Teacher-student interaction on wikis: Fostering collaborative learning and writing

[[1]](#footnote-1)Maha Alghasab (corresponding author)

University of York, UK (mbader@live.co.uk)

Jan Hardman

University of York, UK (jan.hardman@york.ac.uk)

Zoe Handley

University of York, UK (zoe.handley@york.ac.uk)

**Abstract**

Wikis are widely considered to be student-centred platforms which promote collaborative learning.  Previous research has, however, demonstrated that without teacher intervention some students fail to engage with one another collaboratively in these environments. This study contributes to the emerging literature on the role of teachers in supporting collaborative learning during wiki activities by examining teacher and student online interaction during wiki-mediated collaborative writing activities in three Kuwaiti high school English as a Foreign Language (EFL) classes. Teacher and student discussion posts and text edits during the eight- week projects were analysed using a discourse analysis framework and triangulated with data from semi-structured interviews. The findings revealed that the approaches adopted by the teachers in this study ranged from directive to dialogic. Where the teachers took a more directive approach, students tended to interact with the teacher rather than with the peers and wrote by themselves individually. Where the teachers adopted a more dialogic approach, however, there was greater student-to-student interaction and collaboration leading to jointly constructed texts. Such findings point to the benefits of adopting a dialogic approach to teaching during wiki-mediated collaborative writing activities.

**Key words:**

Socio-cultural theory; educational dialogue; teacher-student interaction; wiki; EFL collaborative writing; teacher professional training

**1. Introduction**

Driven by sociocultural theory which posits that knowledge is socially constructed and learning occurs as a result of interacting with knowledgeable others (Vygotsky, 1978), group work which promotes peer interaction has become popular in schools. Research on peer interaction, however, has found that students do not spontaneously collaborate and engage in the kinds of collaborative interaction that promote thinking and learning when you ask them to work together (Mercer, 1995; Rojas-Drummond & Mercer, 2003;Webb, 2009), where collaborative interaction refers to mutual interaction where instances of reciprocal feedback and sharing of ideas are predominant throughout the activity (Storch, 2013). In other words, research suggests that students require support from their teachers to develop the skills required to benefit from group work.

Sociocultural theory particularly highlights the role of social interaction and language as key mediators of the learning process (Vygotsky, 1978). This claim is supported by the growing body of research exploring the impact of dialogic teaching on students’ collaboration, thinking, learning and attainment, where dialogic teaching refers to an approach which prioritises the use of teacher talk to engage students in the joint construction of knowledge (see, for example, Alexander, 2008; Howe, 2017; Howe & Abedin, 2013; Littleton & Mercer, 2013; Resnick et al., 2015; Teo, 2013). More specifically, using teacher talk to promote student-student interaction rather than teacher-student interaction has been shown to be important because it creates a more symmetrical environment in terms of power and status differentials between students which is more conducive to the co-construction of knowledge (Hardman & Hardman, 2016).

Research has also emerged around the role digital technologies might play in facilitating interaction, collaboration and learning (Beatty, 2010; Gee, 2015; Major et al., 2018; Wegerif, 2010), with a growing body of studies exploring interactional patterns in computer-mediated group discussions (Asterhan, 2015; Asterhan & Schwarz, 2010; Collins & White, 2015; Lund, 2004; Stahl, 2015). A body of research has also emerged exploring the computer-mediated co-construction of knowledge and meaning. Within this body of research, wikis have particularly captured the attention of researchers and teaching practitioners. Providing users with a discussion space, a space for the joint authoring of texts and a history of edits (Leuf & Cunningham, 2001), wikis provide students the tools to engage in collaborative dialogue and writing (Li, 2012; Li & Kim, 2016; Norenes & Ludvigsen, 2016; Pifarre & Li, 2012; Schwartz et al., 2004; Sung, Yang & Lee, 2017). For example, students can post their ideas in a discussion forum, share a text on a wiki page for others to comment on, revise and edit, and track the history of changes one another have made (Godwin-Jones, 2003; Mak & Coniam, 2008).

Despite the findings of research on group work in face to face (see above), research on computer-mediated communication has tended to assume that providing tools such as wikis that include spaces for group discussion and co-authoring texts is sufficient to promote student-student collaboration (Godwin-Jones, 2003). While some research has found that some learners do indeed engage with one another collaboratively during wiki-mediated group writing activities (Arnold, Ducate, & Kost, 2012; Aydin & Yildiz, 2014; Bradley, Lindstrom, & Rystedt, 2010; Mak & Coniam, 2008; Woo, Chu, Ho, & Li 2011), others do not (Grant, 2009; Li & Zhu, 2011; Lim et al., 2010; Lund & Smordal, 2006). For example, some studies observe a high level of student collaborative dialogue (Swain, 2000; Lee, 2010) and collaborative writing (e.g. Ducate et al., 2011; Kessler & Biskowsi, 2010; Li, 2012, 2013; Li & Zhu, 2011; Li & Kim, 2016; Woo et al., 2011). In these studies, students were observed to verbalise their thoughts, engage with each other’s contributions, seek reciprocal feedback, pool their linguistic resources to solve problems, and deliberate on their own and other’s edits to complete a common writing task. This process which exhibits a high degree of mutuality has been found to feed into students’ collective learning in terms of the acquisition of vocabulary, grammar and writing content and structure, and have a positive impact on student’s writing performance (Donato, 1994; Mak & Coniam, 2008; Storch, 2005, 2013; Swain, 2000; Swain & Watanabe, 2013).

On the other hand, other studies exploring wikis use have observed low levels of student engagement in collaboration in the collaborative writing process (Bradley et al., 2010; Grant, 2009; Li & Zhu, 2011; Lim et al., 2010; Lund & Rasmussen, 2008). In these studies it was observed that some students ignored other’s suggestions and sometimes reverted edited texts to their original versions. Where collaboration did occur in these studies, it tended to be limited to editing language features rather than the structure and content of the writing, so that the forms of argumentation remained largely unchanged (Alyousef & Picard, 2011; Arnold et al., 2012; Kessler, 2009; Kost, 2011).

These mixed findings are also reflected in students’ perceptions of wiki-mediated collaborative writing activities (see Ducate et al., 2011; Grant, 2009; Lee, 2010; Li & Zhu, 2011; Lin & Yang, 2011). While some studies found that students were motivated in their writing by the use of wiki, others found that students preferred to write by themselves individually (Grant, 2009; Lund, 2008) and preferred feedback from their teachers to feedback from their peers (Lee, 2010).

The contradictory findings have led to calls for more research on the role of teachers in supporting student collaboration in the wiki context (Kessler, 2009; Lund, 2008). Responding to these calls, Lund (2004) examined the kind of support that teachers provide to students in face-to-face and computer-mediated writing. He found that teachers used dialogue to perform five different functions 1) pedagogical: to help students with epistemic learning and argumentation through the use of open questions and feedback; 2) social-emotional: to foster social relations between students and motivation; 3) interactional: to encourage student participation and scaffold interaction; 4) managerial: to manage and monitor the completion of a task; 5) technical: to assist with technical issues. Similarly, working with six grade students and their teachers in Israel, Asterhan et al. (2012) identified two main functions of teacher intervention: i) epistemic guidance: to assist with improving student online argumentation, and ii) interactional guidance: to foster social relations by encouraging students to listen, express their opinions and respond to others’ contributions. And, Mangenot & Nissen (2006) working with pre-service teachers in three distance learning settings observed that teachers interacted with students at three levels: 1) the organisation level: to plan and manage a online task; 2) the socio-affective level: to promote interpersonal relationships and group cohesion; 3) the socio-cognitive level: to encourage building on others’ ideas leading to shared understandings.

Together these findings suggest that teacher interaction in online settings mirrors teacher interaction in traditional face-to-face settings (Asterhan et al., 2012; Wang & Chen, 2009). These studies, however, provide little if any insight into how these behaviours impact on student-student interaction in wiki-mediated writing activities. Exploring the impact of teacher interaction on student-student interaction in this context is important because wikis differ in significant ways from the traditional face to face contexts which have been the focus of previous research. Notably, in contrast with face to face contexts, wiki requires students to jointly author a text (Alghasab & Handley, 2017; Li &Kim, 2016). Moreover, as highlighted by Alghasab and Handley (2017), student-student interaction during wiki-mediated collaborative writing activities is complex and there are number of different ways in which students might make and respond to suggestions to develop and improve co-authored texts.

This paper explores this gap in the literature in a study exploring the use of wiki-mediated collaborative writing activities in high school English as a Foreign language classes in Kuwait. While educational policy in Kuwait has promoted collaborative writing activity in language learning context as prescribed in high school students’ textbooks, the use of wikis to support collaborative writing is still in its infancy (Alghasab &Handley, 2017).

**2. The study**

With a view to helping teachers develop their pedagogical practices to support collaboration, dialogue and discussion in both face-to-face and online teaching and learning contexts, this study set out to investigate how teachers interact with their students during the process of EFL collaborative writing on wikis, how their interactional moves impacted on student learning and writing behaviours, and what the teachers and students thought about their experiences of using wiki.

***2.1. Case***

The intervention took place in three government high school classes in Kuwait over the course of 13 weeks: (Week 1) briefing participating teachers and students about the study; (Weeks 2-3) training the teachers and students in how to use a wiki; (Weeks 4-11) carrying out a practice writing task on a wiki; (Week 12-13) interviewing the teachers and students about their experiences in writing on the wikis.

A multiple case study (Yin, 2009) was conducted with three English as a foreign language teachers, given the pseudo-names of Ms. Susan (Case 1), Ms. Danah (Case 2) and Ms.Wesam (Case 3). The teachers were all Kuwaiti nationals for whom English was a foreign language. All had a BA in Education (English Language Teaching) and had 7-11 years of computer experiences with basic knowledge of wiki technology. However, they had never used wikis for teaching collaborative writing in their classrooms. Each of the teachers had between 20-22 female students in their 12th grade classes (aged 17-18 years) with Arabic as their native language and an intermediate level of English as a foreign language. The students are taught ICT as an obligatory school subject and had been using technology such as online chats, emails, Facebook, Wikipedia and Twitter on a daily basis for at least five years. Students had all used face-to-face pen and paper collaborative writing activities in their classes, as prescribed by the ‘Over to You’ curriculum.

***2.2. Wiki training***

For the purpose of the study, each teacher and class were trained over two consecutive days during Weeks 2-3 of the study in the school computer labs in the use of the PBwiki platform. This involved demonstrating its technical features and how the platform could facilitate the collaborative writing process followed by an opportunity for the teachers and students to practise writing collaboratively using the wiki technology. Each teacher and student was given their own personal login details for the wiki platform and private wiki space. Classes were further divided into smaller wiki groups and under the general theme of ‘My School’ designated a sub-topic for them to write a mini essay (i.e. school campus, department and facilities, and learning atmosphere at the school) and the class teacher was asked to support their students online.

***2.3. Data collection procedures***

Similar to the wiki practice task carried out during the training, the participating teachers and students were given the common collaborative writing task of producing a tourist poster about Kuwait. This task was adapted from the national Grade 12 textbook ‘Over to You’ so as to fit in with the normal school curriculum. This was a creative writing task designed to enhance student awareness of the language of persuasion, and to provide an opportunity for them to co-construct tourist information and present it in an appropriate genre.

In every class, the students were further divided into 4-5 smaller wiki groups and each of these sub-groups was designated a topic (i.e. country geography, culture, places to visit, and food and restaurants). Within each of the three classes, great care was taken in grouping the students into the wiki groups (3-4 students per group) informed by a questionnaire administered in Weeks 1-2 of the study. The questionnaire asked about the students’ English language levels, computer use and skills, and group work and collaborative writing experiences (Appendix A). Across the three classes, a total of 11 wiki groups were formed on the basis of students’ group work and collaborative writing experiences and a mix of more and less collaborative students allocated to each.

During the following eight weeks of the study (Weeks 4-11), the students worked collaboratively on the task of writing the poster as an out-of-class activity at home and/or in their school computer labs. This process was accessed and supported by their class teachers online. During this time, posts to the discussion boards and text edits were studied by the principal researcher to track the activity within each of the group wiki spaces. Towards the end of the study, in Weeks 12-13, semi-structured interviews lasting approximately 15 minutes, were also conducted with the teachers and students to gain further insights into their wiki-mediated interactions and the collaborative writing process as well as the teachers’ assumed roles and the rationale for their interventions (Appendix B and Appendix C).

***2.4. Framework of analysis***

In order to analyse the online interactions arising from the discussion boards (‘said mode’) and text edits (‘wrote mode’) a discourse analysis framework was developed. A discussion post or a text edit corresponded with a turn in the chain of a teacher-student-student interaction. Teacher and student discussion posts and text edits were time stamped with dates and times throughout the eight weeks creating rich and extended threads of interactions that could then be presented as transcripts for the purpose of the discourse analysis. This meant that the teacher and students’ discussion posts and their edits to the wiki text could be analysed in tandem to capture the overall patterns of teacher-student-student interaction and collaboration (Alghasab &Handley, 2017).

At a lower level of discourse, a single teacher discussion post was further made up of one or more moves, and the teacher moves subsequently prompted different student actions and verbal contributions. A discourse analysis of the extended transcripts was carried out to identify inductively teacher moves and student actions and contributions, which are presented in Table 1. It was found in the analysis that there was a range of types of teacher moves and there was a wide variety of student actions and contributions prompted not only by teacher moves (T-S) but also in response to other students’ contributions (S-S).

The data coding of the transcripts was checked for reliability through blind coding of 15% of the randomly selected wiki transcripts. The principal researcher and second coder agreed on the codes assigned to 86.7% of the teacher moves and student actions and contributions.

**3. Findings**

The findings reported in this paper are based on a fine-grained transcript analysis of three of the 11 wiki groups. One group was purposively selected from each class to include a mix of more and less collaborative students as well as a range of computer and language abilities. This sample included a total of 578 discussion posts and text edits of various lengths of which 207 were generated by the teachers and 371 by the students. The analysis was carried out at the lower level of the constituent teacher moves and student actions and contributions.

The following section explores teacher moves and student actions and contributions while using the wiki platform with a focus on teacher moves and their impact on student interaction and writing collaboration. Examples of interactions are provided along with interview data from teachers and students exploring why the teachers adopted these different approaches to supporting their students while working on the wiki online platform and what the students thought of the teachers’ role and interaction practices.

***3.1. Teacher interactions***

Analysis of the wiki data revealed that teachers intervened and talked to their students by drawing on a repertoire of teacher moves which carried certain pedagogical and interactional functions, which in turn prompted and promoted a range of student responses and contributions as presented in Table 1 below. Teacher moves and student actions/contributions that make up discussion posts and editing acts are coded as follows: added text is underlined, deleted text is struck through, and, to save, space segments of a text are deleted and represented by ….

Table 1. Repertoire of teacher wiki moves and illustrative student actions and contributions

| **Moves** | **Descriptions** | **Examples of teacher moves** | **Examples of student actions/contributions** |
| --- | --- | --- | --- |
| 1. Setting collaborative ground rules | Teacher makes explicit and reminds students, usually in a soft supportive tone, of the ground rules for collaboration and group cohesion.  | T: Dear my lovely students, I would like to remind you that here you are going to work together and I want every group to respect each other’s ideas and suggestion. Also don’t delete your friend’s text unless you have a reason for that and unless you discussed it with your friends first. (Ms. Wesam, Case 3) | **S:** Girls check what I have just added plz feel free to edit share with me your comments I am happy to receive them love u all xxx  |
| 2. Praising | Teacher acknowledges student contributions so as to keep them motivated during the collaborative writing process. | T: Excellent girls, I am so happy with your work so far, keep doing the work together, it is really great**! (**Ms. Wesam, Case 3) | This is evidenced in student interviews. For example,S: This made us feel motivated, especially when she said “good” or “excellent” to our group page, I felt like there was someone who appreciated what we were doing as a group.  |
| 3. Guiding the writing steps | Teacher assists students by telling them how to complete the writing task, such as brainstorming ideas and planning the text. | T: It is really too early to start writing your poster so try to discuss first, discussion is really useful for you girls to organise your ideas and thoughts, also to plan your text well. (Ms. Wesam, Case 3) | S: As planned I did write about Kuwait marriage as a tradition thing in Kuwait …  |
| 4. Promoting joint construction of meaning and form | Teacher encourages students to share and discuss ideas and language forms through building on own or others’ contributions, considering alternative suggestions, and seeking reciprocal feedback. | T: You need first to discuss and read what others have written and also build on that, don’t just start over and over this will make the ideas in your wiki page unconnected which will result in incoherent text*.* (Ms. Wesam, Case 3) | S: I agree with you Sue and Laila, we need to focus on Kuwaiti culture only rather than compare it to other, the task is asking us about Kuwaiti culture not comparing it with other non-Arabic culture.  |
| 5. Giving formative feedback  | Teacher provides formative feedback on the language form and content of writing. | T: Kuwait was ~~build~~ built ~~with~~ by it's own people's ~~hand~~ hands (..) since these believes are ~~root~~ rooted in the Kuwaiti society. ~~in~~ In our wiki ~~page~~ page, we ~~present~~ are going to present some of the cultural norms which are ~~relate~~ related to men and women. (Ms. Wesam, Case 3)Girls please check the editing page some editing have been made by me try to learn from what I have edited there are some grammar rules that we have just covered in class such as passive voice. (Ms. Wesam, Case 3) | S: Miss I started my part which is the Kuwaiti men and women clothes but it is still uncomplete (sic) I will read more and add more information check that plz and tell me about it. |
| 6. Suggesting resources | Teacher suggests resources for writing. | T: Girls try to work on electronic dictionary, it is going to help you in finding word meaning… I also want you to read these websites… and if you have other websites suggest that to your group member. (Ms. Susan, Case 1)  | S: Teacher me too I participate ☺ your suggestion to write about the meaning of culture is really great, I tried to think about its meaning and came up with amazing definition from my own understanding of the word , hope you read it and tell me what do you think ??  |
| 7. Promoting individual contributions | Teachers asks students to contribute to the writing task individually. | T: Girls, you can divide the work if you feel that you are not sure about what you are supposed to write about. If you want to discuss that and then start writing your section. (Ms. Susan, Case 1) | S: Teacher I added my section, can you tell me your opinion? Let me know it I did not add pic. I will do latter on. |
| 8. Adopting the editor role | Teacher directly edits a student text without or with minimal explanation. | T: It ~~likes~~ is the most traditional ~~Kuwaiti~~ Kuwaiti restaurant that ~~attract~~ attracts many people in ~~Kuwait~~ Kuwait ~~becasue~~ because of ~~his taste food.~~ its food taste. (Ms. Susan, Case 1)No you need to correct it, it should be people follow, people is a plural noun. (Ms. Susan, Case 1) | S: Teacher I was editing the text it is written people follows?? Is that right or wrong? |
| 9. Prescribing the content and form | Teacher prescribes the specific content, structure and/or format of the text.  | T: Start writing about the cultural behaviour and etiquettes as I suggested. (Ms. Danah, Case 2) | S: Teacher I added some sentences and wrote an introduction for my part Kuwaiti food. Let me know your opinion about it |
| 10. Adopting the monitor role | Teacher closely checks the student writing activity. | T: Please all groups should work on its page and I want you to finish the activity on time, I will check what you are doing regularly and ask me if you need any assistance. (Ms. Susan, Case1) | S: Miss check the page now all these have been done. |

Drawing on the classroom discourse literature discussed in the opening section of this paper, the teacher wiki moves 1 to 6 could be broadly characterised as promoting a dialogic wiki environment (see Alexander, 2008; Pifarre & Li, 2012), whereas teacher moves 7 to 10 promote a more directive teaching approach (Asterhan et al, 2012; Rojas-Drummond , Mercer & Dabrowski, 2001). In other words, the teacher moves of setting *collaborative ground rules, promoting joint construction of meaning and form* and *praising* help to create an open, safe and motivating social space for dialogue and promote joint thinking and co-construction of meaning, which proponents of sociocultural theory consider central to learning.

Similarly, the teacher moves of g*uiding the writing steps*, g*iving formative feedback* and *suggesting resources* characterise a discovery or heuristic process of learning that scaffold students to discuss and solve problems for themselves. Such moves also closely align with Alexander’s principles of a dialogic pedagogy in that they are collective, reciprocal, supportive, cumulative and purposeful (Alexander, 2008). They also concur with the online teacher patterns of interaction classified in previous studies as social-affective, interactional, cognitive, pedagogical and organisational (Asterhan et al., 2012; Lund, 2004; Mangenot & Nissen; 2006).

Conversely, the teacher moves 7-10 were found to have an opposite effect on the wiki environment in that they promoted a closed, highly structured and directive teaching approach found in many traditional classrooms (Asterhan et al, 2012; Wang & Chen, 2009), which in turn left very little space for student contributions and militated against a collaborative writing approach (Rouhshad, Wigglesworth & Storch, 2016; Storch, 2013). Through the teacher moves of a*dopting the editor role*, *prescribing the content and form* and *adopting the monitor role*, tight control over the students’ participation, interaction, writing process and learning was observed, which subsequently promoted a sense of insecurity on the part of the students and high dependency on teacher interventions.

While it is important to acknowledge that all of the teacher wiki moves identified, either dialogic or didactic in orientation, have a role to play in the overall teaching and learning process, given that wiki technology is designed as a platform for a dialogue-rich collaborative writing process, the findings suggest there needs to be a balanced repertoire of teacher moves to ensure higher levels of student participation.

Analysis of student interactions while using the wiki platform revealed two contrastive patterns of interaction. The first, which was observed when teachers adopted a dialogic approach, was characterized by a high level of student participation in dialogue, thinking together and the co-construction of knowledge. The second, which was observed when teachers adopted a more directive approach, was characterized by an absence of student-student dialogue and in turn collaboration.

Examples of these patterns of interaction are discussed in detail below. In the extracts, the contributors are coded as follows: teacher (T) or students (S1, S2, etc.). The time stamps for wiki discussion posts and text edits are in bold and underlined. Replies to the posts in the discussion forum are coded using an arrow (→). Editing acts are underlined. Added text is underlined. Deleted text is struck through. To save, space segments of a text are deleted and represented by ….

***3.1.1. Impact of dialogic teacher interaction on student interaction***

The following extract is taken from an asynchronous interaction between Ms. Wesam and one of her wiki groups of students (with the pseudo-names of Samar, Laila and Sue) over a period of four days:

Extract 1

| **Line** | **Who** | **Wiki discussion posts and text edits** |
| --- | --- | --- |
| 1 | S1 | **Samar wrote at 5:27 p.m. on Mar 30, 2014**… Kuwaitis have always been free to manage their affairs among themselves … and develop their unique cultural characteristics in their own way …. |
| 2 | T | **Ms. Wesam said at 11:38 p.m. on Apr1, 2014** Group 2, I noticed that Samar has written the following sentence in paragraph 4 “Kuwaiti have always been free to manage their affairs among themselves” do you think using the word affair fits the sentence and the meaning here, what do you think of using other sentence? Think together about an alternative word that can suit the sentence and the meaning |
| * 3
 | * S2
 | **→ Laila said at 12:39 a.m. on Apr 2, 2014** I think what Samar has written is not wrong but the word cannot be used in this sentence to refer to what we are trying to say I have no idea about alternative but relation or affinity can be used. What do you think girls??  |
| * 4
 | * S3
 | **→ Sue said at 4:47 p.m. on Apr 2, 2014** * Affinity I don’t know what does this word means exactly I have not used that in a sentence before but I checked that in the dictionary it means like a sort of close relationships. I think rather than saying relation or affair we can say relationship or social relationships. Any comments?
 |
| * 5
 | * S1
 | ***→* Samar said at 5:22 p.m. on Apr 2, 2014** Oh I have just realised that there is a difference between using the two words!! affair can be used to a love relationship between two people but relationship is more formal and can be used to describe the sort of relationship that we are talking about here ☺ anyway I edited that and changed to relationships |
| 6 | S1 | **Samar wrote at 5:23 p.m. on Apr 2, 2014**free to manage their ~~affairs~~ relationships among themselves … |
| * 7
 | * T
 | **→ Ms. Wesam said at 2:50 p.m. on Apr 4, 2014** Excellent girls I am so happy with your work so far, keep doing the work together, it is really great**!** |

In this extract, Ms Wesam deploys the teacher move of *giving formative feedback* whereby she frames her question carefully by asking ‘do you think using the word affair fits the sentence and the meaning here’ (in line 2). This teacher feedback is heuristic in nature that it encourages the students to think and solve the vocabulary problem by themselves.

Within the same teacher turn, she deploys the move of *promoting joint construction of meaning and form* by urging the students to ‘think together about an alternative word’. Ms. Wesam’s post (line 2) draws the students’ attention to Samar’s earlier post (in line 1), which is subsequently picked up by Laila (in line 3). Here she comments on Samar’s contribution by stating ‘I think what Samar has written is not wrong but cannot be used in this sentence and suggesting two alternative words ‘relation’ and ‘affinity’ to open up space in the group for other contributions. She also probes for further contributions from the other students in the wiki group by asking ‘What do you think girls?’ (in line 3). This encourages another student, Sue, to build on Laila’s comment and offer the word ‘relationship’ while at the same time keeping the space open for other contributions by asking ‘Any comments?’ (in line 4).

Samar later returns to the discussion board, having considered the earlier contributions from Laila and Sue, and discusses her developing understanding about the usage of the word ‘*relationship*’ when she states ‘Oh I have just realised that there is a difference between using the two words!!’ (in line 5). She subsequently amends her original text (in line 6). Ms. Wesam closes the interaction by praising the students for their contributions and encouraging them to continue with their group collaboration through her use of the *setting collaborative ground rules* (in line 7).

Overall, it can be seen that Ms. Wesam’s dialogic moves create a supportive online environment, allowing for a high level of student participation, dialogue, thinking together and co-construction of knowledge during the process of writing. In response, the students keep the lines of enquiry open, seek reciprocal feedback, critically comment and build on each other’s contributions and build understanding and vocabulary (as in the case of Samar’s post in line 5 of the extract above).

Tracking the wiki interactions of Ms. Wesam’s wiki group over the period of 8 weeks, it was observed that the teacher’s intervention (by means of discussion posts and text edits) reduced significantly over time from twelve instances in week 1, to seven in week 4 and only one in week 8. Conversely, student contributions increased from nine instances in week 1, to twenty in week 4 and thirty in week 8. This suggests that the dialogic approach taken by Ms. Wesam helped to raise student confidence and independence resulting in higher student-student collaboration.

The teacher and student semi-structured interviews reflected what was found in the discourse analysis of the wiki transcripts in relation to the patterns of interaction and the parts played by both teachers and students. For example, the interview with Ms. Wesam suggested a good understanding of the nature of collaboration and her role in supporting students in the collaborative writing process:

It was nice seeing them [students] discussing and replying, but in order to push them further to edit and act on each other’s texts, they need guidance and they have to know that the teacher herself is encouraging such behaviour (Ms. Wesam, Case 3)

Similarly, one of her students in the interviews reported that they valued her interventions and her reinforcement of the ground rules for working collaboratively on a wiki:

Without her [the teacher] we would not have been able to know what was acceptable and unacceptable in the wiki. I mean she posted comments to tell us to respect each other, to read each other’s work and to post comments if possible. This was really useful for me because this encouraged me to do things that the teacher would like us to do (Sue, Ms. Wesam’s class).

They also appreciated the motivating effect of her positive feedback on their drafts for improving the quality of their writing:

I feel that our work is really important because the teacher is reading it. I feel happy when she praises us (…). When she posts positive feedback I feel so happy and this encourages me to keep working and to write better over time (Eman, Ms. Wesam’s class).

Students also valued the teacher’s explicit instructions on how to structure the writing:

At the beginning of the project the teacher told us what to do and what not to do. This was really helpful; from her post I understood what she wanted us to do, for example we should not delete each other’s texts without discussing this with others. This was really helpful (Samar, Ms. Wesam’s class).

It was also clear from the students’ interview that collaboration would not have occurred naturally without the presence and active intervention of the teacher:

I asked them [fellow students] to provide feedback on my writing, but no one posted anything until the teacher asked them to; that is why you know the teacher should be there. This will encourage us as students to reply to each other and to read each other’s writing because we want to participate (Laila, Ms Wesam’s class).

The teacher agreed with the students that her presence and support was indispensable even though wiki technology was designed to be used mainly as a student-centred collaborative writing platform.

I feel it was my responsibility to make the wiki a student-centred context. I did not want them to ask me but rather ask those who were in the group (...) I am sure they know the correct answer (Ms. Wesam, Case 3)

***3.1.2. Impact of directive teacher interaction on student interaction***

In contrast, the following transcript extract is taken from a more directive form of interaction between Ms. Susan and one of her wiki groups (with the pseudo-names of Aseel and Salma) collected over a period of five days.

Extract 2

| **Line** | **Who** | **Wiki discussion posts and text edits**  |
| --- | --- | --- |
| 1 | T | **Ms. Susan said at 5:59 p.m. on Mar 20, 2014**Salma and Aseel, where are you, please start your sections, your friends have started  |
| 2 | S1 | **Aseel wrote at 7:18 p.m. on Mar 20, 2014**Formal celebrations in Kuwait:In Kuwait, people has two major religious holidays that are cause for celebration among all others. … Kuwaiti people also went to Eid prayer at the morning at 6 o'clock and pray in the mosque. They exchange kissing and greeting and also congratulations for Eid coming … |
| * 3
 | * S1
 | **→ Aseel said at 7:33 p.m. on Mar 20, 2014**Sorry Miss, I was busy with exams, here we go my section is added. plz read it and give it a comment  |
| * 4
 | * T
 | **→ Miss Susan said at 4.40 p.m on Mar 21, 2014**That’s good Aseel still needs work to revise it |
| * 5
 | * S1
 | **→ Aseel said at 5:06 p.m. on Mar 22, 2014** Teacher in my text I used at the morning when you asked me to revise I was confused between at the morning and in the morning .also is people plural or singular I heard that we can use has with the word people?? Hope you help me in revising my section |
| 6 | T | **Miss Susan wrote at 6:00 p.m. on Mar 22, 2014**~~in~~ In Kuwait, people ~~has~~  have two major religious holidays ~~that are cause~~ for celebration. ~~among~~  Among ~~all others~~ all other celebrations,.. ~~at~~ in the morning **(..)** ~~excange~~ exchange.  |
| 7 | S.2 | **→ Salma said at 8:52 p.m. on Mar 24, 2014**Miss Susan, my mind is empty I don’t have more information I feel that my friends has written what I was about to write, help plz suggest ideas. |
| 8 | T | **→ Miss Susan said at 12:57 p.m. on Mar 25, 2014**Salma check out Mark’s blog:248am.com he has a section inside called events check it out  |

What is striking about this extract is that there is no visible interaction between the students themselves. This can be seen in the first six turns (lines 1-6) where Miss Susan engages in a one-to-one interaction with Aseel, and this is followed by a one-to-one interaction with Salma (lines 7-8).

Ms. Susan deploys the wiki move of *adopting the monitor role*, checking ‘where are you’ and also the move of *promoting individual contributions* by directing Aseel and Salma to ‘please start your sections’(in line 1). In response to Ms. Susan’s directive, Aseel posts her contribution (in line 2) and then immediately returns to the teacher ‘plz read it and give it a comment’ (in line 3). Ms. Susan then acknowledges Aseel’s contribution and suggests a further revision (in line 4).

Aseel, once again, follows up on Ms. Susan’s post by asking for further help with the correct language between ‘at the morning’ and ‘in the morning’ (in line 5). The teacher responds again by taking on the role of editor and directly edits Aseel’s text without offering any explanations (in line 6). The second student, Salma, later responds to Ms. Susan’s earlier call (in line 1) by asking for further suggestions ‘help plz suggest ideas’ (in line 7). The teacher responds with the move of *suggesting resources* with the comment ‘Mark’s blog’ (in line 8).

In contrast to the first extract, no student-student dialogue and collaborative writing occurs in Ms. Susan’s group: the students write in parallel and rely heavily on the teacher’s directions. The teacher’s pattern of interaction is mainly transmissive in nature with the teacher taking on the roles of a monitor and an editor and directing the students in what to do in the writing task. Similar pattern was also observed in Ms. Danah class (Case 2) as shown in the following extract.

Extract 3

|  |  |  |
| --- | --- | --- |
| **Line** | **Who** | **Wiki discussion posts and text edits**  |
| 1 | T |  **Ms. Danah said at 11:09 p.m. on Apr 13, 2014**Great job! Here are a few tips: 1- Make the words in the headings all start with a capital letter: "Drinks “and "Food behaviour and etiquette ", not all small letters.    2- Make all the text and pictures in the middle. The part about Cafe Baza is on the side.    3-Fix the spelling of the words "restaurant" and then add more. You wrote you'd mention a number of restaurants, you wrote "1" in front of Cafe Baza and that was it? Add more examples of restaurants.    4- Please remove " I will continue later bye girls ", that's just so silly The table on the page seems needs some editing it doesn’t look nice, try to make it better. Work on these and I will check whether you have done your job! |
| 2 | S | **→Amy said at 12:25 a.m. on Apr17, 2014**Miss check the page now all these have been done |

The teacher and student semi-structured interviews again reflected what was found in the discourse analysis of the wiki transcripts in relation to the patterns of interaction and the parts played by both teachers and students. In contrast with Ms Wesam, Ms Susan and Ms. Danah saw themselves as authorities figure monitoring and prescribing the written content and form:

I am the teacher, I have to make it clear who should do what … I need to post commands… I know there are some girls who are always waiting me to tell them what to do and what not to do … I mean we are teaching English and we need to deliver knowledge correctly … In the wiki the teacher should correct these mistakes and students have to check the corrected form on the page history (Ms Susan, Case 1).

I was trying to help them make their wiki text better and more accurate. They may feel hesitant about editing their own mistakes because they may feel embarrassed or unsure about their editing, I mean whether it is right or wrong. I think it is my role to guide students towards having an accurate text. They will check their edited mistakes and by doing so they will learn things correctly (Ms. Danah, Case 2)

The interview with students from Ms. Susan’s and Ms. Danah’s classes also revealed that they relied heavily on the teacher’s direct intervention, expecting to be told explicitly what to do through the wiki posts and comments:

She divided us into group and also told everyone what she wanted us to do and to write about. I like this because if the teacher did not do that we would be wondering how to start and who should do what (Salma, Ms Susan’s class).

I was busy for some days and did not add anything in the wiki, but because she mentioned my name, I added some sentences and told her that I had participated. She remains our teacher, even if we are working in the wiki, not in the class. That is why I felt worried, if she thought that I was not working as well as my friends (Mei, Ms Danah’s class)

Her students also discussed their lack of confidence in peer feedback on their writing compared to that of their teacher:

Sometimes I do not trust their feedback because some of my group members are not that good in English and I always question their feedback. If the teacher is there, I feel that the teacher can give better feedback because she is our teacher (Aseel, Ms Susan’s class)*.*

I do not think that we will be able to manage correcting each other’s mistakes, because I do not know, we may fight over or refuse each other’s editing because we all are students and she is the teacher, so she has the right to correct our mistakes (Fai, Ms Danah’s class).

The students’ lack of experience in writing collaboratively on wiki and their intermediate level of English proficiency may also have contributed to their lack of confidence but such negative views were not expressed by students in Ms. Wesam’s group.

Overall, the mixed views reported in the interviews across the three classes reflect those reported on in previous studies of the use of wiki in EFL/ESL contexts (Alyousef & Picard, 2011; Ducate et al., 2011; Li, 2012; Sung et al., 2017). Given the novelty of the wiki technology in the Kuwait school curriculum, the interviews suggest more training and practice in the use of wiki is needed by both the teachers and students to develop the necessary skills, competency and understanding to facilitate the collaborative writing process.

**4. Discussion and conclusions**

Overall, the analysis of the wiki transcripts and interviews reveals a repertoire of teacher wiki moves carrying specific pedagogical and interactional functions, and that teachers draw on the repertoire, from dialogic to directive, in varying degrees. Such patterns of teacher interaction have been shown to impact on student learning and writing behaviours in strikingly different ways. A more dialogic engagement between teacher and students tends to give rise to productive talk and impacts positively on student collaborative writing process, whereas a more directive approach hinders the collaborative process of writing and breeds students’ dependency on the teacher’s direct intervention.

While the current study of wiki-mediated EFL collaborative writing instruction and practice is small and exploratory in nature, it provides valuable insights into the role of the teacher in promoting a collaborative writing approach while using an online platform like wiki. It also suggests that a technological innovation like wiki will not, by itself, bring about underlying pedagogical changes without the support of the teachers, and that key pedagogical practices need to be addressed to ensure that a broader repertoire of interactive and discourse practices while using wiki. This is particularly important in a country like Kuwait where English language teaching is often teacher-led with a focus on language mastery and accuracy, as reflected in the current study where the interactions mainly focused on linguistics (vocabulary and grammar) rather than text structures and forms of argumentation (Kessler, 2009; Nami & Marandi, 2014).

As productive classroom talk is seen as prerequisite for learning, there is a need for teachers to be trained in an effective online pedagogy in order to change habitual classroom behaviours and traditional discourse patterns which teachers use in both face-to-face teaching and online to secure improvements in student engagement and learning through the guided co-construction of knowledge (Hardman &Hardman, 2016; Mercer, et al, 2017; Prestridge, 2014). Wiki technology in particular requires that teachers use a dialogic approach alongside more directive forms of teaching, particularly in EFL/ESL and MFL educational contexts where technology is not fully-embedded in a curriculum (Pifarre & Li, 2012).

The research reviewed in the opening section of this paper suggests that an interactive pedagogy can have a considerable impact on learning if it is supported by relevant school-based professional development. Such school-based teacher development has to be aligned with teachers’ needs, have the support of the head teacher and involve teachers working together at school and cluster level, with follow-up in the classroom involving observation, coaching, and feedback (Hardman & Hardman, 2017). Peer monitoring and self-evaluation of teaching will need to become a regular part of school-based professional development so as to give teachers a degree of ownership of the process of school improvement.

It will also be important to involve teachers in the analysis of classroom discourse and interaction, both face-to-face and online, to help in the transforming of beliefs, knowledge, understandings, skills, and commitments. Such reflection on teachers’ intentions and beliefs about their practice is seen as a way of enhancing expert thinking and problem solving. In this way teachers can rise their teaching so as to make confident and professionally informed decisions about the way they interact with students so as to encourage greater participation and higher levels of cognitive engagement.

As in the current study, online transcripts and teachers’ interviews can provide a powerful way of promoting critical reflection on professional practice. Such stimulated professional dialogue can encourage teachers to articulate and demonstrate their own understanding of their interactive styles and provided opportunities for monitoring and self-evaluation.

In addition to the provision of more powerful professional development programs, there is the need for more research to provide comprehensive evidence, for both teachers and policy makers, that online learning and a dialogic pedagogy encouraging more active student involvement in the guided co-construction of knowledge can produce significant gains in learning. More large-scale, longitudinal studies to conduct impact and process evaluations to consolidate and extend the evidence base on pedagogical practices and student learning are needed.

**Acknowledgment:**

The authors would like to thank the teachers and students who participated in this study. The Centre of Research and Educational curriculum, Kuwait, for their support in recruiting paticipants for this study. The Public Authority for Applied Education and Training (PAAET), Kuwait, who funded the first author’s doctoral studies on which this paper is based. Waad Alzahrani for second coding the data.

**Funding**

This work was supported by The Public Authority for Applied Education and Training (PAAET)

**References:**

Alexander, R. (2008). *Towards dialogic teaching: Rethinking classroom talk* (4th ed.). New York: Dialogos.

Alghasab, M. & Handley, Z. (2017). Capturing (non-)collaboration in wiki-mediated collaborative writing activities: the need to examine discussion posts and editing acts in tandem. *Computer Assited Language Learning, 30*(7), 664-691.

Alyousef, H. & Picard, M. (2011). Cooperative or collaborative literacy practices: Mapping matadiscourse in a bussiness students’ mwiki group project. *Australian Journal of Educational Technology*, *27(3),* 463-480.

Asterhan, C.S.C, Schwarz, B.B., & Gil, J. (2012). Small group, computer-mediated argumentation in middle-school classrooms: The effects of gender and different types of online teacher guidance. *British Journal of Educational Pychology*, *82*, 375-397.

Asterhan, C.S.C. (2015). Introducing online dialogues in co-located classroom: If, why, and how. In L.B.Resnick, C.S.C. Asterhan & S.N. Clarke (Eds), *Socializing Intelligence Through Academic Talk And Dialogue* (pp.205-218). Washington, DC:AERA.

Asterhan, C.S.C. & Schwarz, B.B. (2010). Online moderation of synchronous e-argumentation. *International Journal of Computer-Supported Collaborative Leanring (5)*, 259-282.

Arnold, N., Ducate, L., & Kost, C. (2012). Collaboration or cooperation? Analyzing group dynamics and revision processes in wikis. *CALICO Journal, 29(2),* 224-248.

Aydin, Z., & Yildiz, S. (2014). Using wikis to promote collaborative EFL writing. *Langauge Learning & Technology, 18(1),* 160-180.

Beatty, K. (2010). *Teaching and researching computer assisted language learning* (2nd ed.). London: Pearson Education.

Bradley, L., Lindstrom, B., & Rystedt, H. (2010). Rationalities of collaboration for language learning in a wiki. *ReCALL, 22*(2), 247-265.

Collins, A. & White, B.Y. (2015). How technology is broadening the nature of learning dialogues. In L.B.Resnick, C.S.C. Asterhan & S.N. Clarke (Eds), *Socializing Intelligence Through Academic Talk And Dialogue* (pp.231-244). Washington, DC:AERA

Donato, R. (1994). Collective scaffolding in second language learning. In J. Lantolf & G. Appel (Eds.), *Vygotskian approaches to second language research* (pp.33-56). Norwood, NJ: Albex.

Ducate, L. Anderson, L. & Morena, N. (2011). Wading thorugh the world of wikis: An analysis of three wiki projects. *Foreign Language Annals*, *44*(3), 495-524.

Gee, J.P. (2015). Accountable talk and learning in popular culture: The game/affinity paradigm. In L.B.Resnick, C.S.C. Asterhan & S.N. Calrke (Eds), *Socializing Intelligence Through Academic Talk And Dialogue* (pp.197-204). Washington, DC:AERA

Godwin-Jones, R. (2003). Emerging technologies, blogs and wikis: Environments for online collaboration. *Language Learning & Technology, 7*(2), 4-11.

Grant, L. (2009). ‘I don’t care do ur own page!’: A case study of using wikis for collaborative work in a UK secondary school. *Learning, Media and Technology, 34*(2), 105-117.

Hardman, J., & Hardman, F. (2016). Guided Co-Construction of Classroom Talk. In S. Wortham, D. Kim & S. May, (Eds.), *Handbook of Language and Education: Discourse and Education****.*** The Netherlands: Springer. 1-12.

Hardman, F., & Hardman, J. (2017). Systematic observation: Changes and continuities over time. In M. Myhill & R. Maclean (Eds.), *Handbook on life in schools and classrooms: Past, present and future visions*. Dordrecht: Springer. 123 – 138.

Howe, C. (2017). Advances in research on dialogue: Commentary on the articles, *Learning and Instruction*, *48*, 61-65

Howe, C. and Abedin, M. (2013). Classroom dialogue: a systematic review across four decades of research. *Cambridge Journal of Education, 43(*3), 325-356

Kessler, G. (2009). Student-initiated attention to form in wiki-based collaborative writing. *Language Learning & Technology, 13*(1), 79-95.

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.

Kost, C. (2011). Investigating writing strategies and revision behavior in collaborative wiki projects. *CALICO, 28*(3), 606-620.

Lee , L. (2010). Exploring wiki-mediated collaborative writing: A case study in an elementary Spanish course. *CALICO* Journal, 27(2), 260-276.

Leuf, B., & Cunningham, W. (2001). *The wiki way:Quick collaboration on the web*. Boston, MA: Addison Wesley.

Li, M. (2012). Use of Wikis in Second/Foreign Language classes: A literature Review. *CALL-EJ*, *13*(1), 17-35.

Li, M. (2013). Individual novices and collective experts: Collective scaffolding in wiki-based small group writing. *System, 41*(3), 752-769.

Li, M., & Zhu, W. (2011). Patterns of computer mediated interaction in small writing groups using wiki. *Computer Assisted Language Learning, 26*(1), 61-82.

Li, M., & Kim, D. (2016). One wiki, two groups: Dynamic interactions across ESL collaborative writing tasks. *Second language writing*, *31*, 24-42

Lim, W., So, H., & Tan, S. (2010). E-learning 2.0 and new literacies: Are social practices lagging behind? *Interactive Learning Environment, 18*(3), 203- 218.

Ling, W. & Yang, S. (2011). Exploring student’s perceptions of intergrating wiki techinology and peer feedback into English writing courses. *English Teaching: Practice and Critique, 10*(2), 88-103

Littleton, K. & Mercer, M. (2013). *Interthinking: Putting Talk to Work*. Abingdon Routeledge.

Lund, K. (2004). Human support in CSCL: What, for whom and by whom?. In J.-W. Strijbos, P.A. Kirshner, R.L., Martens, & P. Dillenbourg (Eds.), *What We Know About CSCL and Implementing It In Higher Education: CSCL* (pp. 167-198). Norwell, MA: Kluwer Academic

Lund, A. (2008). Wikis: A collective approach to language production. *ReCALL, 20*(1), 35-54.

Lund, A., & Smordal, O. (2006). *Is there a space for the teacher in a wiki?* Paper presented at the Preceedings of the 2006 international symposium on wikis, Odense, Denmark.

Lund, A. & Rasmussen, I. (2008). The right tool for the wrong task? Match and mismatch between first and second stimulus in double simulation. *Computer-Supported Collaborative Learning,* *(3),* 387-412

Major, L., Warwick, P., Rasmussen, I., Ludvigsen, S. & Cook, V. (2018). Classroom dialogue and digital technologies: A scoping review. *Education and Information technologies.* <http://dx.doi.org/10.1007/s10639-018-9701-y>

Mak, B., & Coniam, D. (2008). Using wikis to enhance and develop writing skills among secondary school students in Hong Kong. *System, 38*(3), 437-455.

Mangenot, F., & Nissen, E. (2006). Collective activity and tutor involvement in e-learning environments for language teachers and learners. *CALICO Journal, 23*(3), 601-621.

Mercer, N. (1995). *The guided construction of knowledge: Talk amongst teachers and learners.* Philadelphia, PA: Multilingual Matters.

Mercer, N., Hennessy, S. & Warwick, P. (2017) Dialogue, thinking together and digital technology in the classroom: Some educational implications of a continuing line of inquiry. *International Journal of Educational Research*, <http://dx.doi.org/10.1016/j.ijer.2017.08.007>

Nami, F., & Marandi, S. (2014). Wikis as discussion forums: Exploring students’ contribution and their attention to form. *Computer Assisted Language Learning*, *27* (6), 483- 508.

Norenes, S., & Ludvigsen, S. (2016). Language use and participation in discourse in mathematics classroom: When students write together at an online website. *Learning, culture and social interaction, 11,* 55-84.

Pifarre, M. & Li, L. (2012). Teaching how to learn with a wiki in primary education: What classroom interaction can tell us. *Learning, Culture and Social Interaction, (1), 2*, 102-113.

Prestridge, S. (2014). A focus on students’ use of Twitter – Their interaction with each other, content and interface. *Active Learning in Higher Education, 15*(2), 101–115.

Resnick, J.B.C., Asterhan, C.S.C., & Clarke, S. N. (2015). Introduction: talk, learning, and teaching. In L.B.Resnick, C.S.C. Asterhan & S.N. Clarke (Eds), *Socializing Intelligence Through Academic Talk And Dialogue* (pp.1-12). Washington, DC:AERA

Rouhshad, A., Wigglesworth, G. & Storch, N (2016). The nature of negotiations in face-to-face versus computer-mediated communication in pair interactions. *Language Teaching Research,* *20*(4), 514-534.

Rojas-Drummond, S., & Mercer, N. (2003). Scaffolding the development of effective collaboration and learning. *International Journal of Educational Research. 39*, 99-111.

Rojas-Drummond, S., Mercer, N., & Dabrowski, E. (2001). Collaboration, scaffolding and the promotion of problem solving strategies in Mexican pre-schoolers. *European Journal of Psychology of Education, 16*(2), 179- 196.

Stahl, G. (2015). Computer-supported academically productive discourse. In L.B.Resnick, C.S.C. Asterhan & S.N. Clarke (Eds), *Socializing Intelligence Through Academic Talk And Dialogue* (pp.219-230). Washington, DC:AERA

Storch, N. (2005). Collaborative writing: Product, process, and students’ reflections. *Journal of Second Language Writing, 14* (3), 153-173.

Storch, N. (2013). *Collaborative writing in L2 classrooms: New perspectives on language and education.* Bristol, UK: Multilingual Matters

Sung, YT., Yang, JM. & Lee, YH. (2017). The effects of mobile-computere-supported collobairative leanring: Meta-nalaysis and critical analysis. *Review of Educational Research*, *87*(4),768-805.

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97-114). Oxford, UK: Oxford University Press.

Swain, M., & Watanabe , Y. (2013). Languaging: Collaborative dialogue as a source of second language learning. In C. Chapelle (Ed.), *The encyclopedia of applied linguistics*. Oxford, UK: Wiley-Blackwell publishing

Schwartz, L., Clark, S., Cossarin, M. & Rudolph, J. (2004). Educational Wikis: features and selection criteria. *The International Review of Research in Open and Distance Learning*, 5(1), 1-6.

Teo, P. (2013). ‘Stretch your answers’: Opening the dialogic space in teaching and learning. *Learning, culture and social interaction, (2)* 2, 91-101

Vygotsky, L.S. (1978). *Mind in Society: The development of higher psychological processes*. Cambridge, MA: Cambridge University Press

Yin, R. (2009). *Case study research: Design & methods*. Thousand Oaks, CA: Sage.

Wang, Y. & Chen, N.S. (2009). Criteria for evaluating synchronous learning amangement systems: arguments from the distance language classrooms. *Computer Assisted Language Learning*, *22*(1), 1-18.

Wegerif, R. (2010). Dialogue and teaching thinking with technology: Opening, expanding and deepening the ‘inter-face’. In K. Littleton and C. Howe (Eds.) *Educational Dialogues: Understanding and promoting productive interaction.* London: Routledge.

Webb, N. (2009). The teacher's role in promoting collaborative dialogue in the classroom. *British Journal of Educational Psychology, 79*(1), 1-28.

Woo, M., Chu, S., Ho, A., & Li, X. (2011). Using wikis to scaffold primary school students' collaborative writing. *Educational Technology and Society, 14*(1), 43-54.

1. College of Basic Education (PAAET), Kuwait (mb.alghasab@paaet.edu.kw) [↑](#footnote-ref-1)