Facilitating Peer-Learning thru Wiki and Online Discussion Forum¹ Agus Dwi Priyanto Sebelas Maret University

Abstract

As the socio-constructivists believe, better learning process occurs when expert learners help the novice ones to accomplish a task. The advance of ICT has provided the opportunities for learning to take place not only in the classrooms but also through computer-mediated communication (CMC). The technology has also enabled students to learn not only from their teachers, but also their peers. As Ohta (2001) maintains, true peers have different strengths and weaknesses. The peer-learning will mutually reduce the weaknesses and improve the strengths.

This paper shares and discusses an experience on how students learn from their peers through CMC. The discussion is based on the findings of a small research done to a group of 40 university students having a project with wiki and online discussion forum. In this project, the students are given access to create and modify a wiki, a collaborative website whose content can be edited by anyone who has access to it. The topic of the wiki is general linguistics. In addition, the discussion will also cover the negotiations of meaning occurring in an online discussion forum. In this non-synchronous discussion, students share their success and difficulties in writing an essay. Both the wiki and the online discussion forum are hosted for free at (http://www.pbwiki.com/ⁱ and http://www.quicktopic.com/). These two channels of learning are made in addition to the weekly classroom sessions.

Both the benefits and the potential problems will be elaborated so that language or linguistic teachers can anticipate and plan for better projects.

Keyword: wiki, discussion board, collaboration, peer-learning

INTRODUCTION

Language learning paradigm has shifted so many times along with different perspectives of language. We are now coming to an era where language is closely interwoven with society and social semiotic system (Halliday & Hasan, 1989; Martin, 1992; Santosa, 2003). In this regard, language learning should be socially situated and not separated from the social and cultural values. In addition, learners are now not merely an individual, but also a member of a social group involved in goal-oriented activity and in co-constructing the learning process. Learning process takes place better when learners interact with others, either their teacher or their peers.

Departing from Vygotsky's (1978) theory of socio-constructivism, the practice of language learning and teaching now has also emphasized the importance of collaborative, goal-oriented learning. Pair or group works have become popular in task-based activities. Prior to the activity, students are made aware of the goal of doing the task, that is not to obtain the mark so that they pass the subject, but to achieve a certain accomplishment that only can be done by using the target language.

The advent of technology has enabled students to collaborate from different places at different times. The success of language learning through the help of email, chat, discussion board, blog, and webbased content is now evident (Priyanto, 2006). Godwin-Jones (2003) also finds wiki helpful in facilitating collaborative learning.

This paper discusses some points of utilizing wiki and discussion board to facilitate collaborative learning. Before presenting the findings, the first part of this paper will be a brief overview of wiki and discussion board; and the rationale of using these two channels. The benefits and the difficulties are then discussed. At the end of the paper, some recommendations for further practice are presented.

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WIKI & DISCUSSION BOARD

The name of discussion board is actually self explanatory. This refers to an online forum where users can post questions or answers to questions. As an asynchronous communication tool, discussion board enables users to prepare their posts before they actually click the 'send' button. This means that this tool give opportunities for the users to focus on the language (form) as well as the content.

Basically, wiki is a website that allows users or visitors not only to post comments as what happens in blogs, but also to edit the content of the page. To do this, no knowledge of HTML language is required. Users can modify the content of the page directly from their browser. That is why Godwin-Jones (2003, p. 15) states that "...wikis are intensely collaborative". This nature of very easy contribution will indeed enable users to post misleading information. However, other users can also make the revision once they see it. While wiki is an ideal way collaborative work, it requires seriousness in the collaboration and obedience to the conventions.

WHY DISCUSSION BOARD AND WIKI

Meskill (1999) encourages language teachers to create active, meaning-centered, participatory, and collaborative writing environments. L2 learning is effective, she argues, where there is a balanced focus on the forms as well as on the functions of language. Ideal environments for collaborative work comprise a convergence of learner identity, teacher support, content relevance, and the valuing of the activity as an integral contribution to the overall learning community. For computer-supported tasks, the tasks need to accommodate learners' needs, goals, and shared experiences.

Many studies have shown the success of language learning with the use of networked computers as a tool for collaboration. Phinney (1996) and Pennington (1999) both suggest that networked computers are highly effective to encourage student collaboration. Indeed, recent studies (Biesenbach-Lucas & Weasenforth, 2001) conclude that students' writing skills improve through the use of computer-mediated communication activities.

Specifically about discussion board, Warschauer & Meskill (2000) note a number of beneficial features which make it a good tool for language learning. First, computer-assisted discussion tends to feature more equal participation than face-to-face discussion. This is because when participating in online discussion, students have no personal inhibition from others. They can post their comments from anywhere secured from the eyes from others. All have the same access to the board, resulting in class discussions which are more fully collaborative (Warschauer, 1996; Warschauer, 1999). Second, discussion board carefully learn the linguistic forms used in others' posts and incorporate them in their messages (Warschauer, 1999). Third, discussion board allows more planning time. This then results in more lexically and syntactically complex language (Warschauer, 1996).

As far as wiki is concerned, Kessler (2009) maintains that students show more willingness to edit others' posts than their own contributions. This study finds that peer editing focuses on form more frequently than self-editing. LeLoup and Ponterio (2006) also recommend the use of Wikipedia as a valuable source of information to empower foreign language learning. Despite its nature to editable by all internet users, Wikipedia should be viewed as another new tool to increase exposure to a wide variety of topics.

Wiki also meets the principles of incorporating web-based activities (Warchauer, Shetzer, Meloni 2000). First, wiki is a good example of the use of web not only as a vehicle but also as a medium. The nature of wiki being online requires different language from that of traditional medium like newspapers, or wall magazines. This will teach students about what forms of communication should be used, the language, and the technical skills to use. Second, wiki is potential to empower students with autonomy, with less control of teachers. Third, wiki requires integration of all language skills. To be able to contribute an article, students should be able to read, listen, and discuss. In addition, by taking part in a wiki, students are aware of the real audience. The awareness of the audience will also influence the language used in their contribution. They are aware that their posts will be read by others: their teachers, their peers, or even

many people around the globe. Consequently, wiki also will triggers further collaboration, since when somebody finds something wrong in the article, (s)he can directly propose a revision.

Overall, discussion board and wiki meet the requirements for project based learning as proposed by Hanson-Smith (2007). First, the activity should give opportunities for learners to seek, synthesize, and analyze information in order to comprehend or create higher order knowledge. Second, it should facilitate learners' interaction in the use of language. Third, project-based learning should encourage collaboration as a group in which specific roles are assigned so that members can significantly make contribution to the end result of the project. Finally, such an activity should also make it possible to have peer-assessment or individual assessment and reflection, in addition to teacher's feedback.

INFORMATION BACKGROUND TO THE PROJECT

This study was conducted over a class of 36 students in a sixteen-week semester. The students are non-regular students of English Department at Sebelas Maret University, enrolled through UNS internal mechanism, not by the results of the national selection (SNMPTN). Their levels of English varied considerably, mostly at the beginner to intermediate levels. They were required to contribute their knowledge about general linguistics in a wiki hosted at <u>http://intro2gl.pbwiki.com/</u> and take part in the online discussion conducted through <u>http://www.quicktopic.com/</u>.

This project was conducted in response to a weekly silent classroom discussion. In the classroom discussion, students spoke up only when they were assigned to present the topic. Likewise, only few students from the audience responded to the presentation. They did have something to say but would not do so unless I as their teacher called their names. After the first four weeks, an evaluation showed that they understood very little of the topics that had been discussed. Therefore, the project on pbwiki and quicktopic was then introduced.

I then made the account on pbwiki for all students, with automatically generated passwords. I printed all the usernames and passwords, and then distributed them to students so that they had access.

In this project, I had my students find more resources about general linguistics and post them to the wiki. The topics covered included morphology, syntax, semantics; and also sociolinguistics and pragmatics as well. Providing all the pages and simple navigation on the side-bar (see Fig.1), I left the wiki to the students to collaboratively develop it. The main intention of this project was for this group to solely responsible for the knowledge construction. Secured with the passwords, only the members of the group had access to modify the content of the wiki. Students would not get any updates, additions, or any other kinds of revision from anyone other than their peers. I sometimes took part, only when problems seemed to arise.



Figure 1: Navigation on the Side Bar

While there are many other benefits of these two online tools, the discussion in this paper is concerned more with peer-learning facilitated through the project.

FINDINGS

This section shows how wiki and discussion board can facilitate peer learning through collaborative work. The discussion is then focused on how learners can be the source of knowledge for their peers. The second part of this section will be discussing some problems encountered, so that they can be anticipated for future projects. Since the findings about the use of discussion board are similar to what happened in the comment fields in the wiki, there will be no specific discussion about this.

Peer-learning through Wiki and Discussion Board

The first easily visible positive value is that students were enthusiastic when introduced to the project. All responses on the comments field on the front page show this. The following are some examples. *Kustina (1:34pm, Dec 23): Mr. Agus, I think this wiki is very use full since it can build our knowledge*

about linguistics...

Sartika (2:33pm, Dec 23): Dear Pak Depe, I'm so happy being active again... so silent three weeks before. I will make full use of this wiki then...

The figure below is other responses from the students. These positive responses show that that wiki can be an alternative learning environment for them.

	Figu
Nunung Permata said	2:
at 10:18 am on Dec 24, 2008	
	Posi
morning Mr. DP	e
i didn't attend the last meeting last week, so i do not know much about semantic and pragmatic. but i had asked my friends to explain the material for me. but i'm not completely understand.	-
however, i hope that i can have better understanding about semantic n pragmatic after i visit your blog. thanks	Resp
	nses
Umi Dwi Lestari said at 10:35 am on Dec 24, 2008	fron
a. 10.35 an 01 Dec 29 2000	Stud
Morning Mr. DP, How's today?	ts
i need to learn more since linguistics has many scopes of study. our last material is about sociolinguistics, i will try to add comment or may be edit the message from another students as well as i can. yesterday i got trouble to log in, but now is not. ok, you are so creative lecturer sir. it will be useful for us. thank you. have a nice holiday.	
as really yesterday rigot chousing in, but how is not, ok, you are so treative recturer sir, it will be useral nor as, thank you, have a nice holiday.	
Arini Hidayah said	
at 19:47 am on Dec 24, 2008	
Ass.Wr.Wb	
Good Morning Mr.DePe	
Good Morning My friends	
I want to try to study linguistics	
I want to write some comment from the other students about linguistics Mr.Depe, this is my first time I write my comment in pbwiki.	
mr. Depe, dais in my rais dane 1 write my Commercian powiek. U are good lectrue b'Cz U Can make this powiki.	
o are good recure ou zo can make the power. I an very interesting in power.	
s an equivalences in a ported of the nevery time neverywhere.	
Thanks	
HeHi	
^_^	
Wass.Wr.Wb.	

Secondly, the level of student participation rose very dramatically. Those who used to be silent in the classroom discussion are now active in the wiki. This can be seen in one of the history pages below.

Compare	
\odot \bigcirc	January 13, 2009 at 9:22:19 pm by Septian RP
\odot	January 13, 2009 at 8:21:59 pm by Tri Marina Handayani
00	January 13, 2009 at 6:22:34 am by Presty Rika Wati
00	January 11, 2009 at 8:39:06 pm by Arini Hidayah
00	January 10, 2009 at 3:47:19 pm by Umi Dwi Lestari
00	January 9, 2009 at 7:44:48 pm by Setyo Cahyaningtyas
00	January 9, 2009 at 7:07:02 pm by Dinar Fitria Rushadi
00	January 9, 2009 at 7:05:32 pm by Dinar Fitria Rushadi
00	January 9, 2009 at 7:04:14 pm by Dinar Fitria Rushadi
00	January 9, 2009 at 12:46:56 pm by Septianingrum
00	January 7, 2009 at 11:28:25 am by Septianingrum
00	January 7, 2009 at 9:38:21 am by Septianingrum
00	January 7, 2009 at 9:38:19 am by Septianingrum
00	January 5, 2009 at 1:36:50 pm by Agus D. Priyanto
00	January 5, 2009 at 1:36:47 pm by Agus D. Priyanto
00	December 27, 2008 at 8:32:47 am by Nhiken Sugiyanta
00	December 27, 2008 at 8:05:52 am by Nhiken Sugiyanta
00	December 26, 2008 at 5:04:28 pm by Sartika Dian
00	December 25, 2008 at 6:06:21 pm by Ramadan
00	December 24, 2008 at 10:40:01 pm by Foda Anggraeni
00	December 24, 2008 at 8:20:00 pm by Agus D. Priyanto
00	December 23, 2008 at 10:12:10 pm by Mega Asmara
00	December 23, 2008 at 10:10:08 am by Eka Agustina

Figure 3: History Page

Eka Agustina (who first made contribution – at the bottom of the list) is one of the silent students in the classroom, but then she initiated giving contribution to the page of 'morphology'. This also happens to such other students Mega Asmara, Foda Anggraeni, Septianingrum, Setyo Cahyaningtyas, Arini, Presty Rika Wati, and Septian. This shows online environment where students have no physical contact with others, have no personal inhibition, can improve learners participation. After the initiation from Eka, other students, who position themselves similar as her, then continued the wiki. This was done after they really saw that there was no harm of posting their contribution to the wiki. What is also good is that the more active and more knowledgeable peers did take part, so that they could share.

Another positive point of using this project is that wiki is successful in motivating learners to share what they understand. With this, others who are at the lower level can learn more, with the fact that the content is there in the wiki, accessible at any time. The pride of making contributions seems to be the factor behind this phenomenon. Some students made contributions not only once. As shown in Fig.4, Umi and Dwi Herwinta made contribution twice. This shows that they did struggle to find more resources so that they could contribute more. Indeed, in the classroom activities, these two students were more active in the discussion. In addition, I find that some other students even tried to make contribution on every page of the wiki. In short, wiki is able to engage the learners in a positive learning environment.

	00	January 14, 2009 at 6:05:02 am by Agus D. Privanto
	00	January 13, 2009 at 4:22:07 pm by BM Dwi Herwinta
	00	January 12, 2009 at 8:45:40 pm by Debora Wulan Yuni
	00	January 12, 2009 at 6:58:50 pm by BM Dwi Herwinta
	00	January 12, 2009 at 9:14:41 am by Evi Nurindah H
	00	January 11, 2009 at 8:17:08 pm by Arini Hidayah
	00	January 11, 2009 at 8:10:54 pm by Arini Hidayah
	00	January 9, 2009 at 7:26:04 pm by Dinar Fitria Rushadi
	00	January 5, 2009 at 5:34:02 pm by Kustina Indira
	00	December 31, 2008 at 7:53:43 am by Maria Febriana
	00	December 28, 2008 at 9:47:52 am by Umi Dwi Lestari
	00	December 24, 2008 at 8:21:33 pm by Supriyanto
	00	December 24, 2008 at 4:54:00 pm by Umi Dwi Lestari

Figure 4: Students made more than one contribution.

Another evidence of this is that even when one student asked a question addressed to me, other students gave the answer before I had time to do so. Although the answers should ideally be posted on the relevant page, this shows that students really want to share their ideas.



Figure 5: Question



Next, working in wiki, the students did collaboratively work together to construct their knowledge. My observation to the history pages shows that many contributions are significantly beneficial for their peers. Sometimes, they made the information clearer by giving examples. Some other times, they added some more information. The following is the evidence that they have successfully learned together by working collaboratively in the wiki.

SYNTAX					
		months, 3 week	ks ago Saved by 👌 Yasinta on January 7, 2009 at 1:29:36 pm		
Syntax is study of the principles and rules for constructing sentences in natural language.sentences					
Syntax is study of	t the princip	ples and rules	s for constructing sentences in natural language.sentences		
Syntax structure	: function, (Category, Rol	le		
Syntax structure example : Yasinta	: function, (Category, Rol	le		
Syntax structure	: function, (a membeli c	Category, Rol dua boneka k	ile kuar-kura		
Syntax structure example : Yasinta syntax structure	: function, (a membeli c Yasinta	Category, Rol dua boneka k membeli	kuar-kura dua boneka kura-kura		

Figure 7: Sample of Early Post

VIEW EDIT				
SYNTAX				
	by 🙆 Dian Karuniawati nuary 13, 2009 at 11:02:14 pm			
Early 1900 ferdinand de saussure founded structural linguistic. Before 20 th Century, language in term comparison and no scientific approach. There are two kinds of relation, relation of syntactical and paradigmatic relation.				
Syntax is the study of the principles and rules for constructing sentences in natural languages. It is also used to refer directly to the rules and principles				
that govern the sentence structure of any individual language.				
a. syntactic structure consist of 4 types, they are :				
1. structure of predication				
The component are subject and predicate.				
Ex : I live in malang. I as subject, and live in malang as predicate.				
2. structure of modification				
The component are : head and modifier				
Ex : the intelligent student. The intelligent student as modifier, and	student as head.			
3. structure of complementation	이 것 같은 것 같			
The component are : verb element and complement.				
Ex: live in malang. Live as verb element, and in malang as complem				
4. structure of coordination.				
The component is coordination				
For This is realised and studying Fundish, And as as and institut				
Figure 8: Edited Post				

Some Problems

There are indeed some problems I encountered when conducting the project. I can classify them into technical problems and pedagogical problems. By technical problems, I mean the problems deriving

from the low computer and internet literacy of the students. Pedagogical problems refer to those resulting from the misbehavior of the students or problems that may make the students learn misleading information.

The first very technical problem occurred when students failed to log in, because they forgot their usernames and passwords. Their usernames and passwords were automatically generated by the system when I made their accounts. The passwords comprised a name of animals and a combination of 4-digit numbers. Unfortunately, the system did not allow them to change their passwords that possibly were not familiar at all to them. Many students texted me for the usernames and passwords. I then printed the list, and gave it to the captain of the class.

Another technical problem came when some students, instead of modifying the page, they posted their contribution at the side bar. This made the navigation bar disappear. When this happened, all contribution was halted because students could not directly find the page they would modify. Actually, they did not that they could find it by typing the complete URL at the address field of their browsers. Instead, one of them asked me through the comments field at the bottom of the front page.



Figure 9: Students could not find the page.

Some students posted their contribution even at the comment fields. The first possible cause of this is the missing navigation bar, as what happened to Dwi Herwinta below (Figure 10). Because she could not find the page to post her contribution on morphology, she then posted it in the comment field. Another possible factor is because students were more familiar with discussion board where they could post their responses only at the comments field, not at the body of the web-page. When such a problem happened, I did not move their contribution directly to the place where it was supposed to be. Instead, I had them move so that they could learn how to work with wiki.



Thanks before..

Figure 10: Contribution in the Comment Field

In addition to the technical problems, some pedagogical problems also need anticipation. First, sometimes students posted misleading information that possibly made their peers misunderstood the concept. Despite the available time for them to plan, to check and recheck, and to find some more references for their contribution; some students posted what they understood, without consulting further reference. Usually, when such confusing information was posted, other students would post a question. The discussion then followed in the comment fields. As the nature of being a wiki, the posted materials were actually editable by the other members of the class. However, very often I found it long enough to wait. In such a case, to avoid further misunderstanding, I then reminded the contributor in such a way that would not inhibit him or her to make further contribution. Look at the following discussion.

Problems of cheating also occurred in this project. Some students just re-typed the materials from the textbook I recommended as the reference. Instead of posting the links, some others even only copied the text from online resources. When I found this, I reminded them that they would get any benefit of doing so. I encouraged them to post in their own words. Another intention of working with this project was to assess student mastery of the knowledge or the content. This treatment worked well, as shown in Figure 7 and Figure 8 where students gave examples from Bahasa Indonesia, but explained the syntactic functions and categories in English.



Figure 11: Misleading Information

Figure 12 below shows that sometimes students waited for me to give a review on the posted materials. Not all of them really trusted the information from their peers, especially after reading my comments on the confusing post as shown in Figure 10. They needed a kind of endorsement that all the posts were valid. While it can be a problem, this also teaches the students that all information in wiki is not always trustworthy and can be used as an academic reference. What I did then was that I encouraged them to keep posting while check-and-rechecking the validity. I also promised them to give the review later, waiting for other students to do it first. Such a problem would occur no more, when the students found my name as the one who edited the last.



Figure 12: Student waiting for teacher's post

CONCLUSION

The findings elaborated in advance show that wiki serves very well as a medium for collaborative learning. It attracts students' participation and engages them in a constructive nature. Learners are willing not only to learn from others, but also to share their ideas so they others can learn from them. Wiki has also provided a meaningful learning environment where students can be proud of their post while also learning from others.

Kessler (2009) finds that leaving the wiki all to students will encourage them to be more autonomous. This study shows that teacher's role is still important, but not to dominate the work. Students still need a kind of endorsement from their teacher before they really think that they can trust the info.

Some lessons can learned for who want to conduct a wiki project. First, prior to the commencement of the project, students need a kind of training about internet literacy. The training does not to be too elaborate, but able to cover the online navigation system, and how to modify a wiki page. Second, teachers should keep the records of the usernames and passwords just in case some students fail to log in only because they lose them. Learning from the pedagogical problems in this study, it is recommended that teachers encourage students to be responsible for their posts. This also needs to be done in advance.

Since the main intention of this project was not for language learning class (although students were required to post in English), further research should be conducted to identify whether or not students get benefits for their language proficiency. Consistent with Kessler's (2009) study, the preliminary phenomena in this study also show that on their posts, learners focus more on meaning rather than on form. Another study is also required to conduct to select what kind of wiki project is more suitable for language learning.

REFERENCES

- Biesenbach-Lucas, S., & Weasenforth, D. (2001). E-mail and word processing in the ESL classroom: How the medium affects the message. *Language Learning & Technology*, 135-165.
- Egbert, J. (2005). CALL Essentials: Principles and Practice in CALL Classrooms. Maryland: TESOL Inc.
- Godwin-Jones, R. (2003). Blogs and wikis: Environments for on-line collaboration. Language Learning. Language Learning and Technology, 12-16.
- Halliday, M., & Hasan, R. (1989). Language, Text, and Context. Borwood: Deaking University Press.
- Hanson-Smith, E. (2007). Classroom Practice: Tasks for Collaborative Learning. In J. Egbert, & E. Hanson-Smith, CALL Environments: Research, Practice, and Critical Issues (2nd Ed.) (pp. 194-223). Maryland: TESOL Inc.
- Kessler, G. (2009). Wiki-Based Collaborative Writing. Language Learning and Technology, 79-95.
- LeLoup, J. W., & Ponterio, R. (2006). Wikipedia: Multilingual Trasure Trove. *Language Learning and Technology*, 4-7.
- Martin, J. (1992). English Text. Amsterdam: John-Benjamins.
- Meskill, C. (1999). Computers as toos for socio-collabroative language learning. In K. Kameron, *CALL: Media, Design, and Application.* Lisse: Swetz and Zeitlinger.
- Ohta, A. S. (2001). Second Language Acquistion Processes in the Classroom: Learning Japanese. Mahwah, NJ: Lawrence Erlbaum Associates.
- Pennington, M. (1999). The missing link in computer-assisted writing. In K. Cameron, Computer Assisted Language Learning (CALL): Media, Design, and Application (pp. 271-294). Lisse: Swets and Zeitlinger.
- Priyanto, A. D. (2006). WebQuest to Scaffold L2 Writing in Tertiary Level. *Competency-Based English Teaching: Theory and Practice* (pp. 5-13). Bandung: UPT Pusat Bahasa, ITB.
- Santosa, R. (2003). Semiotika Sosial: Sebuah Pandangan terhadap Bahasa. Surabaya: Eureka Press.
- Vygotsky. (1978). Mind in Society. Cambridge: Harvard University Press.
- Warschauer. (1996). Comparing Face-to-face and electronic discussion in the second language classroom. *CALICO Journal*, 7-26.
- Warschauer, M. (2005). Sociocultural Perspective on CALL. In J. Egbert, & G. Petrie, CALL Research Perspectives (pp. 45-51). Mahwah, NJ: Lawrence Earlbaum.

Warschauer, M., & Meskill, C. (2000). Technology and Second Language Teaching and Learning. In J. Rosenthal, *Handbook of Undergraduate Second Language Education*. Mahwah, NJ: Lawrence Erlbaum.

Warschauer, M., Shetzer, H., & Meloni, C. (2000). Internet for English Teaching. Maryland: TESOL Inc.

ⁱ <u>http://www.pbwiki.com/</u> is now changed into <u>http://www.pbworks.com/</u> but all wikis hosted are still accessible.