Collaboratively Composing an Argumentative Essay: Wiki versus Face-to-face Interactions

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ABSTRACT

This study employed a qualitative case study method to compare learner-learner interaction on wiki and face-to-face collaborative writing in completing an argumentative essay. Face-to-face collaborative writing refers to in-class meeting of students to write essays collaboratively. Thirty ESL tertiary students from an intact class participated in the study. They were randomly divided into Group 1 and Group 2. Each of the two groups was further sub-divided into five smaller groups comprising three members. Group 1 discussed and wrote the essay on the wiki platform while Group 2 did the same task face-to-face in the classroom. One sub-group from both modes of writing was selected for in-depth comparison. Data were collected from the collaborative writing processes on the wiki platform and audio-recordings of face-to-face interactions, and also from semi-structured interviews. The findings revealed that the participants of both modes of writing were able to evaluate different viewpoints, and understand shortcomings and strengths through interaction in either of the collaborative learning contexts. The collaboration through both modes of writing showed that the participants not only displayed similar understanding, but also learned from each other through developing and sharing different perspectives on the same issues. Of the differences found between the two modes of collaborative writing, Wiki is a more effective platform for drafting and revising, while planning is easier done through face-to-face interaction. The study implies that either mode of collaborative writing can be adopted by ESL language instructors who aspire to practice the social-constructivist approach to writing instruction especially in a blended learning environment.

Keywords: ESL; collaborative writing; face-to-face; learner-learner interaction; social constructivist approach; wiki

INTRODUCTION

Collaborative learning is about working together towards a shared goal during the process of learning. It also means that learners accept their and also their group members' responsibility of learning. In other words, students take almost full responsibility for working, constructing

knowledge, changing and evolving with each other, and of course, improving together. Many advantages have been presented for collaborative writing up to now such as actively engaging students in discussion and negotiation of ideas to increase the students' awareness in learning. Notably, being engaged in discussions and taking responsibility of their own learning can help students to be critical thinkers (Dooly, 2008). In the context of the study, learner-learner interaction refers to students' interactions with their peers and groups, and it is a dynamic and social process where learners collaborate and negotiate new meanings together (Wenger, 1998). Because of the potentials of the Web 2.0 technology in promoting interaction among learners and instructors, it is gaining much attention in online teaching and learning (Beldarrian, 2006). The Wiki technology, as such, has been providing new chances to foster collaborative writing in teacher education (Hadjerrouit, 2014). Wiki, a relatively new online software, is one of the open sources that can be an effective tool for collaboration in language learning. It is known for its effectiveness in promoting interaction that requires collaborative efforts and collective knowledge construction (Goodwin-Jones, 2003; Trentin, 2009). Wikis have simple text syntax, allowing users to easily amend pages or to create new pages or hyperlinks between pages (Leuf & Cunningham, 2001). Wiki also provides exclusive features for collaboration. It has the ability for editing and viewing content revisions, as well as communicating with others (Lin & Reigeluth, 2016). Moreover, it permits the complete revision of text by any user, anytime, and anywhere. In this regard, authorship and ownership of an article, once limited to a single student, can now belong to a group. A contribution by any collaborative partner is not just a comment or response but rather an alteration to the previous contribution. It means that a text written on wiki can be changed by each member of the group (Kessler, 2009), and these changes help learners to improve their writing skill.

REVIEW OF RELATED STUDIES

Research carried out in ESL collaborative writing contexts has pointed out the mediating role of L2 dialogue or interaction as the most important aspect of successful L2 learning. Ohta's (2000) research in L2 learning is in line with the social interaction theoretical perspective that has provided evidence of the conceptualization of the mediating notion of dialogue and the establishment of community of practices. L2 learners construct linguistic knowledge as they attempt to accomplish a certain task.

Other studies have identified several features that characterize social interaction in L2 collaborative writing. For example, Storch (2001) conducted a study among intermediate-level adult ESL learners at a large university in Australia to characterize learners' interaction in collaborative writing among peers who were involved in completing grammar-focused tasks. The results revealed several features characterizing social interaction such as social relationship, common goals, and joint attempts that facilitate learning through meaning negotiation, and mutual assistance or help. The more collaborative peers produced more coherent texts, and better results were obtained than those who were not collaborators.

A later study conducted by Storch (2002) examined the nature of social interaction among adult learners who wrote in pairs. In comparing the peer-based writing versions and the individual writing versions, the analysis showed equality and mutuality as two dimensions of peer interactions. The patterns of interaction were collaborative, dominant/dominant, dominant/passive, and expert/novice. The findings obtained from 23 adult ESL learners engaged in collaborative writing showed that they could generate better ideas, pool more resources, enjoy collaboration, and enhance their vocabulary and accuracy than other learners who worked individually.

In another study, Ferna´ndez Dobao and Blum (2013) investigated learners' attitudes and perceptions to collaborative writing in pairs and small groups. The participants were 55 intermediate learners of Spanish as a foreign language. Half of them worked in pairs while the other half in groups of four. They all received the same post-task questionnaire. Overall, the learners had positive reaction to the collaborative writing experience, and only 4 out of 55 said they preferred to write individually. Most of them saw a positive impact of collaboration on grammatical and lexical accuracy of their texts.

Along the same line, Memari Hanjani and Li (2014) examined the impact of jointly performed task on participants' writing performance. The study had five pairs of EFL learners as participants, enrolled in an L2 essay-writing course at an Iranian university. Each pair jointly revised their argumentative texts. The participants interacted to do collaborative revision and their revised drafts were collected. The data analysis revealed that the students used a variety of functions in their negotiations. It was also observed that both partners benefited from the joint revision task regardless of their level of L2 writing proficiency. Due to the positive results, the study suggests the incorporation of collaborative revision in EFL writing instruction as a method to improve writing and revision skills.

In the Malaysian context, Yong's (2011) study on text construction of ESL tertiary learners during a collaborative writing task revealed that cumulative talk as well as questions and negotiation helped learners to think at a deeper level. Weaker students learned about idea generation, sentence structure and accuracy from their more capable peers. In another related investigation on the types of conflict among ESL/EFL upper immediate students during collaborative writing, the results showed that substantive conflict enabled group members to voice disagreement and consider alternatives (Pathinathan & Yong, 2012).

One set of related research studies investigated the application of Web 2.0 technologies in collaborative learning, and how such technologies have enabled instructors provide students with learning environments that can enhance interaction among instructors and peers (Beldarrain, 2006; Trentin, 2009). The employment of Web 2.0 tool in language instruction has enhanced students' interaction (Pop, 2010). The benefits of group work in EFL courses were also investigated (Chang, 2010). The results of the study showed that group work motivated students to develop their language and complete tasks.

Recent studies have also pointed out the features that make wiki an interactive learning environment (Lund, 2008; Yan, 2008). Wiki enables learners to communicate, share and contribute through easy editing, modifying, and revising. Such features facilitate learners' frequent engagement and interaction (Ansarimoghaddam, & Tan, 2013; Engstrom & Jewett, 2005; Goodwin-Jones, 2003; Singh, Harun, & Fareed, 2013). The online collaborative learning promotes higher social engagement level among learners (Shen et al., 2006). A study that was conducted through a fun activity of collaborative story writing using wiki revealed that wiki can potentially enhance the teaching and learning process of writing for students (Kazem Syed Hamid & Adlina Wan Mansor, 2012). Moreover, an online learning environment through wiki is learner-centered and it enables learners to involve with synchronous or asynchronous interaction in collaborative writing activities (Baird & Fisher, 2005). Furthermore, it was found that social negotiation has positive impact on the overall interaction in wiki (Sajjapanroj et al., 2008).

PURPOSE OF THE STUDY

Currently, a number of research studies have focused on the interaction on wiki (Beldarrain, 2006; Chang, 2010; Trentin, 2009) and face-to-face collaborative writing (Dale, 1994; Nixon, 2007; Storch, 2005) in various contexts. There is also a study that compares writing on a computer and using paper and pencil, focusing on the difference in the internal cognitive

processes (Hoomanfard & Meshkat, 2015). However, there is limited studies that compare learner-learner interaction on wiki and face-to-face collaboration in different stages of writing (i.e. planning, drafting, and revising) in order to determine the appropriateness of the collaborative techniques used in the three stages of writing. Therefore, the present study is conducted to fill in this gap by investigating the following research question: How does the learner-learner interaction in various writing stages influence the wiki and face-to-face collaborative writing processes?

THEORETICAL FRAMEWORK

This study was mainly guided by constructivism and connectivism learning theories in investigating the research question. In explaining knowledge construction, scaffolding that is an important aspect of social constructivism, is discussed. Scaffolding can be better explained through Zone of Proximal Development (ZPD) that was presented by Vygotsky in socio-cultural theory. ZPD is defined as what the learners can do without being scaffolded and what they can do with scaffolds or assistance. In relating this approach to the present study, writing has been defined as a social and cognitive learning process (Matsuda, 2003; Jones, 2006) and a process of negotiation and interaction. Besides constructivism, the present study also applied connectivism in the research because of its emphasis on communication through using online-based social networking tools (Nobels, 2011). Another rationale of applying this theory is that the principles of learning as advocated by this theory have not been included by any other theory. For example, constructivism theory only addresses learning that occurs inside individuals and it does not address learning that happens outside of the individuals such as storing and manipulating learning assisted by technology. This was supported by several researchers who applied connectivism (e. g., Dolan, 2011; Nobles, 2011) to their online research, which provided the evidence of wiki as a social network that enables learners to connect with each other and to write collaboratively (Engstrom & Jewett, 2005; Keith, 2006). A wiki-based learning environment is conducive to negotiation of ideas, collaboration and learning from each another (Keith, 2006). In addition, this new collaborative technology assists learners to modify and add to their writing easily and conveniently. Wiki can empower them to accomplish writing projects successfully through communication, interaction, discussion and collaboration (Lamb, 2004).

METHODOLOGY

An intact class of 30 first-year ESL undergraduates participated in the study. The participants of the study were randomly divided into Group 1 and Group 2 with 15 students in each group. Each of these two groups was further divided into five smaller groups comprising three participants. They were divided into two groups comprising 15 students each. Among the participants, 23 were female (76.7%) and 7 were male (23.3%). Most of the participants (76.7%) spoke Malay as their first language, while 13.3% spoke Mandarin, 6.7 % Tamil, and 3.3% spoke French language. The participants' age range was from 18-23 years old.

Different data sources and data collection methods were used, namely, audio- and video-recording, wiki discussion records, and semi-structured interview. The wiki technology chosen for this study was *Wetpaint* (www.wetpaint.com). Wetpaint is a hosted service that allows users to register and create a free wiki website. It includes an easy edit button that is easy to use and requires no knowledge of syntax. Furthermore, it offers several functional features that can assist users to write collaboratively in a shared website. It provides navigation for non-linear organization, different from blog's reverse chronological order. Students can also use the discussion feature to leave comments or communicate

asynchronously. Given these functional characteristics of wiki, Wetpaint provides a suitable learning environment for wiki collaborative writing tasks. The wiki website the participants used for their collaborative writing in the current study was *wikicollaborativewriting.wetpaint.com*. The participants were interviewed about their interaction on wiki and face-to-face collaborative writing and their experiences in each stage of the collaborative writing process.

A qualitative case study method was used in this research study. The participants of the study were randomly divided into Group 1 and Group 2. Each of these two groups was further divided into five smaller groups comprising three participants. Group 1 wrote on wiki and Group 2 wrote during face-to-face discussion. Both groups wrote an argumentative essay on a similar topic and followed the same stages of writing; only the mode of collaborative writing was different. One sub-group from Group 1 (wiki) and one sub-group from Group 2 (face-to-face) were chosen for in-depth comparison.

After the briefing about the collaborative process, the participants wrote an argumentative essay in their respective groups. The collaborative essay was written in three stages of planning, drafting, and revising. Students were given instruction on how to collaborate in each stage of the collaborative writing. In the planning stage, both group members of wiki and face-to-face were involved in planning, generating ideas and making decisions about choosing and clustering the best ideas. The face-to-face groups finished the planning stage in the class. The wiki groups, on the other hand, continued the discussion on planning until the next session. In the drafting stage, the groups drafted the whole essay based on the ideas they had chosen in the planning stage. Similarly, face-to-face groups had to finish the drafting stage in the class while the wiki groups kept writing until the next session. At the last stage i.e. revision, each team member revised the writing of the other group members, and each member discussed what he/she corrected to avoid making the similar errors. Error corrections were to help the participants learn rather than to find fault. The face-to-face groups conducted their revision in class. The wiki groups went beyond each session. Having more time for collaboration by itself can be a priority of wiki over face-to-face collaborative writing. The participants' interaction was saved automatically on wiki while the interaction for face-to-face collaborative writing sessions was audio and video-recorded.

RESULTS

The data obtained from the audio and video-recording were transcribed, and wiki discussion records were analyzed to compare the two sub-groups' interactional exchanges through the two modes of collaborative writing.

One sub-group from Group 1 (Sub-group A) and one sub-group from Group 2 (Sub-group B) were chosen as cases for in-depth micro-analysis to compare learner-learner interaction in various writing stages of collaborative writing processes effectively. These groups were chosen because their collaboration showed more critical incidents which exemplified the manner in which the groups interacted, generated ideas, composed different sections of the essay, constructed knowledge, and revised the whole essay.
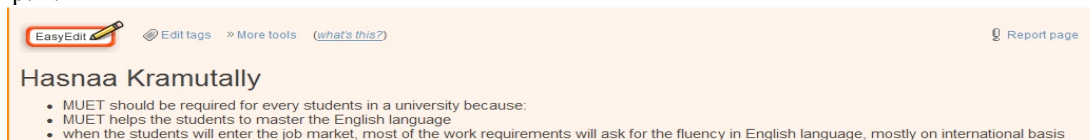
SUB-GROUP A: COLLABORATIVE WRITING ON WIKI

The participants in the wiki group created a wiki-ID for themselves. This group comprised three members: Hasnaa Kramutally, Fishy Yee, and Li Yuan. Excerpts were selected to illustrate what the members did in each stage of their collaborative writing on wiki.

PLANNING STAGE (SUB-GROUP A)

The participants were involved in planning their writing task on the argumentative essay entitled "Should the Malaysian University English Test (MUET)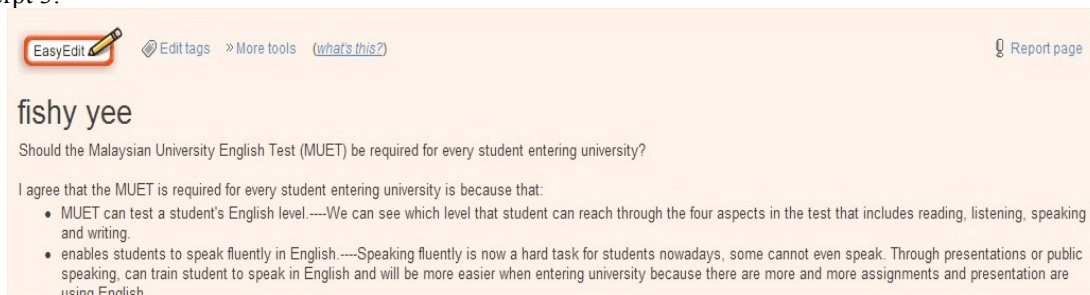 be required for every student entering university?" The group began by brainstorming and sharing their ideas with one another. They wrote their ideas on their personal page. Excerpt 1 illustrates Hasnaa's agreement with the topic. She provided her reasons that MUET was necessary for students who wanted to enter the university because it helped them to master English language and to prepare themselves for the job market which requires fluency in the language.

Excerpt 1:

Unlike Hasnaa, Li Yuan disagreed with the topic due two reasons. Firstly, as students were required to attain a specific band score (e.g. 5) in MUET, they would just focus on that short term goal instead of improving their language skills. Secondly, the MUET result is valid for five years. Students might think that they were already qualified and might not put in more effort to improve their English language further. Furthermore, IELTS was recognized in many countries compared to the MUET. Based on her prior knowledge and experience, Li Yuan provided a lengthy explanation to justify her argument (see Excerpt 2).

Excerpt 2:

One of the useful features characterizing writing on wiki as illustrated in Excerpt 2 is that wiki provides learners with the opportunity to highlight the most important segments of the written text. Wiki provided learners with the necessary tools to change the appearance of the text such as bold, underline, italicize, and colors. Therefore, it was easier for other group members as well as instructors to understand the text and the line of argument better.

Contrary to Li Yuan's views, Fishy Yee believed that MUET could test students' English level and gauge the students' attainment of the language skills. MUET also trains students to present their work in English, which is common feature at the tertiary level. Like other members, Fishy Yee provided justifications and reasons for her views (see Excerpt 3).

Excerpt 3:

The group read what their members wrote on the wiki platform and posted comments on threads to decide which ideas were the best. Decision making through discussion is the central process of participation especially in collaborative writing because the chosen ideas have impact on the quality of the essay. Hasnaa initiated the discussion on Li Yuan's page (Excerpt 4). This excerpt was taken from the participants' discussion in which they had to come up with a list of ideas suggested about the topic.

Excerpt 4:

Hasnaa accepted some ideas presented by Li Yuan. At the same time, she showed her disagreement by stating that it was not necessary for the students who come from English-speaking countries to take the MUET test. Fishy Yee tried to convince Hasnaa that both of them shared the same idea, but they expressed it in different ways. They believed that it was necessary for local students to refresh what they had learned about English language continually; however, it should not be compulsory for English-speaking international students to take the MUET test because it would be a waste of time. Disagreement is a common feature in group interaction (Tocalli-Beller, 2003; Yong, 2010) that may result in better idea generation. The members had opportunities to express their opinions and that they were listened to. Consensus decision making is an agreement process that not only seeks the agreement of a majority of participants, but also works to resolve or reduce the objections of the minority to achieve the most agreeable decision for all (McConnell, 1999).

They then moved on to reflect on Fishy Yee's and Hasnaa's page to discuss and comments on the ideas. Li Yuan asserted that she preferred what private universities did to help students with low proficiency, which is to enroll in a specialized English course. As Hasnaa was not able to grasp what Li Yuan was trying to convey and the relevance of the idea, she asked for further explanation (see Excerpt 5).

Excerpt 5:

This part of the discussion shows that collaborative work on wiki enabled the participants the freedom to give comments, ask questions and clarify their points. Li Yuan elaborated her idea to make her intention clear. Li Yuan's explanation helped Hasnaa to understand the point and they all agreed to choose that idea. The example also illustrates how group members collaborated to construct meaning and to make decision.

From the participants' interactional exchanges in the planning stage, it is evident that the group members had equal participation and meaning making. Through negotiations, reasoning and sharing of general knowledge and experience, the group members could make a better decision in selecting appropriate ideas. The group members were interviewed whether they could offer ideas easily on wiki. All of them mentioned that it was easy to share their ideas on wiki because they could post their comments easily. Moreover, they could think of well-focused ideas for their essay. Besides, wiki provided the chance of changing the color of the text to highlight or to distinguish ideas and that led to better understanding of the task focus at hand. Collaboration on wiki also gave them a sense of liberty so that they could freely offer their ideas without worrying how other group members would react.
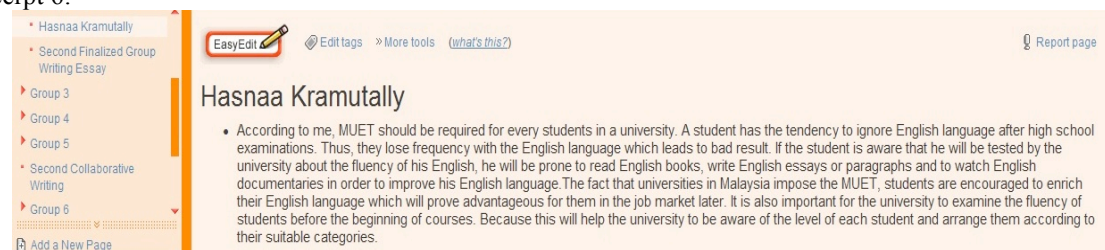
Conflict and disagreement are common phenomenon in collaborative writing (Yong, 2010). However, the group felt that there were no serious disagreements among the members because wiki naturally led to fewer arguments. Moreover, they had similar purposes and they did not want to waste time arguing with each other. Although they could chat, it was difficult to set the time for it. When they posted a comment through thread, it took time to receive response. This made discussion a bit difficult in the planning stage.

DRAFTING STAGE (SUB-GROUP A)

In the drafting stage, the whole essay was written. Since the group members collaborated on wiki, they divided the drafting work among themselves so that each group member had the responsibility of writing some sections. They agreed on elaborating each idea into a full paragraph. One of the members wrote the introduction and another person wrote the conclusion. The third person agreed to post the finalized essay in the special page provided for this purpose after revision.

The members drafted the whole essay based on what they had discussed in the planning stage. Each group member wrote on her own page. Below is the example of Hasnaa's page (Excerpt 6).

Excerpt 6:

In the drafting stage, the group did not have much discussion except for some reminders, which is being on time in posting paragraphs and seeking help for spelling. Excerpt 7 shows that Fishy Yee did not post the elaboration of the first paragraph on time. Therefore, Li Yuan reminded her to do her part.

Excerpt 7:
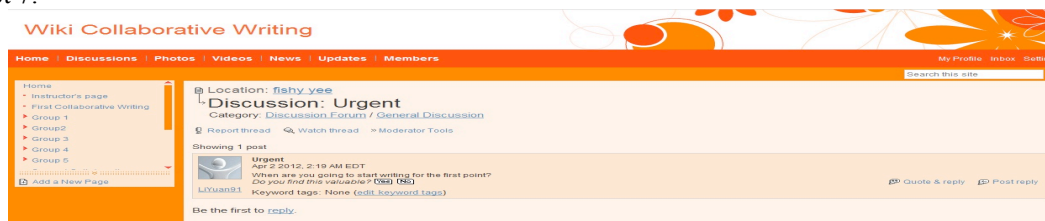
As shown in Excerpt 8, Fishy Yee sought help for the spelling of two words. Hasnaa responded to her query. The group members had the opportunity to ask questions and obtain answers from their group members on wiki.

Excerpt 8:
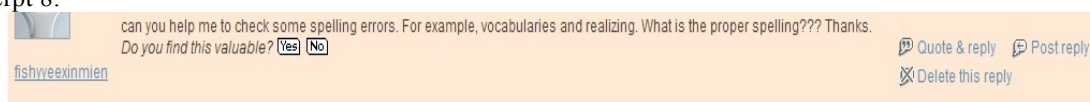
When the participants were interviewed about the drafting stage, they all agreed they just elaborated their ideas and attempted to draft the essay without much discussion. This is because they reserved editing and revision to the next stage. One of the interviewees believed that if there was a chance of meeting one another, she might discuss the content with them. Because on wiki when a comment was posted, one could not be sure when one would receive response; thus, they decided not to discuss much during this stage.

REVISING STAGE (SUB-GROUP A)

When group members finished drafting the whole essay, they moved on to the revision stage. In this stage, the group members went through one another's writing to correct the mistakes found in their joint essay. They focused on grammatical mistakes and vocabulary changes.
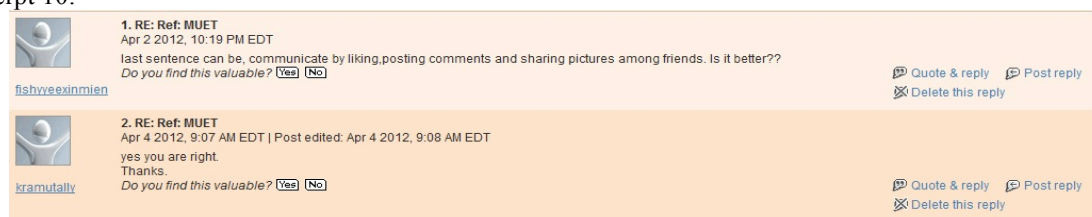
As illustrated in Excerpt 9, Li Yuan pointed out sections where grammatical mistakes occurred and needed to be corrected, accuracy of meaning and sentence structure. Fishy Yee was receptive to the feedback and was willing to do the corrections. Hasnaa pointed out another mistake and made a suggestion to add the verb *trying* to the phrase *to possess a better proficiency* to show a more accurate picture of the situation.

Excerpt 9:
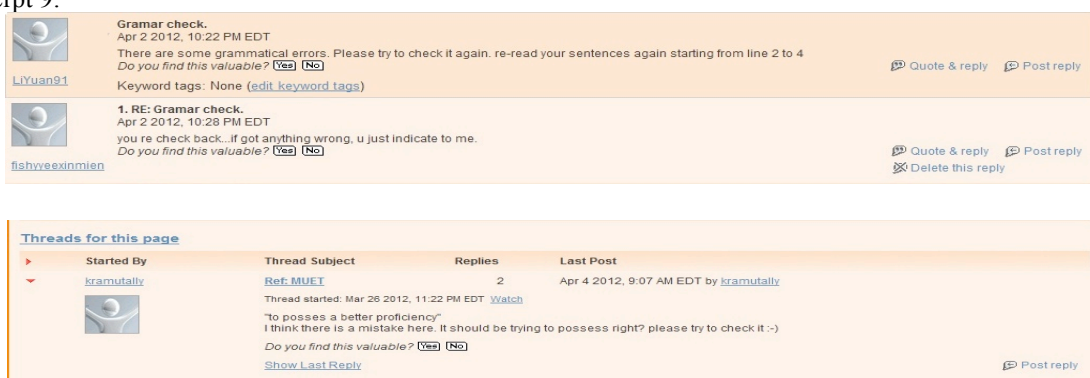
Fishy Yee also provided feedback on grammatical mistakes found in their writing. She reminded Li Yuan that the verb that follows the word *by* should be a gerund not an infinitive (Excerpt10). The comments made revealed scaffolding and co-construction of knowledge in that the group not only produced a better essay, but also learned about the mistakes they made.
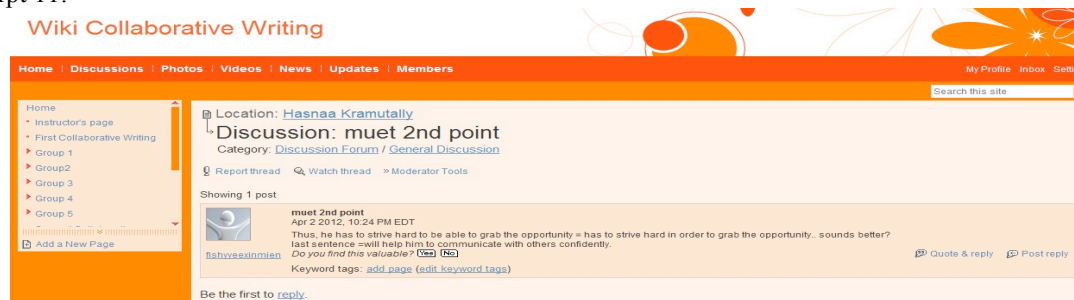
Excerpt 10:

Another aspect of writing that the members' revision focused on is the vocabulary. As shown in Excerpt 11, Fishy Yee suggested to change the phrase *be able* and replaced it with *in order to*. The group easily accepted group members' comments and made the amendments without any arguments. This may not be the typical response in the traditional face-to-face approach in revising. However, this might be typical on collaborative writing revision on wiki because group members do not meet one another and they need to wait for others to respond to their comments. Therefore, most of the time, the group did not argue a lot. Such lack of argument in collaborative writing revision can be good or bad. Sometimes arguments may disrupt the discussion and the group members may deviate from the real purpose. On the other hand, arguments may result in a better piece of writing because group members have to reconcile differing viewpoints (Storch, 2002; Tocalli-Beller, 2003; Yong, 2011).

Excerpt 11:

Based on the participants' responses to the interview questions regarding their group members' feedback in the revising stage, the results revealed that the participants perceived their peers' feedback as a useful way of learning. Hasnaa admitted that comments provided by her peers were helpful because they helped her to identify her mistakes. Fishy Yee declared that because the comments she received were helpful for improving the quality of their essay, she did not argue at all. Li Yuan believed getting the same score was enough for her; therefore, she did not want to argue a lot. She made sure that her comments were only for improving the essay and not for the sake of argument. The group members' responses to the interview question on argument are as follows:

Analysis of this group interaction on wiki through highlighting the critical incidents revealed that collaborative writing on wiki gave the chance of collaboration to the participants and they could interact and negotiate their views and ideas easily. Besides, the participants could write a collaborative essay and learnt their errors and mistakes.

SUB-GROUP B: FACE-TO-FACE COLLABORATIVE WRITING

This group comprised Suzi, Chong and Hassan. The group members' behaviors were consistent except for some instances when they encountered conflicting views.

PLANNING STAGE (SUB-GROUP B)

The writing task assigned to this sub-group was an argumentative essay, similar to the wiki group.

Excerpt 12:
> Suzi: Dear friends good morning, today we are going to write an essay that all of us are aware of the title which is "Should the Malaysian University English Test (MUET) be required for every student entering university?" I think at first we need to generate the proper ideas. Do you agree?
> Hassan: Yes
> Chong: Sure.
> Suzi: From my point of view having good command of English is really necessary for those who want to enter the university especially for those who are not native speaker in EL…. I share three ideas with you ….that shows why MUET is a requirement for entering university. It …. determines the participants' English proficiency level …. The second reason I want to share with you is that they will filter the students. … Students who cannot speak well will be eliminated … Because I think students with low level of English are frustrated when get in. The third is, English is really essential to continue the education here in Malaysia. Please you two give us your ideas then we choose the best among them.

Suzi began the planning stage by suggesting three ideas which showed agreement to the topic. First, having good command of English is really necessary to enter the university especially for the students whose English is not their mother tongue. Second, MUET filters university enrolment so that students with a low proficiency level will be disqualified from entering the university. Third, English is essential to continue one's education in Malaysia. Suzi then asked the other group members to share their ideas. Chong agreed with the topic and justified that having a good command of English enables students to do assignments better as well as to interact with others and international students. In his words:

> Chong: My point is the preparation for students e.g. students for entering the university must take MUET. ….because when the students entering university … if they are qualified and have good command of English, then, they can easily handle the assignment and then they will be able to communicate easily with others and international classmate they have in the class.

Hassan also presented his ideas. Unlike Suzi and Chong, Hassan gave a different view about the topic because he believed some students who did not pass the MUET test might be eager to enter the university and MUET was an obstacle for them. In his words:

> Hassan: Although I agree with the topic …… I have this in mind that some students maybe cannot pass the MUET test but they are eager to enter to the university, and just because of this obstacle they cannot enter to the university.

After voicing their ideas, the group had to decide which ideas were the best to support the topic. The group members were actively engaged in the discussion and they considered every point carefully. Suzi and Chong who agreed with the topic tried to convince Hassan that being competent in English is important for students to meet the demands of university work load and to communicate with others. To overcome the obstacle which was mentioned by Hassan, Suzi proposed that those students could study harder to pass the test. Chong

suggested that only capable students should enter the university. In response, Hassan mentioned that the statement was too general. They had to be more specific when justifying their point. Suzi agreed with Hassan's comment (see Excerpt 13).

Excerpt 13:
> Chong: Now each of us shared our ideas. So, it is the time to choose the best of them. Hassan somehow you are right but you should keep this in your mind even if those who have low language proficiency enter to the university they themselves face with problems and cannot study and communicate with others properly. I think it is a necessity to know English language especially here in Malaysia.
> Hassan: I understand what you are saying, but my point is…I mean it is not fair that some students cannot enter to the university just because he is not competent in English language.
> Suzi: You know Hassan it is easy if someone is not good in English, simply he should study hard and find the ability to pass the MUET test, then, easily can enter to the university.
> Hassan: Yes it can be right.
> Chong: In my point of view the best ideas are, just capable students should enter   to the university, English language is dominant here in Malaysia, and when students have good knowledge of English language they can better do their assignments at university.
> Hassan: Just capable students should enter to the university cannot be a main issue, because it is very general. We need to make it specific.
> Suzi: That is right, what about these points. One, students understands in which level they are and even if they pass the MUET test, they try to improve the skills they are not good enough in. Two, there are many international students, so it is an obligation to know English for those who want to enter to the university, and finally because they will be able to do their assignments with higher quality.
> Hassan: They are all right. I do agree.
> Chong: Fine with me also.

Having listened to everyone's suggestions, Suzi combined all their ideas and came out with three points which everyone agreed mutually. Compared to wiki, face-to-face collaboration allowed more rigorous discussion as members could provide immediate feedback and they could deliberate until they reached consensus.

Group members were interviewed about their interaction in the planning stage. The members believed that it was easy to express their ideas because all of them shared the same purpose and responsibility. Besides, the group members respected one another and used gestures to convey the intended meaning. The group members also believed that although there were some disagreements, they could solve them through explanation and logical reasons.

Based on the group members' interaction in the planning stage and their interview responses, it was obvious that generating ideas and decision making were easily accomplished because of mutual respect and immediate feedback from group members.

DRAFTING STAGE (SUB-GROUP B)

In the drafting stage, the group members drafted the whole essay. Suzi proposed that introduction and conclusion should be jointly written, but supporting paragraphs should be developed by individuals. She consulted her group members if they agreed with it. They unanimously accepted her suggestion.

Excerpt 14:
> Suzi: I have an idea it is better to write introduction and conclusion all together   and each idea, then, will be developed into a paragraph by each of us. How it sounds to you two?

Chong: It sounds great
Hassan: Ok, we do it like this, yes fine.

What was quite obvious in the group discussion was the monitoring of one another's piece of writing. Sentence structure was discussed a lot in the drafting stage to improve the quality of their essay. One of the examples was Hassan's suggestion to Chong to change the structure of one the sentences because it was confusing for the reader. Besides suggesting what to do, he restructured the sentence to show what he meant (see Excerpt 15).

Excerpt 15:
>   Hassan: You know what, I cannot understand this sentence very well I mean if you
>   express it with different structure it will be easier to understand.
>   Chong: What do you mean exactly?
>   Hassan: I mean it is better to say "either teacher or students benefit from this test because
>   communication becomes easier". Better say use either ….or… for constructing this
>   sentence.
>   Chong: Yeah.…got it.

Content was another aspect that the group members mainly talked about in the face-to-face drafting stage. They discussed what should be included or excluded from the paragraph to make it more comprehensive. In Excerpt 16, Hassan made a suggestion to Chong to elaborate and explain the benefits of using MUET and its positive effects. Again, he gave some examples how she could expand the idea.

Excerpt 16:
>   Hassan: After writing this part now you should explain how this area can benefit the
>   students… I mean for example when you can speak very well your presentation will
>   be more acceptable and impressive…your sentence will be very fluent…you have a
>   very higher confidence and that is it…if he speak very well then the presentation
>   has higher quality…you   should elaborate like this.

Another example of monitoring can be seen in Chong's suggestion not to include too many ideas in one paragraph (see Excerpt 17). She believed that this would make the paragraph too lengthy. They should focus on one main idea for one paragraph and provide comprehensive supporting details.

Excerpt 17:
>   Chong: Because there are four elements you cannot explain them all in details just in one
>   paragraph, so, you elaborate some, otherwise it look like a very long… try to finish
>   this in a paragraph and make it more comprehensive….

Suzi also corrected the content of a sentence by pointing out to Hassan that MUET is not a test which is recognized worldwide. It is not an international test like IELTS and TOEFL. She was concerned about providing correct information to the readers (see Excerpt 18).

Excerpt 18:
>   Suzi: In this sentence you have written "MUET is an important examination for students
>   to progress in their program…because it is recognized by the world". You cannot
>   say that it is recognized by the world….it is not like IELTS and TOEFL.
>   Hassan: Sure.

When the group members were interviewed about what they focused on in drafting stage, they responded that they mainly focused on sentence structure and content.

REVISING STAGE (SUB-GROUP B)

The last stage of collaborative writing was revising. At this stage, the group members revised the whole essay twice. At first, they revised it separately and then collaboratively. Their revision was carried out based on writing conventions and feedback received from members. They revised word choices, grammar mistakes, mechanics and paragraphing.

Excerpt 19:
> Suzi: I think the word that you have placed here should be changed. Instead of writing the word "know" you should write "recognized".
> Chong: You mean "know" is a wrong word?
> Suzi: Not exactly, but, recognize transfer the meaning better. Also, here you have used the word "moreover" more than three times its better to use its synonyms such as "furthermore", "besides", and "in addition" for example.
> Chong: All right

As illustrated in Excerpt 19, the group members read one another's writing meticulously and gave their suggestions on different aspects of writing. Suzi gave feedback on word choice and use of transition on Chong's piece of writing. She suggested an alternative word *recognize* to replace *know* because it gave a clearer meaning. Another suggestion was related to transition. She identified that the transition marker *moreover* was repeatedly used three times. It was better to use other synonyms such as *furthermore, besides* and *in addition* to add variety. It is apparent that the group is concerned about accuracy and coherence in their writing. Hassan and Chong also provided their feedback to improve their essay as follows:

> Hassan: I have a point, discussion about the four skills should be written in the first paragraph then discuss other thing later afterward; this makes our essay more understandable.
> Suzi: Okay, yes…
> Chong: Here you have written students are read……this sentence is active or passive? If it is active then you should write "students read" otherwise students should be omitted with an objective….
> Hassan: What do you mean exactly?
> Chong: Simply it means that the word "students" in this sentence is a subject. In passive tense the objective comes at the beginning of the study.
> Hassan: Oh, thanks, good point.
> Chong: This word should be written like this "tertiary" you have misplaced "i" and "a".
> Suzi: Oh, sorry…yes, yes.
> Chong:Next point is students should be engaged in not engaged of. The preposition should be changed.
> Suzi: I did not know that. Thank you for mentioning this point.
> Hassan: The word "therefore" should be added here to convey the meaning easier.
> Chong: Ok

Hassan commented on the organization of ideas to make it clearer for the readers. Discussion on the four skills should precede other ideas to set the scene. Chong pointed out the phrase *students are read* that was used by Hassan. She wanted to know if he intended to use an active or passive voice. Chong proceeded to explain the rules of an active voice. As Hassan was still unclear about this aspect, she elaborated on the principles of active and passive structure. Chong also commented on the wrong spelling of *tertiary* and wrong use of preposition *engaged of*. She provided her expertise to help the other members have a better understanding of the proper usage of grammar. The group continued to revise their essay based on the feedback they received. Their interaction was captured as follows:

> Hassan: Rather than this you need to place comma after the word "moreover".
> Chong: Uhhha
> Suzi: I found three words in your text that should be written capitalized but you did not, I have underlined them here, MUET because it is an acronym and the other two words because they are written at the beginning of the sentence.
> Chong: Completely right, I do the correction.

Hassan mentioned that a comma was needed after the subordinating conjunction *moreover*. Suzi drew Chong's attention to the use of capital letters. The word MUET should be capitalized because it was an acronym. There were two words that should also be capitalized because they appeared at the beginning of a sentence. The members' feedback had two benefits. First, through constant deliberation, giving and receiving feedback on various aspects of writing, the group improved the quality of the essay. Second, the participants became increasingly aware of the importance of correcting their own mistakes in their individual writing.

Nonetheless, the group members behaved or reacted differently to their peers' feedback. As shown in Excerpt 20, sometimes the members admitted their own mistakes and easily accepted the feedback. At times, it was hard to accept comments and they argued with each other. Hassan and Chong deliberated on the use of active and passive voice. Initially, they had disagreement with each other; however, they solved the problem amicably and reached to an agreement so that they could produce a good essay.

Excerpt 20:
> Chong: I think here instead of active sentence it is better to write it in a passive form?
> Hassan: Why?
> Chong: Because here subject of the sentence it is not important at all and just the objective is our concern.
> Hassan: You know what just you want to say that I have full of mistakes in my writing, active and passive sentences both are right.
> Chong: I do not want to disturb you; just what I want is to give comments for improving our essay.
> Hassan: But my sentence is not wrong by the way…
> Chong: As I told you before, passive structure is better and I did not mean yours is wrong. We are in a group and we want to write a good essay. That's all.
> Hassan: Ok fine

During this face-to-face collaborative writing, the group members raised questions that stimulated the thinking process. They utilized existing knowledge and created new knowledge in the process of writing and refining the text production. Although the members sometimes argued during collaborative writing, they engaged in supportive collaboration. When they were asked about the feedback session during revision stage, the participants confirmed that it was inevitable to have disagreements during collaboration, but they could reach consensus:

> I tried to read my friends' writing carefully and give them useful feedback but sometimes they argued a lot that was annoying. (Chong)
> I do not like to be criticized on and on but you know in face-to-face collaborative writing because students are sitting next to each other will discuss a lot about a point. (Hassan)
> Although there was argument among group members but it was not that problematic. (Suzi)

Collaboration through both wiki and face-to-face revealed that wiki can be a useful tool for collaborative writing (Hadjerrouit, 2014). It is not only as good as face-to-face but also even more effective because it can provide students with more opportunities to have effective interaction with one another.

DISCUSSION

In the planning stage, the first observation is related to the nature of the two modes of collaborative writing. Face-to-face collaborative writing provided the flexibility for the group to choose the way they want to collaborate with one another. Group members could decide to generate ideas together from the beginning or to work alone first and then share their ideas with other members later. However, for collaborative writing on wiki, since the group could not meet one another, they generated ideas on their own page first before they discussed together.

The second observation is related to idea generation from two aspects: generating of ideas and decision making. On wiki, the group members could generate more ideas with better creativity than face-to-face collaborative writing because they could search for materials online. This is consistent with the findings of Chao and Lo's (2009) study that participants could come up with more ideas, better creativity, and better organization in their collaborative planning through wiki.

Another advantage of wiki for generating ideas was the fact that the group members had more time to think and did not experience interruption. In face-to-face collaborative writing, the group members interrupted each other most of the time and they sometimes forgot what they wanted to say. Therefore, it created uncomfortable and uneasy feeling similar to the study by Nelson and Murphy (1992) that revealed receiving bad comments from the group members were disappointing. With regards to group discussion and decision making, face-to-face collaborative writing was more appropriate than wiki because the group members could meet, discuss ideas with more ease and share thoughts on the spot. Moreover, the findings revealed that although good ideas were generated on wiki, it was time-consuming. This is also reported by Chao and Lo (2009) who found that although a few participants reported that group discussion was time consuming, most participants liked the collaboration with appropriate division of work. On the other hand, the chat box might be an added advantage for the wiki group, but it was difficult to fix a common time to chat. When a comment was posted, it was not clear when the response was received. Consequently, it made planning on wiki somewhat difficult for the members because the planning stage demanded a lot of discussion.

The third observation is related to gestures. In face-to-face collaborative writing, the members could convey ideas better through facial gestures. Although on wiki, group members could not use gestures, wiki provided some facilities for its users such as emoticons, changing of colors, italicize, highlight, and bold the text to increase their level of understanding among group members during their interaction. The group made good use of these facilities during the wiki collaboration.

The fourth observation is related to disagreements among the group members. There were some disagreements among group members in wiki and face-to-face collaboration. Since the face-to-face group could discuss there and then, naturally they discussed more than the wiki group. This resulted in more arguments and sometimes the group deviated from the main topic. On the other hand, the wiki group did not have a lot of arguments. When the members met each other online, their attention was focused on the content. Both wiki and face-to-face groups could overcome their disagreements and reached consensus. In short, in the planning stage, both wiki and face-to-face group could easily generate ideas without any major problem. This indicates that wiki is a suitable means that facilitates learners' collaboration and interaction for the planning stage in collaborative writing almost the same as face-to-face collaborative writing. This finding is also in line with Chao and Lo (2009) who found that students' comments indicated that Wiki is likely to motivate learners to write as it enhances interaction and communication for writing.

Moreover, the participants' responses in the interview showed that although both wiki and face-to-face were suitable for the planning stage, discussion on the spot through face-to-face collaborative writing was more helpful and more effective. For the drafting stage in face-to-face collaborative writing, the group members chose the way they wanted to write. They wrote the introduction and conclusion together but divided the supporting paragraphs for individuals to write. Sentence structure and the content of the essay were discussed together. In wiki collaborative writing, the group members had to draft each part of the essay individually. The group members just wrote the parts assigned to them and they did not have much discussion about any specific idea and left commenting on one another's writing to the next stage. Based on the group members' responses to the interview, the participants preferred collaborative writing on wiki for this stage because they believed the focus was to draft the essay and not much discussion was needed.

For the revising stage in face-to-face collaborative writing, the group members paid attention to different aspects of writing conventions and checked them carefully. Sometimes, they argued with one another due to differing viewpoints. Although the disagreements were resolved, at times it resulted in an unpleasant situation. This is in agreement with the results of Nelson and Murphy (1992) who demonstrated how a participant played the role of an attacker, and the others tried to defend themselves or went against the attacker.

On the other hand, the group members in the wiki group mostly edited grammatical mistakes, word choice and word order. The members of both modes mentioned that feedback provided by their group members were effective and resulted in better learning. When comparing the revision on wiki and face-to-face collaborative writing, there were fewer mistakes on wiki than in face-to-face collaborative writing. The participants stated that they preferred wiki for the revision stage. The similar result was also found in the study conducted by Kost (2011) that by using wiki, most pairs tended to engage in both content and structural revisions, and by working in pairs, they could discuss any language- or discourse-related inquiries, and pool their knowledge to explain the issue.

The findings from the interaction among group members of both face-to-face and wiki collaborative writing revealed that both modes provided social interaction that motivated them to work together. This is in line with the study conducted by Chang (2010) who revealed that pair discussions and group work throughout the term encouraged interaction among students. Besides, collaborative writing on wiki showed that members were very engaged in the learning process (Trentin, 2009). The study also revealed that process writing had major impact on understanding the nature of writing and its instruction (Hyland, 2003). In this study, the notion of social constructivism can be clearly reflected by the learners' collaboration. The findings showed that the participants in both modes evaluated various viewpoints, realized shortcomings and strengths in the collaborative learning situation. Through collaboration in either mode of writing, they not only showed almost similar understanding, but also learned from one another through developing and sharing various perspectives on the same issue.

In summarizing the above, although both modes were appropriate for collaborative writing, there were some priorities for online collaborative writing over face-to-face collaborative writing. These findings do not degrade the benefits and advantages of face-to-face collaborative writing but rather show that wiki can be used as a continuation of face-to-face collaborative writing that makes interaction and collaboration easier and more effective. In other words, the notion that wiki makes collaborative writing among students possible was confirmed in this study from the perspective of perceived interaction levels between the group members. This finding is consistent with the study of Huang (2010) who admitted that wikis might promote collaborations between learners. The present study revealed that individuals could improve their abilities through interactions and reflective processes that promoted their individual growth.

CONCLUSION

In the present study one sub-group from Group 1 and one sub-group from Group 2 were compared in terms of their interaction on wiki and face-to-face collaborative writing in the three stages of planning, drafting and revising the essay for in-depth comparison. Both face-to-face and wiki provided interactions that made learners feel involved in the learning process. The investigation on the interaction among group members throughout the three stages of planning, drafting, revising and participants' interview responses revealed that the students' learning, construction and co-construction of knowledge occurred through interaction among group members. Participants learned how to brainstorm, generate ideas, look into a problem from different perspectives, develop ideas and write a complete paragraph, organize an essay, and revise a text on content, language and mechanics. These are processes that would come about within the zone of proximal development of learners. Generally, the participants enhance their abilities through collaboration by interactions and reflective processes as part of a constructivist classroom that promotes individual growth.

The results revealed that wiki allowed the participants to check the improvement of the essay by saving the date and time of the editing process as well as the person who did the editing. Other group members could add or further edit the content to improve or expand the idea. If revision by another user was inappropriate, it was possible to undo the revision since the editing process was always archived. All these activities were ongoing and governed by dynamic interaction among autonomous group members.

The findings of the present study may have significant implications for students at tertiary levels to produce high quality essays and improve their writing skill. Since collaborative writing in essence is a beneficial method for process writing, students should learn to write collaboratively through both wiki and face-to-face. The findings of the study can be used as a guide for students and teachers to choose any or both of the collaborative writing modes for language learning in a blended learning environment. When these two modes of collaborative writing are compared, wiki is more effective because it permits easy access to write, comment and revise what they have posted. Indeed, to overcome the limited class time in face-to-face environment and to provide learners with more chances to write, students can select to write on wiki. The present study suggests a need for both teachers and students to be familiar with the application of wiki for collaborative writing.

Future studies can be carried out to investigate the interaction between students and their instructors. It can be in the form of comparative investigation of different modes of collaborative writing or individual investigation of interaction among group members or interaction between students and teacher.

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