work among themselves, but also adjust to each other’s changes as they go. However, during the actual writing of their essay in the wiki “History” module, to offer a head-start, Huda initiated the process by using a single-author writing strategy in which one author is responsible for most of the writing. That was followed by the parallel (7) and reactive (13) strategies applied by all members throughout the completion of their essay. Group Two seemed to prefer a sequential single-author writing, in which each writer completes his/her task, then passes it on to the next writer who becomes the next single-author writer. In their actual writing of their essay, they, too, adjusted their collaborative writing strategies by beginning with a single-author writing strategy applied by the posting of a previously written paper by Asma, which was followed by all group members adjusting by using parallel writing strategies (4) and, mostly, reactive writing strategies (12). In their discussion, Group Three, too, indicated they might follow the sequential single-author writing strategy, or the single-writer strategy, in which one person is directed or self-directs to write for the entire team. However, without a consensus on their essay’s content or organization, they applied the sequential single-author writing strategy three times and had to literally co-create their essay using mostly parallel (21) and reactive (14) writing strategies, responding and adjusting to each other’s texts continuously.

Overall, the group single-author collaborative writing strategy and the group sequential single-author strategy were applied two and three times, respectively. As a sign of true collaboration, parallel writing strategies (32) and reactive writing strategies (40) by far exceeded the single-author writing strategies applied during the collaborative writing of the participant groups’ essays. Thus, the comparison between planned and actually utilized collaborative writing strategies shows an important feature of collaborative writing, its flexibility. It is most prominent

in Group Three's use of collaborative writing strategies. Going into the co-creation stage of their essay without a clear idea of its content and organization, they were able to adjust to this and to the fact that one of the group's members was inactive. By applying parallel and reactive writing to the best of their abilities they created a good essay despite these unfavorable conditions.

To further complete the overall presentation of the participants' collaborative discussion and collaborative writing experiences, below, I summarize their perceptions of those experiences.

Research Question 3

3. How do the participants perceive their asynchronous wiki-supported task-based collaborative writing experience?

Examining the participants' perceptions of their collaborative writing experiences recorded in their oral interviews and reflective letters provided a further insight into their thoughts and feelings about their first-time wiki-afforded task-based collaborative essay writing and enabled the researcher to understand the overall effect of this study's research project.

Perceptions on Wiki-Supported Collaborative Writing Versus Writing Alone

Composing alone which the participants were well accustomed to still had its advantages by being faster and simpler. Some participants felt that waiting for their team members to respond made them feel uncomfortable. Even they, however, were transformed by this new experience and were ready to further look into it, even change. Most of them, seven out of nine, preferred to write collaboratively, as in this study's project. They appreciated sharing their ideas, learning about new ideas from their peers, gaining new perspectives on familiar concepts, even recognizing some of the discussed topics as serious challenges. They were all impressed by the novelty of this experience and felt it was a good one. They compared it to individual writing but also to other forms of group writing they were familiar with. They found both significantly

different. Sara summed it up, “The whole process would be different from something I would do individually: starting from the discussion, brainstorming together, adding or removing ideas that seemed irrelevant, drafting, revising and editing... It’s nothing like if I would do it individually.” She also added, “the collaboration in this project made me think about collaboration in a different way.” Thus, as a result of their participation in this collaborative writing project, the participants had the opportunity to juxtapose that to every other writing experience they had before. Consequently, they indicated in their perceptions that they liked it and would apply it with some adjustments in their classrooms.

Perceptions on the Wiki in Wiki-Supported Collaborative Writing

One of the brand-new experiences for this study’s participants was related to their use of a new technology, the wiki “Discussion” and “History” modules. Naturally, they all mentioned in their interviews and reflections, that, at the beginning, they were not quite sure how it worked and didn’t know what to expect. However, as they gradually got to know more about it, they shared their excitement about it. They found it a useful complement to other writing technologies they knew about. Many of them felt liberated as they could write when, where, and as much as they wanted to. Even students who were not very active and couldn’t participate regularly, had positive comments about it. It is important to note that from their limited experience with wikis, even they had some profound realizations, “I knew it, but now I experienced how meaning is socially constructed” (Reem). Some other less active participants, however, felt constrained by its novelty and often held back what they wanted to say. Without face-to-face meetings, without even knowing the other participants, many found it difficult to deal with the two inactive participants in Group 2 and 3. Overall, participants had high praises for the wiki as a “cutting-edge tool where students can communicate with each other. Using wiki as a site for collaborative

writing is a memorable experience in itself” (Huda). They mentioned considering adapting wikis and other online collaborative tools for their classrooms.

Perceptions on the Task in Wiki-Supported Collaborative Writing

Designing a task that is well-suited for collaborative completion especially using an unfamiliar wiki tool could be a challenge. The participants’ perceptions of the task as they experienced it during this study could cast light on designing wiki-based collaborative tasks in the future. Without knowing much about the wiki, the participants relied on the task instructions and provisions for guidance in this project. They found those helpful. They praised the task setting and directions in particular, “The directions in the handout and task prompt helped a lot” (Huda). Regarding the adoption and adaptation of this and similar tasks in their teaching, they said they might add face-to-face discussions, divide participants into groups according to various personal factors (e.g., proficiency, interests). They would also have the teacher play a more active role during the discussion and during the actual writing. However, for Group 2 and 3 participants, the task seemed incapable of helping them deal with inactive participants. They attributed such problems to the fact that the task was voluntary. They believed participation in the collaborative writing task might be better if mandated as part of a regular class project. Despite that, Sara summed up the sentiments of most participants, “This collaborative writing task was a new experience to me...One thing that is memorable to me is feeling responsible about the task as a whole, not just about my part... It also made me think about the difference between this collaborative task and other tasks that I used to participate in.”

Perceptions on the Wiki-Supported Collaborative Writing Experience

Overall, in their oral interviews and reflective letters, the participants were able to identify specific aspects of this study’s collaborative writing project, such as the type of collaboration it provided, the wiki tool it used, and the task that defined its objectives and

procedures. In many of their reflections, however, they referred to the wiki experience during the discussion in the wiki “Discussion” and “History” modules as a whole. They enjoyed and benefitted from their linear threaded discussion of their topic in the wiki “Discussion” module. They found inspiring the diversity and novelty of this experience. Reaching consensus, too, was mostly a positive experience, except for Group Three where one member’s views clashed with those of her team mates, which, ultimately, made it impossible for this group to reach consensus about their essay’s content and organization. The groups, however, pointed out different ways in which they might use wiki-afforded collaborative writing in their classrooms. As they attributed low group cohesion to some team mates’ irregular postings, they all planned to prevent this from happening by adopting strict course-related requirements. They also suggested that they might vary the students’ roles in such tasks by allowing them to select the topic themselves as well as select their own collaborative writing teams. In their perceptions, the participants also had a different role for the teacher extending beyond task designer and wiki provider. They thought that the teacher’s more active role during the task completion itself might encourage students to be more active and responsible for their work and more aware of their contributions as part of a whole rather than as single postings. Thus, in the participants’ perceptions, the most prominent outcome of this collaborative writing project was their advanced notion of collaboration itself and of wiki-afforded collaborative writing as a composite team effort that cannot be reduced to the sum total of its constituent contributions, nor replicated alone.

Conclusion

The goal of this collaborative writing study was to examine the wiki-afforded collaborative writing experiences and perceptions of its participants, nine female Saudi graduate students. In that, it aimed to differentiate this study’s collaborative co-creation of texts from

other familiar forms of additive writing, group, cooperative, and other. Below, I summarize its conclusions.

ONE. This study established and applied successful collaboration requirements for its participants selection, task design, and wiki application to meet the requirements for successful collaboration. According to it, participant readiness for collaboration was linked to availability, common background, but also diversity. Task readiness for collaboration included suitability for collaborative completion, goal-focused instructions, and ability to overcome potential barriers. Wiki collaboration readiness was associated with securing high-level collaboration through interrelated convergent discussion notes, avoiding threaded discussions' reply protocol limitations, and encouraging a linear discussion over a threaded one;

TWO. As part of its task, it provided the study's participants with a personally and professionally significant topic for discussion, "ESL Challenges in Saudi Arabia." Within that global topic, it enabled as well as required its participants to select five aspects of this topic as main ideas for their collaborative essays. The content analysis of the topics generated in the participants' discussion in the wiki "Discussion" module secured a lively and productive discussion which resulted in brainstorming and outlining the three essays' content and organization, thus, contributing to the task's success.

THREE. Besides the content analysis of the topics generated in the wiki "Discussion" module, the discourse analysis of the process of generation and negotiation of these topics revealed how the participants applied these negotiation-focused discourse strategies: making the first offer, focusing on a target, ranking priorities, sharing interest, making a counter-offer, and reaching a final agreement. Additionally, a discourse analysis of the participants' discussion disclosed the collaborative writing strategies they intended to use during the composition of their

essays in the wiki “History” module, that is group single-author writing, sequential single-author writing, parallel writing, and reactive writing, each signifying a different level of collaboration.

FOUR. In its analysis of the wiki-supported collaborative writing activities, this study applied a rhetorical model of analysis that allowed the combined analysis of the wiki “Discussion” linear notes and the wiki “History” writing changes as one iterative process. Consequently, it linked the findings from the content and discourse analyses of the discussion notes to the process and progress of the co-creation of the participants’ collaborative essays. Thus, it provides a departure from the separate and unrelated investigations of these two wiki affordances as reported in the current literature.

FIVE. Based on the findings from the analysis of the participants’ discussion in the wiki “Discussion” module, this study used rhetorical and linguistic analyses to make sense of the findings from the analysis of the writing changes to their co-constructed essays recorded in the wiki “History” module, each related to a different level of writing: drafting or the initial complete version of a document, revising or making word-, sentence-, and text-level changes in terms of content, grammar, and style, and, editing, related to final changes meant to enhance the document’s consistency in terms of spelling, punctuation and logic.

SIX. Closely related to the analysis of the collaborative writing activities is the analysis of the participants’ writing strategies applied in these activities. These were examined, once as planned in the wiki “Discussion” module, and a second time, as applied in the wiki “History” module. Thus, although initially planned as group single-author writing, sequential single-author writing, parallel writing, and reactive writing during the discussion, they were flexibly applied according to the current essay version. Thus, if a group member started the writing process by posting a longer passage from a previously written paper, virtually applying a group single-author writing strategy, the other group members adjusted to the situation and adopted

complementary strategies of parallel and reactive writing by revising and editing rather than drafting.

SEVEN. Judging from the essays they composed, group members managed to finish this project's task as assigned despite the irregular postings by two participants. That is the researcher's perspective based on the data analysis of the two stages of the project's task completion. Complementing this are the participants' perceptions of their collaborative writing experiences during this project. Largely exceeding the researcher's expectations, and besides being new to such a task, the participants had overwhelmingly positive comments about the superiority of this particular writing experience over their previous individual and group writing experiences. Despite some glitches, they found this to be a qualitatively different experience, one where writing is co-creation of texts and where collaboration enriches the final product and enhances each individual's personal experience.

Directions for Future Research

This study prepares the ground for future research on online collaborative writing, and more specifically, on student collaboration and negotiation in co-constructing online texts.

To continue examining the utilization of wiki-based collaborative writing in educational settings, future research may focus on varying populations. This study was designed for and applied to Saudi female participants. Regarding the selection of populations, several other aspects may be considered further, such as: age, gender differences, proficiency levels, literacy level, cultural, ethnic, and educational background, group member similarities and differences. Using a different sample size and task completion period might yield different results. Also, future research projects could design different tasks and task specifications, such as mandatory rather than voluntary completion, different participant instructions, and different teacher roles in the task's completion.

Further research on wiki-based collaborative writing could examine the different factors affecting participant collaboration, that is shared interests, common background and goals, availability, attitudes to wikis and wiki-supported activities in general, and prior experience with wikis and other collaborative writing tools. Furthermore, research on the potential barriers to successful collaboration needs urgent attention. So too, the ways such barriers could be prevented or overcome. Specifically, managing participant responses and timely submissions may benefit from the exploration of various methods of team membership management. Related to that is the effect of members' inactive and other disruptive behaviors on group cohesion and collaboration, and on task completion.

Other research may address the application and incorporation of wiki-based collaborative writing as part of various composition classes at elementary, secondary, and high school levels, as well as in ESL contexts in Saudi Arabia and elsewhere. In connection with that, researchers might want to examine possibilities of coordinating educational goals and standards and the assessment tools applied for their measurement with the possibility of using wiki-based collaborative writing and other projects evaluated by alternative assessment tools that are specially designed to assess collaboration. Such projects may also use wikis in combination with other online and or face-to-face collaborative tools.

As collaborative writing becomes the norm in some educational and professional settings, future researchers might want to examine ways of preparing college and other graduates for collaborative writing and other projects. Especially in the context of distance education, collaborative project affordances could be examined for their effectiveness, affordability, and usability.

Further research might focus on teacher- and teaching-related issues. For example, research could address teacher participation in online collaborative writing tasks, more

specifically the ways in which teachers could scaffold students' collaboration and negotiation processes, provide more structured wiki environments for teacher and peer feedback, and intervene in cases where there is a breach in collaboration or other issues in need of attention.

Another important area in need of further investigation is the incorporation of face-to-face discussions prior to or during online collaboration. Where possible, teacher and student attitudes and experiences might yield valuable data for further research. They may contribute to the already large body of research on the wiki's separate affordances. Even more important would be research on connecting participants' experiences from the different wiki modules, such as its "Discussion," "Comments," and "History" modules.

Finally, this study was situated in the Saudi ESL educational context. In the same context, it would be important to conduct research on other educational disciplines that might utilize wikis and other forms of online collaboration. It may also be valuable to examine Saudi students' and teachers' attitudes to such educational tools which could enlighten the design of collaborative activities at various educational levels. Most important will be studies of the socially and culturally appropriate ways of incorporating collaborative activities and online collaborative writing activities in particular in the Saudi educational system. Such research, of course, could be initiated in other countries and world regions.

References

- Abalhassan, K. M. I. (2002). *English as a Foreign Language Instruction with CALL Multimedia in Saudi Arabian Private Schools: A Multi -case and Multi -site Study of CALL Instructors' Pedagogies and Beliefs* (Doctoral Dissertation). Available from ProQuest Dissertations and Theses A&I database. (UMI No. 2002d60)
- Abu Bakar, N., Latif, H., & Ya'acob, A. (2010). ESL students feedback on the use of blogs for language learning. *3L: The Southeast Asian Journal of English Language Studies*, 16(1), 120-142. Retrieved from <http://ejournal.ukm.my/3l/article/view/1008/920>
- Adkins, M., Reinig, J. Q., Kruse, J., & Mittleman, D. (1999, January 5-8). *GSS collaboration in document development: Using GroupWriter to improve the process*. Paper presented at the Thirty-Second Annual Hawaii International Conference on System Sciences, Maui, HI. doi:10.1109/HICSS.1999.772739
- Adler, E. S., & Clark, R. (1999). *How it's done: An invitation to social research*. Belmont, CA: Wadsworth Publishing.
- Ajjan, H., & Hartshorne, R. (2008). Investigating faculty decisions to adopt Web 2.0 technologies: Theory and empirical tests. *Internet and Higher Education*, 11(2), 71–80. doi:10.1016/j.iheduc.2008.05.002
- Al Khateeb, A. A. (2013). Wikis in EFL writing classes in Saudi Arabia: Identifying instructors' reflections on merits, demerits and implementation. *Teaching English with Technology*, 13(4), 3-22. Retrieved from <https://eric.ed.gov/?id=EJ1144142>
- Al-Banawi, N. A., & Yusuf, N. (2011). *Impact of the demand of women higher education: A new dimension: Case: Saudi Arabia*. *GSTF Business Review (GBR)*, 1(2), 161. Paper presented at the International Conference on Qualitative and Quantitative Economics Research, (QQE). doi:10.5716_2010-4804_1.2.70

- Al-Hariri, R. (1987). Islam's point of view on women's education in Saudi Arabia. *Comparative Education*, 23(1), 51-57. Retrieved from <https://www.jstor.org/stable/3099445>
- Al-Hozaimi, A. (1993). *Attitudes and perceptions of teachers, principals and supervisors toward teaching written composition in the fifth and sixth grades in boys' public schools in riyadh district, saudi arabia* (Doctoral dissertation). Available from ProQuest Dissertations & Theses Global database. (304085345)
- Al-Kahtani, N. K. M., Ryan, J. J. C. H., & Jefferson, T. I. (2006). How Saudi female faculty perceive internet technology usage and potential. *Information Knowledge Systems Management*, 5(4), 227-243. Retrieved from <http://www.sciepub.com/reference/92402>
- Al-Maini, Y. H. (2013). Issues in integrating information technology in learning and teaching EFL: The Saudi experience. *Merit Research Journals*, 1(5), 49-55. Retrieved from <http://www.meritresearchjournals.org/er/content/2013/June/Al-Maini.pdf>
- Al-Saggaf, Y. (2004). The effect of online community on offline community in Saudi Arabia. *The Electronic Journal of Information Systems in Developing Countries*, 16(2), 1-16. Retrieved from https://www.researchgate.net/publication/229023405_The_Effect_of_Online_Community_on_Offline_Community_in_Saudi_Arabia
- Al-Saggaf, Y., & Williamson, K. (2004). Online communities in Saudi Arabia: Evaluating the impact on culture through online semi-structured interviews. *Forum Qualitative Sozialforschung/Forum: Qualitative Social Research* 5(3), Art. 24. Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/564/1225>
- Al-Showaye, M. (2002). *Use of computer-based information technology and the Internet in Saudi Arabian intermediate and secondary schools*. (Unpublished Doctoral dissertation). The University of Manchester: Manchester, UK.

- Alenezi, A. (2014). Influences of the mandated presence of ICT in Saudi Arabia secondary. *International Journal of Information and Education Technology* 5(8), 638-644.
doi:10.7763/IJET.2015.V5.583
- Aljamhoor, A. (1999). *The effectiveness of using computers in teaching EFL to secondary school students: An experimental study*. Paper presented at the Symposium on Educational Technology and Information, Bahrain. Bahrain University.
- Alshalan, A. M. (2016). *The effects of wiki-based collaborative writing on ESL student's individual writing performance* (Doctoral dissertation). Available from ProQuest Dissertations and Theses A&I database. (UMI No. 10153432)
- Alshalan, R. (2010). *The effects of wikis and process writing on the performance of Saudi female EFL secondary students in writing*. Available from ProQuest Dissertations and Theses A&I database. (Masters Dissertation., King Saud University, Riyadh). Retrieved from <http://www.awej.org/images/Theseanddissertation/ReemFahadAlshalan/reemfahadalshalanfullthesis.pdf>
- Alshumaimeri, Y. (2011). The effects of wikis on foreign language students writing performance. *Procedia-Social and Behavioral Sciences*, 28, 755-763.
doi:10.1016/j.sbspro.2011.11.139
- Alsweel, R. A. (2013). *The impact of English as a second language on Saudi women's roles and identities* (Doctoral dissertation). Available from ProQuest Dissertations and Theses A&I database. (UMI No. 3549854)

- Alyousef, H., & Picard, M. (2011). Cooperative or collaborative literacy practices: Mapping metadiscourse in a business students' wiki group project. *Australasian Journal of Educational Technology*, 27(3), 463-480. Retrieved from https://www.researchgate.net/publication/235771369_Cooperative_or_collaborative_literacy_practices_Mapping_metadiscourse_in_a_business_students%27_Wiki_group_project
- Alzahrani, I., & Woollard, J. (2012, April). *The potential of wiki technology as an e-learning tool in science and education; Perspectives of undergraduate students in Al-Baha university, Saudi Arabia*. Paper presented at 2nd International Conference on E-Learning and Knowledge Management. International Journal of Information Technology and Computer Science (IJITCS) - ISSN: 2090-1610. Kuala Lumpur. Malaysia. Retrieved from <https://files.eric.ed.gov/fulltext/ED531146.pdf>
- Amoudi, K. K., & Sulaymani, O. (2014). The integration of educational technology in girls' classrooms in Saudi Arabia. *European Journal of Training and Development Studies*, 1(2), 14-19. Retrieved from <http://www.eajournals.org/wp-content/uploads/The-Integration-of-Educational-Technology-in-Girls----Classrooms-in-Saudi-Arabia.pdf>
- Andersen, P. (2007). What is Web 2.0? ideas, technologies and implications for education. *Bristol: JISC1*, 1(1), 1-64. Retrieved from http://www.ictliteracy.info/inf/pdf/Web2.0_research.pdf
- Anderson, T. (2005). *Distance learning—Social software's killer ap*. Paper presented at the 17th Biennial Conference of the Open and Distance Learning Association of Australia, Australia. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.95.630&rep=rep1&type=pdf>

- Arnold, N., Ducate, L., & Kost, C. (2012). Collaboration or cooperation? Analyzing group dynamics and revision process in wikis. *CALICO Journal*, 29(3), 431-448. Retrieved from <https://www.learntechlib.org/p/74383/>
- Ary, D., Jacobs, L., Razavieh, A. (2002). *Introduction to research in education* (8th ed.). Wadsworth Group, Thomson Learning. Inc. CA. Retrieved from <http://www.modares.ac.ir/uploads/Agr.Oth.Lib.12.pdf>
- Ascott, R. (2005) 'Distance Makes the Art Grow Further: Distributed Authorship and Telematic Textuality in La Plissure du Texte', in N. Neumark and A. Chandler (eds.) *At a Distance. Precursors to Art and Activism on the Internet*, pp. 282–296. Cambridge, MA: MIT Press.
- Bakhtin, M. (1981). *The dialogic imagination: Four essays*. Austin: University of Texas Press.
- Bartholome, L. (2009). Beyond the methods fetish: Toward a humanizing pedagogy. In Darder, A., Baltodano, M., & Torres, R. (Eds.), *The critical pedagogy reader* (2nd ed., pp. 338-355). New York: Routledge.
- Borja, R. R. (2006). Educators experiment with student-written 'wikis'. *Education Week*, 25(30), 10-12. Retrieved from <https://www.edweek.org/ew/articles/2006/04/05/30wiki.h25.html>
- Boulos, M. N., Maramba, I., & Wheeler, S. (2006). Wikis, blogs and podcasts: a new generation of Web-based tools for virtual collaborative clinical practice and education. *BMC Medical Education*, 6(1), 1-8. doi:10.1186/1472-6920-6-41
- Bradley, L., Lindström, B., & Rystedt, H. (2010). Rationalities of collaboration for language learning in a wiki. *ReCALL*, 22(2), 247-265. doi:10.1017/S0958344010000108
- Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3(2), 77-101. doi:10.1191/1478088706qp063oa

- Brown, J. (2001). *Using surveys in language programs*. Cambridge, UK: Cambridge University Press.
- Bruffee, K. (1993). *Collaborative learning: Higher education, interdependence, and the authority of knowledge*. Baltimore, MD: Johns Hopkins University Press.
- Bruffee, K. A. (1986). Social construction, language, and the authority of knowledge: A bibliographical essay. *College English*, 48(8), 773-790. doi:10.2307/376723
- Bruner, J. S. (1966). *Toward a theory of instruction* (Vol. 59). Cambridge: Harvard University Press.
- Bruns, A., & Humphreys, S. (2005, October 16-18). Wikis in teaching and assessment: The M/Cyclopedia project. Paper presented at *2005 International Symposium on Wikis*. San Diego, CA. doi:10.1145/1104973.1104976
- Bruns, A. (2010). Distributed creativity: Filesharing and produsage. In *Mashup cultures*, ed. Stefan Sonvilla-Weiss, 24-37. Retrieved from <http://emerymartin.net/FE503/Week6/Bruns-Distributed%20Creativity%20-%20Filesharing%20and%20Produsage.pdf>
- Cassidy, T., & Miller, M. (2002, March). *Higher education in the Arab states: Responding to the challenges of globalization*. Paper presented at *AMIDEAST Conference on Higher Education In ARAB Countries*. Washington, DC.
- Chao, Y., & Lo, H. (2011). Students' perceptions of wiki-based collaborative writing for learners of English as a foreign language. *Interactive Learning Environments*, 19(4), 395- 411. doi:10.1080/10494820903298662
- Chi, M. T. (1997). Quantifying qualitative analyses of verbal data: A practical guide. *The Journal of the Learning Sciences*, 6(3), 271-315. Retrieved from <http://www.public.asu.edu/~mtchi/papers/Verbaldata.pdf>

- Coffey, A., & Atkinson, P. (1996). *Making sense of qualitative data: Complementary research strategies*. Thousand Oaks, CA: Sage Publications.
- Coniam, D., & Kit, M. L. W. (2008). Incorporating wikis into the teaching of English writing. *Hong Kong Teachers' Centre Journal*, 7, 52-67. Retrieved from [https://www.edb.org.hk/HKTC/download/journal/j7/\(5\)HKTCJ07-Article2-1.pdf](https://www.edb.org.hk/HKTC/download/journal/j7/(5)HKTCJ07-Article2-1.pdf)
- Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches*. Los Angeles, CA: SAGE.
- Creswell, J. W. (2009). Editorial: Mapping the field of mixed methods research. *Journal of Mixed Methods Research*, 3, 95-108. <https://doi.org/10.1177/1558689808330883>
- Creswell, J. W. (2014). *A concise introduction to mixed methods research*. Los Angeles, CA: SAGE.
- Cunningham, D., & Duffy, T. (1996). Constructivism: Implications for the design and delivery of instruction. *Handbook of Research for Educational Communications and Technology*, 51, 170-198. Retrieved from <http://homepages.gac.edu/~mkoomen/edu241/constructivism.pdf>
- Çakır, M. P., Zemel, A., & Stahl, G. (2009). The joint organization of interaction within a multimodal CSCL medium. *International Journal of Computer-Supported Collaborative Learning*, 4(2), 115-149. Retrieved from http://gerrystahl.net/pub/ijCSCL_4_2_1.pdf
- Denzin, N. K., & Lincoln, Y. S. (2008). *Collecting and Interpreting Qualitative Materials* (3rd Ed.). Los Angeles, CA: Sage Publications.
- De Wever, B., Schellens, T., Valcke, M., & Van Keer, H. (2006). Content analysis schemes to analyze transcripts of online asynchronous discussion groups: A review. *Computers & Education*, 46(1), 6-28. doi:10.1016/j.compedu.2005.04.005

- Dobao, A. (2012). Collaborative writing tasks in the second language classroom: Comparing group, pair, and individual work. *Journal of Second Language Writing*, 21(1), 40–58. doi:10.1016/j.jslw.2011.12.002
- Donato, R. (1994). Collective scaffolding in second language learning. In J. P. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp. 33-56). Norwood, NJ: Ablex Pub. Corp. Retrieved from <http://titan.iwu.edu/~cisabell/courses/spanish410/donato.pdf>
- Donato, R. (2004). Aspects of collaboration in pedagogical discourse. *Annual Review of Applied Linguistics*, 24, 284-302. doi:10.1017/S026719050400011X
- Doolan, M. A. (2006). Effective strategies for building a learning community online using a wiki. *Doolan: Building an Online Learning Community*, 51–63. Retrieved from https://www.researchgate.net/profile/Martina_Doolan2/publication/30384334_Effective_strategies_for_building_a_learning_community_online_using_a_Wiki/links/54bd036e0cf218da9390244d/Effective-strategies-for-building-a-learning-community-online-using-a-Wiki.pdf
- Dörnyei, Z. (2003). *Questionnaires in second language research: Construction, administration, and processing*. Mahwah, New Jersey: Lawrence Erlbaum Associates.
- Ducate, L., Anderson, L., & Moreno, N. (2011). Wading through the world of wikis: An analysis of three wiki projects. *Foreign Language Annals*, 44(3), 495-524. doi:10.1111/j.1944-9720.2011.01144.x
- Duin, A. H. (1991). Computer-supported collaborative writing: The workplace & the writing classroom. *Journal of Business and Technical Communication*, 5(2), 123-150. doi:10.1177/1050651991005002001

- Ede, L., & Lunsford, A. (1990). *Singular texts/plural authors*. Carbondale, IL: Southern Illinois University Press.
- Elbow, P. (1998). *Writing with power: Techniques for mastering the writing process*. New York, NY: Oxford University Press.
- Ellis, C. A., Gibbs, S. J., & Rein, G. L. (1991). Groupware: Some issues and experiences. *Communications of the ACM*, 34(1), 39-58. doi:10.1145/99977.99987
- Elola, I., & Oskoz, A. (2010). Collaborative writing: Fostering foreign language and writing conventions development. *Language Learning & Technology*, 14(3), 51-71. Retrieved from <https://core.ac.uk/download/pdf/26920581.pdf>
- Elyas, T. (2008). The attitude and the impact of American English as a global language within the Saudi education system. *Novitas-ROYAL (Research on Youth and Language)*, 2(1) 28-48. Retrieved from <http://www.novitasroyal.org/elyas.pdf>
- Elyas, T., & Picard, M. (2010). Saudi Arabian educational history: Impacts on English language teaching. *Education, Business and Society: Contemporary Middle Eastern Issues*, 3(2), 136-145. doi:10.1108/17537981011047961
- Fontana, A. & Frey, J. H. (2008). The interview. In Denzin, N. K., & Lincoln, Y. S. (Eds.), *Collecting and interpreting qualitative materials* (pp. 115-159). Los Angeles, CA: Sage.
- Franklin, U. (1996). *Introduction to the symposium, towards an ecology of knowledge*. Toronto: University of Toronto.
- Frechtling, J., Sharp, L., & Westat, Inc. (1997). *User-friendly handbook for mixed method evaluations*. Arlington, VA: NSF, Directorate for Education and Human Resources, Division of Research, Evaluation, and Communication.
- Freire, P. (1970). *Pedagogy of the Oppressed*. Ramos, M. B. (Trans.). New York: Continuum.

- Fu, E. L., van Aalst, J., & Chan, C. K. (2016). Toward a classification of discourse patterns in asynchronous online discussions. *International Journal of Computer-Supported Collaborative Learning, 11*(4), 441-478. doi:10.1007/s11412-016-9245-3
- Galegher, J., & Kraut, R. E. (1994). Computer-mediated communication for intellectual teamwork: An experiment in group writing. *Information Systems Research, 5*(2), 110-138. doi:10.1145/99332.99343
- Galinsky, A. D., & Mussweiler, T. (2001). First offers as anchors: The role of perspective-taking and negotiator focus. *Journal of Personality and Social Psychology, 81*(4), 657-669. doi:10.1037/0022-3514.81.4.657
- Godwin-Jones, R. (2003). Emerging technologies blogs and wikis: Environments for on-line collaboration. *Language Learning & Technology, 7*(2), 12–16. Retrieved from https://scholarspace.manoa.hawaii.edu/bitstream/10125/25195/1/07_02_emerging.pdf
- Godwin-Jones, R. (2005). Emerging technologies: Messaging, gaming, peer-to-peer sharing: Language learning strategies & tools for the millennial generation. *Language Learning & Technology, 9*(1), 17-22. Retrieved from https://scholarspace.manoa.hawaii.edu/bitstream/10125/44003/1/09_01_emerging.pdf
- Godwin-Jones, R. (2018). Second Language Writing Online: An Update. *Language Learning & Technology, 22*(1), 1-15. Retrieved from https://scholarspace.manoa.hawaii.edu/bitstream/10125/44574/1/22_01_godwin-jones.pdf
- Grant, A. M. (2013). *Give and take: A revolutionary approach to success*. New York, NY: Penguin.

- Greene, J. C., Caracelli, V. J., & Graham, W. F. (1989). Toward a conceptual framework for mixed-method evaluation designs. *Educational Evaluation and Policy Analysis, 11*(3), 255-274. doi:10.2307/1163620
- Green, B. N., & Johnson, C. D. (2015). Interprofessional collaboration in research, education, and clinical practice: Working together for a better future. *Journal of Chiropractic Education, 29*(1), 1-10. doi:10.7899/JCE-14-36
- Grice, H. P. (1975). Logic and conversation. In Grice, H. P., Cole, P., & Morgan, J. L., *Syntax and semantics* (pp. 41-58). Retrieved from <http://lefft.xyz/psycholingAU16/readings/grice1975-logic-and-conversation.pdf>
- Guo, Y., & Beckett, G. H. (2007). The hegemony of English as a global language: Reclaiming local knowledge and culture in China. *Convergence, 40*(1-2), 117-131. Retrieved from <http://globalization.anthro-seminars.net/wp-content/uploads/2016/11/guo-2007.pdf>
- Guta, H., & Karolak, M. (2015). Veiling and blogging: Social media as sites of identity negotiation and expression among Saudi women. *Journal of International Women's Studies, 16*(2), 115-127. Retrieved from <https://vc.bridgew.edu/cgi/viewcontent.cgi?referer=https://www.google.com/&httpsredir=1&article=1786&context=jiws>
- Hadjerrouit, S. (2014). Wiki as a collaborative writing tool in teacher education: Evaluation and suggestions for effective use. *Computers in Human Behavior, 32*, 301-312. doi:10.1016/j.chb.2013.07.004
- Hamdan, A. (2005). Women and education in Saudi Arabia: Challenges and achievements. *International Education Journal, 6*(1), 42-64. Retrieved from <https://files.eric.ed.gov/fulltext/EJ854954.pdf>

Han, S., & Hill, J. R. (2006). Building understanding in asynchronous discussions: Examining types of online discourse. *Journal of Asynchronous Learning Networks*, 10(4), 29-50.

Retrieved from

https://www.researchgate.net/profile/Janette_Hill/publication/267974626_Building_Understanding_in_Asynchronous_Discussions_Examining_Types_of_Online_Discourse_29_BUILDING_UNDERSTANDING_IN_ASYNCHRONOUS_DISCUSSIONS_EXAMINING_TYPES_OF_ONLINE_DISCOURSE/links/55e48c5d08aecb1a7ccb81cc/Building-Understanding-in-Asynchronous-Discussions-Examining-Types-of-Online-Discourse-29-BUILDING-UNDERSTANDING-IN-ASYNCHRONOUS-DISCUSSIONS-EXAMINING-TYPES-OF-ONLINE-DISCOURSE.pdf

Henri, F. (1992). Computer conferencing and content analysis. In Kaye, A. R. (Ed.),

Collaborative learning through computer conferencing. The Najadan Papers, (pp. 117–136). London: Springer-Verlag.

Hewitt, J. (2001). Beyond threaded discourse. *International Journal of Educational Telecommunications*, 7(3), 207-221. Retrieved from

<https://tspace.library.utoronto.ca/bitstream/1807/26522/1/BTD.pdf>

Hewitt, J. (2003). How habitual online practices affect the development of asynchronous discussion threads. *Journal of Educational Computing Research*, 28(1), 31-45.

doi:10.2190/PMG8-A05J-CUH1-DK14

Higgs, B., & McCarthy, M. (2005). Active learning—from lecture theatre to field-work.

Emerging Issues in the Practice of University Learning and Teaching, 37-44. Retrieved from https://www.researchgate.net/publication/241606589_ACTIVE_LEARNING_FROM_LECTURE_THEATRE_TO_FIELDWORK

- Hirvela, A. (1999). Collaborative writing instruction and communities of readers and writers. *TESOL Quarterly*, 8(2), 7-12. doi:10.1002/j.1949-3533.1999.tb00169.x
- Hmelo-Silver, C. E. (2003). Analyzing collaborative knowledge construction: Multiple methods for integrated understanding. *Computers & Education*, 41(4), 397-420. doi:10.1016/j.compedu.2003.07.001
- Hussey, J., & Hussey, R. (1997). *Business research*. Hampshire: Palgrave.
- Ioannou, A., Brown, S. W., & Artino, A. R. (2015). Wikis and forums for collaborative problem-based activity: A systematic comparison of learners' interactions. *The Internet and Higher Education*, 24, 35-45. doi:10.1016/j.iheduc.2014.09.001
- Jamjoom, M.I. (2010). Female Islamic studies teachers in Saudi Arabia: A phenomenological study. *Teaching and Teacher Education*, 26, 547-558. doi:10.1016/j.tate.2009.06.019
- Jan, I. (2006). *Conversations with Arab graduate students of English about literacy: The construction of identity* (Doctoral dissertation). Available from Indiana University of Pennsylvania. (Order No. 3215781)
- Jiffry, F. (2013, September 10). Education experts urge technology use during classroom lessons. *Arab News*. Retrieved from <http://www.arabnews.com/news/464116>
- Jonassen, D. (1999). Designing constructivist learning environments. In Reigeluth, C. (Ed.), *Instructional design theories and models: A new paradigm of instructional theory* (2nd ed., pp. 215-239). Mahwah, NJ: Lawrence Erlbaum Associates.
- Jouhari, A. (1996). *A process approach for teaching English composition at a Saudi university: Six case study* (Unpublished Doctoral Dissertation). Indiana University of Pennsylvania, Indiana, PA.

- Kedziora, B. (2012). *Wikis in teaching and learning a foreign language: A case study of wiki usage in the course Academic reading and writing for teacher candidates* (Master's Thesis). Retrieved from <http://www.diva-portal.org/smash/get/diva2:534270/fulltext01>
- Kessler, G. (2009). Student-initiated attention to form in wiki-based Collaborative writing. *Language Learning & Technology, 13*(1), 79-95. doi:10125/44169
- Kessler, G., & Bikowski, D. (2010). Developing collaborative autonomous learning abilities in computer mediated language learning: Attention to meaning among students in wiki space. *Computer Assisted Language Learning, 23*(1), 41–58. doi:10.1080/09588220903467335
- Kessler, G., Bikowski, D., & Boggs, J. (2012). Collaborative writing among second language learners in academic web-based projects. *Language Learning & Technology, 16*(1), 91-109. doi:10125/44276
- Saudi Arabia Ministry of Education. (2015). *King Abdullah Foreign Scholarship Program*. Retrieved from <https://moe.gov.sa/en/E-Services/StudentServices/Pages/KasService.aspx>
- Kittle, P., & Hicks, T. (2009). Transforming the group paper with collaborative online writing. *Pedagogy: Critical Approaches to Teaching Literature, Language, Composition, and Culture, 9*(3), 525-538. Retrieved from https://tccl.arcc.albany.edu/knilt/images/0/07/Kittle_and_Hicks_2008.pdf
- Kost, C. (2011). Investigating writing strategies and revision behavior in collaborative wiki projects. *CALICO Journal, 28*(3), 606-620. Retrieved from <http://journals.equinoxpub.com/index.php/CALICO/article/viewFile/22978/18984>
- Krippendorff, K. (1980). *Content analysis, an introduction to its methodology*. Thousand Oaks, CA: Sage Publications.

- Kubota, R. (2004). The politics of cultural difference in second language education. *Critical Inquiry in Language Studies: An International Journal*, 1(1), 21- 39.
doi:10.1207/s15427595cils0101_2
- Kuteeva, M. (2011). Wikis and academic writing: Changing the writer-reader relationship. *English for Specific Purposes*, 30, 44-57. doi:10.1016/j.esp.2010.04.007
- Lambert, L. (2002). *The Constructivist Leader*. New York: Teachers College Press.
- Lee, H. C., & Wang, P. L. (2013). Discussing the factors contributing to students' involvement in an EFL collaborative wiki project. *ReCALL*, 25(2), 233-249. Retrieved from <https://eric.ed.gov/?id=EJ1004383>
- Lee, L. (2010). Exploring wiki-mediated collaborative writing: A case study in an elementary Spanish course. *CALICO Journal*, 27(2), 260-276. Retrieved from <http://www.jstor.org/stable/calicojournal.27.2.260>
- Leuf, B., & Cunningham, W. (2001). *The wiki way: Quick collaboration on the web*. Upper Saddle River, New Jersey: Addison-Wesley.
- Li, M. (2012). Use of wikis in second/foreign language classes: A literature review. *CALL-EJ*, 13(1), 17-35. Retrieved from https://mds.marshall.edu/english_faculty/23/
- Li, M. (2013). Individual novices and collective experts: Collective scaffolding in wiki-based small group writing. *System*, 41(3), 752–769. Retrieved from https://mds.marshall.edu/english_faculty/41/
- Li, M. (2014). Small group interactions in wiki-based collaborative writing in the EAP context (Doctoral dissertation). Available from University of South Florida Library database. <http://scholarcommons.usf.edu/etd/5254>

- Li, M., & Zhu, W. (2013). Patterns of computer-mediated interaction in EFL collaborative writing groups using wikis. *Computer Assisted Language Learning*, 26(1), 61-82.
doi:10.1080/09588221.2011.631142
- Li, M., & Kim, D. (2016). One wiki, two groups: Dynamic interactions across ESL collaborative writing tasks. *Journal of Second Language Writing*, 31, 25-42.
doi:10.1016/j.jslw.2016.01.002
- Lin, G. H. C., & Chien, P. S. C. (2009). An investigation into effectiveness of peer feedback. *Online Submission*, 3, 79-87. Retrieved from <https://eric.ed.gov/?id=ED506179>
- Lin, M. H. (2014). Effects of classroom blogging on ESL student writers: An empirical reassessment. *The Asia-Pacific Education Researcher*, 23(3), 577–590.
doi:10.1007/s40299-013-0131-8
- Lin, W. C., & Yang, S. C. (2011). Exploring students' perceptions of integrating wiki technology and peer feedback into English writing courses. *English Teaching: Practice and Critique*, 10(2), 88–103. Retrieved from <https://files.eric.ed.gov/fulltext/EJ944900.pdf>
- Lincoln, Y. S., & Guba, E.G. (1985). *Naturalistic inquiry*. Newbury Park, CA: SAGE.
- Lowry, P. B., Curtis, A., & Lowry, M. R. (2004). Building a taxonomy and nomenclature of collaborative writing to improve interdisciplinary research and practice. *The Journal of Business Communication*, 41(1), 66-99. doi:10.1177/0021943603259363
- Loehr, L. (1995). Composing in groups: The concept of authority in cross functional project team work. *IEEE Transactions on Professional Communication*, 38(2), 83-94.
doi:10.1109/47.387772
- Lund, A. (2008). Wikis: A collective approach to language learning. *ReCALL*, 20(1), 35-54.
doi:10.1017/S0958344008000414

- Lund, A., & Rasmussen, I. (2008). The right tool for the wrong task? Match and mismatch between first and second stimulus in double stimulation. *International Journal of Computer-Supported Collaborative Learning*, 3(4), 387-412. doi:10.1007/s11412-008-9050-8
- Lund, A., & Smørdal, O. (2006, August). Is there a space for the teacher in a WIKI?. In *Proceedings of the 2006 International Symposium on Wikis* (pp. 37-46). ACM. doi:10.1145/1149453.1149466
- Lundin, R. W. (2008). Teaching with wikis: Toward a networked pedagogy. *Computers and Composition*, 25, 432-448. doi:10.1016/j.compcom.2008.06.001
- Mahboob, A., & Elyas, T. (2014). English in Saudi Arabia: A historical and linguistics analysis. *World Englishes*, 33(1), 12-35. doi:10.1111/weng.12073
- Mak, B., & Coniam, D. (2008). Using wikis to enhance and develop writing skills among secondary school students in Hong Kong. *System*, 36(3), 437-455. doi:10.1016/j.system.2008.02.004
- Marshall, C., & Rossman, G. B. (2011). *Designing qualitative research* (Fifth Edition). London, UK: SAGE Publication, Inc.
- Masoud, T. (2015). Has the door closed on Arab democracy?. *Journal of Democracy*, 26(1), 74-87. doi:10.1353/jod.2015.0013
- Maxwell, J. (1996). *Qualitative research design: An interactive approach*. Thousand Oaks, CA: Sage.
- McKay, S. (2006). *Researching second language classroom*. Mahwah, NJ: Lawrence Erlbaum.
- McMullin, B. (2005). Putting the learning back into learning technology. *Emerging Issues in the Practice of University Learning and Teaching*, 67-76. Retrieved from <http://citeseerx.ist.psu.edu/viewdoc/summary?doi=10.1.1.467.5925>

- Mindel, J. L., & Verma, S. (2006). Wikis for teaching and learning. *Communications of the Association for Information Systems, 18*(1), 1-23. doi:10.17705/1CAIS.01801
- Ministry of Education. (1974). *Educational policy in the kingdom of Saudi Arabia*. Riyadh, Saudi Arabia: Ministry of Education.
- Ministry of Education. (2016). *Education in the kingdom of Saudi Arabia*. Riyadh, Saudi Arabia: Ministry of Education.
- Morgan, M., Allen, N., Moore, T., Atkinson, D., & Snow, C. (1987). Collaborative writing in the classroom. *Bulletin of the Association for Business Communication, 50*(3), 20-26. doi:10.1177/108056998705000305
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2002). Verification strategies for establishing reliability and validity in qualitative research. *International Journal of Qualitative Methods, 1*(2), 13-22. Retrieved from <http://journals.sagepub.com/doi/pdf/10.1177/160940690200100202>
- Nouraldeen, A. S., & Elyas, T. (2014). Learning English in Saudi Arabia: A socio-cultural perspective. *International Journal of English Language and Linguistics Research, 2*(3), 56-78. Retrieved from https://www.researchgate.net/publication/269272686_LEARNING_ENGLISH_IN_SAUDI_ARABIA_A_SOCIO-CULTURAL_PERSPECTIVE
- Odell, L. (1985). Beyond the text: Relations between writing and social context. In Odell, L., & Goswami, D. (Eds.), *Writing in nonacademic settings* (pp. 249-280). New York: Guilford.
- Oshan, M. (2007). *Saudi women and the Internet: Gender and culture issues* (Doctoral dissertation). Available from Loughborough University Institutional Repository database. <https://dspace.lboro.ac.uk/2134/7906>

- Paily, M. U. (2013). Creating constructivist learning environment: Role of "Web 2.0" technology. *International Forum of Teaching and Studies* 9(1), 39-52. Retrieved from https://www.researchgate.net/profile/Abdel_Rahman_Abu-Melhim/publication/309160632_Promising_as_a_speech_act_in_Jordanian_Arabic/links/5827262708ae950ace6ca92f.pdf#page=39
- Patton, M. (1980). *Qualitative evaluation methods*. Beverly Hills, CA: Sage.
- Patton, M. (2002). *Qualitative Research and Evaluation Methods*. Thousand Oaks, CA: SAGE.
- Pavlenko, A., & Lantolf, J. (2000). Second language learning as participation and the (re)construction of selves. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 15-48). Oxford, England: Oxford University Press.
- Perakyla, A. (2008). Analyzing talk and text. In Denzin, N. K and Lincoln, Y. S. (Eds.), *Collecting and Interpreting Qualitative Materials* (3rd Edition). Thousand Oaks, CA: Sage.
- Prensky, M. (2001). Digital natives, digital immigrants part 1. *On the Horizon*, 9(5), 1-6.
doi:10.1108/10748120110424816
- Posner, I. R., & Baecker, R. M. (1992, January). How people write together. In *System Sciences, 1992. Proceedings of the Twenty-Fifth Hawaii International Conference* (Vol. 4, pp. 127-138). Retrieved from www.dgp.toronto.edu/people/RMB/papers/p6.pdf
- Razak, N. A., Saeed, M., & Ahmad, Z. (2013). Adopting social networking sites (SNSs) as interactive communities among English foreign language (EFL) learners in writing: Opportunities and challenges. *English Language Teaching*, 6(11), 187-198.
doi:10.5539/elt.v6n11p187

- Reo, R. (2006). Scaffolding Student Collaboration for Group Wiki Projects. In Mader, S. (Ed.), *Using Wikis in Education* (pp. 34-40). Retrieved from https://www.edugroepen.nl/sites/ICTO-nieuwsbrief%20VU/Shared%20Documents/UsingWikiInEducation_StewartMader.pdf#page=45
- Roblyer, M. D., & Doering, A. H. (2010). *Integrating educational technology into teaching* (5th Ed.). New York: Allyn & Bacon.
- Saaty, A. A. (2015). Utilizing facebook in language classrooms: Social constructivist and affective filter approaches. *Arab World English Journal*, 6(4), 113-127.
doi:10.13140/RG.2.1.5050.2005
- Saldaña, J. (2015). *The coding manual for qualitative researchers* (2nd Edition). Los Angeles, CA: Sage publications.
- Saudi Arabian Cultural Mission to the U.S.A. (2006). *Educational system in Saudi Arabia*. Washington DC, Saudi Cultural Mission. Retrieved from http://www.sacm.org/Publications/58285_Edu_complete.pdf
- Searles, J. R. (1969). *Speech acts*. Cambridge, UK: Cambridge University press.
- Searles, H. F. (1979). *Countertransference and related subjects: Selected papers*. Cambridge, UK: International Universities Press.
- Secomb, M., & Smith, C. (2011). A mixed method pilot study: The researchers' experience. *Contemporary Nurse*, 39(1), 31-35. doi:10.5172/conu.2011.39.1.31
- Sims, R. (2002). *Teaching business ethics for effective learning*. Westport, CT: Quorum Books.

- Smith L., Abouammoh A. (2013). Higher education in Saudi Arabia: Reforms, challenges and priorities. In Smith L., Abouammoh A. (Eds.), *Higher Education Dynamics: Vol. 40. Higher Education in Saudi Arabia*. Springer, Dordrecht. doi:10.1007/978-94-007-6321-0_1
- Smith, B. G. (2004). *The gender of history: Men, women and historical practice*. Cambridge, MA: Harvard University Press.
- Stake, R. E. (2010). *Qualitative research: Studying how things work*. New York: The Guilford Press.
- Stahl, G. (2003). *Communication and learning in online collaboration*. Paper presented at GROUP_03, Sannibel Island, FL. Retrieved from <http://www.cis.drexel.edu/faculty/gerry/publications/conferences/2003/group/group03.dc>.
- Storch, N. (2002). Patterns of interaction in ESL pair work. *Language learning*, 52(1), 119-158. doi:10.1111/1467-9922.00179
- Storch, N. (2004). Using activity theory to explain differences in patterns of dyadic interactions in an ESL class. *The Canadian Modern Language Review*, 60(4), 457-480. doi:10.3138/cmlr.60.4.457
- Storch, N. (2005). Collaborative writing: Product, process, and students' reflections. *Journal of Second Language Writing*, 14(3), 153–173. doi:10.1016/j.jslw.2005.05.002
- Storch, N. (2007). Investigating the merits of pair work on a text editing task in ESL classes. *Language Teaching Research*, 11(2), 143–159. doi:10.1177/1362168807074600
- Storch, N. (2011). Collaborative writing in second language contexts: Processes, outcomes, and future directions. *Annual Review of Applied Linguistics*, 31, 275–288. doi:10.1017/S0267190511000079

- Storch, N. (2012). Collaborative writing as a site for L2 learning in face-to-face and online modes. In Kessler, G., Oskoz, A., & Elola, I. (Eds.), *Technology across writing contexts and tasks*. Texas State University, TX: CALICO.
- Storch, N. (2013). *Collaborative writing in second language classrooms*. Bristol, UK: Multilingual Matters.
- Strijbos, J. W., Martens, R. L., Prins, F. J., & Jochems, W. M. (2006). Content analysis: What are they talking about?. *Computers & Education*, 46(1), 29-48.
doi:10.1016/j.compedu.2005.04.002
- Su, F., & Beaumont, C. (2010). Evaluating the use of a wiki for collaborative learning. *Innovations in Education and Teaching International*, 47(4), 417-431.
doi:10.1080/14703297.2010.518428
- Suthers, D. D. (2006). Technology affordances for intersubjective meaning making: A research agenda for CSCL. *International Journal of Computer-Supported Collaborative Learning*, 1(2), 1-24. Retrieved from <https://core.ac.uk/download/pdf/5094897.pdf>
- Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In Lantolf, J. P. (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford, England: Oxford University Press.
- Tashakkori, A., & Teddlie, C. (1998). *Mixed methodology: Combining qualitative and quantitative approaches*. Thousand Oaks, CA: SAGE.
- Thorne, S. L. (2016). Cultures-of-use and morphologies of communicative action. *Language Learning & Technology*, 20(2), 185-191. doi:10125/44473

- UNESCO. (2011). Saudi Arabia: Principles and general objectives of education. *World Data on Education*. Retrieved from http://www.ibe.unesco.org/fileadmin/user_upload/Publications/WDE/2010/pdfversions/Saudi_Arabia.pdf
- Vaughan, N. (2008, March). *Supporting deep approaches to learning through the use of wikis and weblogs*. Paper presented at the Society for Information Technology and Teacher Education International Conference, Las Vegas, NV. Retrieved from <https://www.learntechlib.org/p/27657/>
- Vicens, Q., & Bourne, P. E. (2007). Ten simple rules for a successful collaboration. *PLoS Computational Biology*, 3(3), 0335-0336. <https://doi.org/10.1371/journal.pcbi.0030044>
- Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.
- Wang, Y. C. (2014). Using wikis to facilitate interaction and collaboration among EFL learners: A social constructivist approach to language teaching. *System*, 42, 383–390. doi:10.1016/j.system.2014.01.007
- Wong, J., & Waring, H. Z. (2010). *Conversation analysis and second language pedagogy: A guide for ESL/EFL teachers*. New York, NY: Routledge.
- Yang, D., Wu, D., Koolmanojwong, S., Brown, A. W., & Boehm, B. W. (2008, January 7-10). *Wikiwinwin: A wiki-based system for collaborative requirements negotiation*. Paper presented at Hawaii International Conference on System Sciences, Proceedings of the 41st Annual (pp. 24-24). IEEE. doi:10.1109/HICSS.2008.502
- Warschauer, M., & Grimes, D. (2007). Audience, authorship, and artifact: The emergent semiotics of Web 2.0. *Annual Review of Applied Linguistics*, 27, 1-23. doi:10.1017/S0267190508070013

- Wheeler, S., & Wheeler, D. (2009). Using wikis to promote quality learning in teacher training. *Learning, Media and Technology*, 34(1), 1-10. doi:10.1080/17439880902759851
- Woo, M., Chu, S., Ho, A., & Li, X. (2011). Using a Wiki to scaffold primary-school students' collaborative writing. *Journal of Educational Technology & Society*, 14(1), 43–54.
Retrieved from
<https://pdfs.semanticscholar.org/5346/96bdd614f9300e5900790a216f6b1f29e66a.pdf>
- Woo, Y., & Reeves, T. C. (2007). Meaningful interaction in web-based learning: A social constructivist interpretation. *The Internet and Higher Education*, 10(1), 15-25.
doi:10.1016/j.iheduc.2006.10.005
- Yamani, M. (2000). *Changing identities: The challenge of the new generation in Saudi Arabia*. London, UK: Chameleon Press.
- Yamani, M. (2005). Muslim women and human rights in Saudi Arabia: Aspirations of a new generation. In Moghissi, H. (Ed.), *Women and Islam* (Vol. 1, pp. 402-410). New York, NY: Routledge.
- Zorko, V. (2009). Factors affecting the way students collaborate in a wiki for English language learning. *Australasian Journal of Educational Technology*, 25(5), 645-665.
doi:10.14742/ajet.1113

Appendix A

Wiki-Based Collaborative Writing Task Prompt



Dear participants:

In your wiki page, collaboratively with your group members, compose a 600-word essay about the challenges that Saudi ESL students may face in learning English in Saudi Arabia. In this essay, you need to include a title, a brief introductory paragraph, body paragraphs, and a brief concluding paragraph. Provide a logical structure where the essay moves from point to point in a logical fashion. As you compose the essay jointly, articulate at least 5 major challenges that Saudi ESL students may encounter when learning English in Saudi Arabia. Explain and describe each of these challenges in detail and provide examples as well. Your audience for this essay are beginning ESL teachers. Therefore, provide clear solution(s) for ESL teachers to better help their students to overcome these challenges and learn better.

Below are some main points that you should address in your essay:

- Discuss and agree about at least 5 major challenges you will write about;
- Jointly explain each of these challenges;
- Jointly provide examples for each of these challenges;
- Jointly suggest solution(s) for each of these challenges.

These points are intended as useful prompts to help you organize your thoughts. Please feel free to address other issues as well if you feel necessary.

You are expected to:

- Complete this task in two weeks beginning on ... and ending on ...;
- Work collaboratively as a group to complete the task. Each group member is required to visit the wiki at least once a day and spend at least ten minutes working on this task. Feel free to visit the wiki any time you have something to say;
- You are not required to meet face-to-face or do anything else outside of the wiki;
- Use these wiki features as often as you can: Edit, Discussion, Comment, History. Please note that the purpose of my study is to establish the ways in which these wiki features could enhance collaborative writing. When a group member accesses the wiki, she is required to consider using the wiki feature that seems most appropriate for her contribution. She may use one or more wiki features to correct a typo, a misused word, a problematic phrase, content that she accepts or not, or to suggest any other changes. For example, if she needs to correct a misspelt word, the “Edit” option may be sufficient. If, however, she needs to replace a misused/imprecise word/phrase, an explanatory comment is needed in addition to the correction. Or, if she feels something doesn’t sound right (e.g., she is about to suggest a content and/or structural change), she may pose a discussion question or suggestion in the “Discussion” section (e.g., “Is this what we mean?” “How about saying that instead?”), before she incorporates her idea in the proposal itself. She may consult the “History” option to compare/contrast the current and previous versions of the essay;
- Feel free to make any changes in your own writing as well as in your group members’ writing;
- After you make one change, stop and leave room for others to do the same. Avoid saying/doing all that comes to mind at any one moment;

- Remember that composing together (e.g., negotiating the essay’s content and structure or making joint decisions on the whole-text level) is just as important and even more important than editing together (e.g., making decisions on the word/phrase/sentence level);
- Follow these joint collaboration rules: be open-minded and respectful of others’ contributions; encourage discussion before making major changes; explain what you want to do and why before/when doing it; ask questions for clarification; try not to take over and write the bulk of the task even if you have more to say; make one point/change and leave room for others to do the same before you make another suggestion; prepare to accept the majority decision; be inclusive by acknowledging others’ contributions; along with the other group members, try and think as well as write together; work with what is already on the wiki unless all members decide on cardinal changes.

Enjoy your collaborative wiki-based writing experience!



Appendix B

Institutional Review Board Approval



Indiana University of Pennsylvania

www.iup.edu

Institutional Review Board for the
Protection of Human Subjects
School of Graduate Studies and Research
Stright Hall, Room 113
210 South Tenth Street
Indiana, Pennsylvania 15705-1068

P 724-357-7730
F 724-357-2715
irb-research@iup.edu
www.iup.edu/irb

December 2, 2016

Ahdab Saaty

Dear Ms. Saaty:

Your proposed research project, "Exploration of Saudi Female TESOL Graduate Students' Interactions In and Perceptions of Wiki-Based Collaborative Writing Tasks," (Log No. 16-278) has been reviewed by the IRB and is approved. In accordance with 45CFR46.101 and IUP Policy, your project is exempt from continuing review. This approval does not supersede or obviate compliance with any other University requirements, including, but not limited to, enrollment, degree completion deadlines, topic approval, and conduct of university-affiliated activities.

You should read all of this letter, as it contains important information about conducting your study.

Now that your project has been approved by the IRB, there are elements of the Federal Regulations to which you must attend. IUP adheres to these regulations strictly:

1. You must conduct your study exactly as it was approved by the IRB.
2. Any additions or changes in procedures must be approved by the IRB before they are implemented.
3. You must notify the IRB promptly of any events that affect the safety or well-being of subjects.
4. You must notify the IRB promptly of any modifications of your study or other responses that are necessitated by any events reported in items 2 or 3.

The IRB may review or audit your project at random or for cause. In accordance with IUP Policy and Federal Regulation (45CFR46.113), the Board may suspend or terminate your project if your project has not been conducted as approved or if other difficulties are detected

Although your human subjects review process is complete, the School of Graduate Studies and Research requires submission and approval of a Research Topic Approval Form (RTAF) before you can begin your research. If you have not

Appendix C

Student Informed Consent Form

Informed Consent Form **[will be printed on IUP letterhead]**

Dear student,

My name is Ahdab Saaty. I am a doctoral candidate in the Composition and TESOL program at the English department. I am currently working to collect data for my dissertation titled as “Exploration of Saudi Female TESOL Graduate Students’ Interactions in and Perceptions of a Wiki-Based Collaborative Writing Task”.

You are invited to participate in this research study. You are eligible to participate because you are a Saudi female TESOL graduate student. The following information is provided in order to help you make an informed decision whether or not to participate. If you have any questions, please do not hesitate to ask.

Your participation:

The purpose of this study is to explore how Saudi female TESOL graduate students co-construct a written text in a wiki-based collaborative writing task and how they interact throughout the completion of that writing task. Additionally, this study investigates Saudi female TESOL graduate students’ perceptions of their own use of wiki-based collaborative writing when completing their writing task.

First you will take a pre-task questionnaire, which mainly asks about your English proficiency, technology experiences, and educational working style. Next, you will be assigned in small groups of three to four to work on a wiki-based collaborative writing task. After completing that task, you will be asked to complete a post-task face-to-face interview and write a reflection letter that would mainly ask about your collaborative writing experience in this research.

Your participation in this study is voluntary. Even if you choose to participate, you may withdraw at any time by notifying the Project Director. Upon your request to withdraw, all information pertaining to you will be destroyed. Participation or non-participation will not affect your presence and participation in the class, nor will it affect your grade in this or any other course. You will not be penalized if you decided not to participate in this study. If you choose to participate, all information will be held in strict confidence and will have no bearing on your academic standing or services you receive from your University. Your response will be considered only in combination with those from other participants. The information obtained in the study may be published in academic journals or presented at academic conferences but your identity will be kept strictly confidential.

Risks:

This research is considered to be minimal risk. That means that the risks associated with this study are the same as what you face every day. There are no known additional risks to those who take part in this study. Your name is anonymous, and your identity will not be disclosed to anyone during and after the study is completed.

Benefits:

You will have an experience in collaborative writing through the “Wiki” technology. The interactions and discussion with the peers will help you broaden your writing perspectives and enhance your writing skills/strategies. The use of the “Wiki” technology will also expose you to the learning/teaching dynamics, which will be beneficial to your future learning/teaching.

At the completion stage of the study, I will offer you a chance to read the results if you are interested in this. The results of this study will help you, as future English teachers, understand and realize the role that online collaborative writing can play in English writing education, and how it can be implemented in Saudi classrooms. In addition, understanding students’ perceptions of collaborative writing in a wiki platform can have considerable significance for improving English writing teaching in educational settings.

Confidentiality:

All information about you will be kept confidential and anonymous. All the gathered data will be securely stored on my password-protected laptop computer and in an external drive. The information and the results of the data may be published in academic journal or presented in academic conferences without disclosing identity information.

If you are willing to participate in this study, please sign the statement below and deposit in the designated box by the door. Take the extra unsigned copy with you. If you choose not to participate, deposit the unsigned copies in the designated box by the door.

Project Director: Miss. Ahdab Saaty
Position: Doctoral Candidate-Composition and TESOL
US Phone:
KSA Phone:
Email address: A.A.Saaty@iup.edu

Faculty Sponsor: Dr. Lilia Savova
Position: Professor of English
Phone:
Email address: lsavova@iup.edu

THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS (PHONE 724.357.7730).

Informed Consent Form (continued)

VOLUNTARY CONSENT FORM:

I have read and understand the information on the form and I consent to volunteer to be a subject in this study. I understand that my responses are completely confidential and that I have the right to withdraw at any time. I have received an unsigned copy of this informed Consent Form to keep in my possession.

Name:

Signature:

Date:

Your contact information (Email or/and phone number):

.....

.....

THIS PROJECT HAS BEEN APPROVED BY THE INDIANA UNIVERSITY OF PENNSYLVANIA INSTITUTIONAL REVIEW BOARD FOR THE PROTECTION OF HUMAN SUBJECTS (PHONE 724.357.7730).

Appendix D

Pre-Task Questionnaire Survey

Participant: _____ Date: _____

The following questionnaire is designed for my dissertation study on wiki-based collaborative writing. I would like to invite you to answer the following questions concerning your background information and your learning experiences. Please provide your information as truly as possible. All the data collected will be highly confidential and will only be used for this research study. Only the researcher will have access to the collected data.

Thank you very much for your kind help!

Section one: *English proficiency*

1. How many years have you studied English? _____.
2. What are your goals of learning English? _____
_____.
3. What is your experience of learning English? (choose one answer)
Very positive Positive Neutral Negative Very negative
4. How do you evaluate your English proficiency? (choose one answer)
Low Intermediate-low Intermediate Intermediate-high High

Section two: *Technology experiences*

5. How often do you use a computer?
_____ hours per day.
6. What do you use a computer for? (choose all that apply)
Studying Fun Social networking other _____
7. How comfortable are you when using computer programs for educational purposes?
(choose one answer)

Appendix E

Post-Task Interview Protocol

1. Have you ever worked on a collaborative writing project?
2. In conducting this task, how did you communicate with the group members? Besides the wiki communication tools, did you use any other communication tools? Which ones?
3. Do you think if you did this task all by yourself, individually, it would be better or worse? How?
4. Tell me about something new you experienced while conducting this task collaboratively that could not happen when writing individually?
5. Did you express everything you wanted to say to group members in the discussion? Or, were there some comments you did not feel comfortable sharing? Do you remember any of them now?
6. Did you edit everything you wanted to edit? Or, were there some edits you did not feel comfortable doing?
7. Did you find other members' suggestions and comments helpful? Why? How?
8. Were all your ideas, comments, and edits acceptable by other group members?
9. Do you consider your ideas, comments, and edits helpful in developing the task? How?
10. Were there some ideas, comments, and edits provided by group members that you did not agree with? If so, how did you respond?

11. In your group, were you all able to reach consensus (joint agreement) easily or were some of the differences difficult to resolve?
12. In your group discussion, you/a group member suggested: (*this question depends on each group contributions*)
-
- a) Was the suggestion welcomed by other group members? Were you satisfied with the discussion and with the joint solution? What are your thoughts about this input?
13. Regarding that specific suggestion, was there anything more you wanted to say or was that all you wanted to say?
14. Based on this experience, what benefits do you see in this collaborative writing task?
15. Based on this experience, what caveats do you see in this collaborative writing task?
- What did you find challenging about this task, and what did you do to overcome it?
16. Based on this experience, what suggestions can you provide to make wiki-based collaborative writing tasks more effective for students?
17. Do you think you are going to use wiki-based collaborative writing with your students?
- Why?
18. What additional comments do you have regarding this wiki-based collaborative writing task?

Appendix F

Reflection Letter Prompt

Write a 300- to 400-word reflection about your experience in completing this collaborative writing task. Talk about the things that you found most memorable, important, or even life-changing for you in this experience. What happened? What did you do? How did you feel? What did you learn?