Modeling Peer Revision among EFL Learners in an Online Learning Community

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Abstract

This present study investigated modeling online peer revision (PR) among English as foreign language (EFL) learners in an online learning community. Specifically, the study focused on how EFL learners were responsive to the instruction and training in modeling PR and how they reflected upon their learning experiences in online PR. The participants were 15 EFL learners who represented a heterogeneous group of learners coming from different Arab countries and different levels of English at university. Using a mixed-method approach, the researcher analyzed learners' feedback exchanges, their written drafts and their written reflective responses. The results showed that the EFL learners engaged in a constant recursive process of evaluating or reflecting on each draft and revising it. Based on this, the learners made multiple full drafts (N=181) and fragmented drafts (N=197). Further identification of the levels of text revisions in these drafts revealed that there were (N=1296) text revisions at sentence, clause, phrase, word and below-word levels. In terms of the focus areas of these text revisions, 8.56 % of these text revisions focused on enhancing the content of written texts, and 15.90% of them focused on improving the unity and organization of texts. Moreover, 18.60% of the text revisions focused on meaning, while 44.29 % of them focused on grammar and sentence structure, and finally, 12.65% of them focused on mechanics. Based on the qualitative analysis of learners' reflective responses to the post-PR questions, the learners showed collective understanding of their shared practice, a sense of autonomy over their learning, relationship-building, engaged diversity and a sense of connection. All these identified themes serve as indicators of a responsive community of learners. The findings have useful implications for pedagogy in EFL writing using technology and future research.

1 Introduction

The shift from the traditional approach to the process approach in English as Second/Foreign Language (ESL/EFL) writing courses has paved the way for researchers to investigate how learners go through these stages of the writing process: pre-writing, writing and revision/review to produce written texts (Ferris & Hedgcock, 2005). As one stage of the writing process, peer revision (PR) or peer review, where learners revise their texts based on corrective feedback, has received considerable attention by researchers (e.g. Liu & Sadler, 2003; Lundstrom & Baker, 2009; Razak & Saeed). Although a few researchers describe PR as a stage of the writing process that is equivalent to error corrections or text revisions (Ferris, 2003; Yang & Meng, 2013), many other researchers consider it a dynamic problem-oriented process that involves learners in evaluating and

revising their texts (Faigley & Witte, 1981; Flower, Hayes, Carey, Schriver, & Stratman 1986; Hayes, Flower, Schriver, Stratman, & Carey, 1987; Sommers, 1996). In other words, PR refers to both internal (re-considering and evaluating written texts) and external (revisions made to texts) manifestations (Piolat, Rousset, & Thunin, 1997). Hayes (2000) also defined PR as "a composite of … text interpretation, reflection and text production" (p. 15). Such definitions indicate that PR is a process of evaluation and text correction or revision, because learners evaluate their texts through feedback comments and revise their texts based on peers' feedback.

From a social development theory perspective (Vygotsky, 1978), peer writing, including PR is a constructive or collaborative activity in which ESL/EFL learners negotiate intended ideas and meaning, reflect on their texts and mutually scaffold each other (De Guerrero & Villamil, 2000; Hu, 2005; Liu & Sadler, 2003; Lundstrom & Baker, 2009; Razak & Saeed, 2014; Villamil & De Guerrero, 1996; Wang & Lee, 2014). Other studies reported that PR provides learners with opportunities to exchange corrective feedback (Hansen & Liu, 2005) and articulate their knowledge (Hyland & Hyland, 2006).

Both lines of research on PR framed within the process approach and Vygotsky's (1978) sociocultural theory pointed out the importance of training learners on how to revise their texts through explicit instruction. For instance, within the process-oriented approach underlying PR, the role of the instructor/teacher is not to identify surface errors in learners' written texts, but to assist them to reflect on their texts, comment on them and revise them in terms of content and ideas (Wang & Lee, 2014). Other related studies on trained PR through teachers' instruction (Berg, 1999; Hansen & Liu, 2005; Lundstrom & Baker, 2009; Min, 2005; Rollinson, 2005; Suzuki, 2008; Tsui & Ng, 2000) concluded that trained PR plays an important role in making learners' feedback focused and their text revisions more effective.

Although the abovementioned studies enrich our understanding of the role of PR, especially when combined with training and instruction on enhancing learners' texts in writing courses, how will learners be responsive to the instruction in modeling PR beyond the classroom context (not part of their required courses at colleges)? This suggests a need for further empirical investigation of modeling PR not only from the instruction side, but also from the learners' perspective as well beyond the classroom. Therefore, this study aimed to investigate EFL university learners' modeling of PR in an online learning community where they engaged in such activities as part of a shared practice beyond the classroom context. Specifically, the study aimed to answer the following research questions:

1. How were the EFL learners responsive to the instruction in modeling PR in this online learning community?
2. How did the EFL learners view their experience in PR beyond the classroom context?

2 Literature review

2.1 Theoretical foundation of PR

The first theory that underlies PR is the Cognitive Process Theory of Writing (Flower & Hayes, 1981). According to this theory, "in the act of writing, people regenerate or recreate their own goals in the light of what they learn" (Flower & Hayes, 1981, p. 381). This includes modeling of writing that is already accomplished, assessing and comparing the written text to the modeled one. Moreover, writing involves individuals in cognitive processes such as monitoring, reflecting on the written texts and operating by making revisions. The cognitive nature of writing exists within the individual's social structure and is informed by the rules of practice and information available within that structure (Flower & Hayes, 1981). This implies that revision involves learners in writing multiple drafts (Kroll, 1990; Leki, 1990; Zamel, 1985).

The second theory that is of relevance to PR is social development theory (Vygotsky, 1978). In this regard, interaction mediates learning, knowledge construction and cognitive development through scaffolding or assistance provided by the instructor or even more capable peers (Swain,

2010). Several studies have investigated PR from this theory (Hu, 2005; Liu & Sadler, 2003; Lundstrom & Baker, 2009; Razak & Saeed, 2014; Wang & Lee, 2014) and have highlighted the role of PR in assisting ESL/EFL learners through interaction and feedback exchanges to enhance their cognitive skills such as reflection on their texts. Moreover, as one of the constructivist approaches to writing in the ESL/EFL context (e.g. Johnson, 2012; Min, 2005; Suzuki, 2008), PR assists learners to improve the quality of their writing.

2.2 *Previous research on trained PR*

PR within Vygotsky's (1978) notion of scaffolding helps learners to negotiate the meaning (Hansen & Liu, 2005; Yang & Meng, 2013). It also assists them to attend to accurate meaning (Berg, 1999; Paulus, 1999), ideas (Tsui & Ng, 2000), widens their reflection through comparison of their revisions and helps them decide to accept or reject their peers' corrective feedback (Yang, 2010). This is especially true when learners are instructed on PR (DiGiovanni & Nagaswami, 2001; Hansen & Liu, 2005; Lam, 2010; Liu & Sadler, 2003; Min, 2005; Rollinson, 2005). Berg (1999) reported that ESL learners who were taught on how to revise their writing could make better revisions in terms of quality and types than those untrained students. Min (2006) also investigated whether coached PR positively affects learners' revision quality and concluded that trained PR could have a direct effect on EFL students' revision types and overall quality of texts. Lam (2010) also found that trained PR was effective as learners incorporated most of their feedback comments into their revisions successfully.

Previous researchers modeled learners' text revisions in their written work when engaging in PR activities. Some (Hall, 1990; Porte, 1996) classified revision changes in terms of the levels (word, phrase, clause and sentence) and operations (deletion, substitution, addition, permutation, consolidation and distribution). However, others (e.g. Faigley & Witte, 1981; Min, 2005) classified revisions in terms of whether they affect the meaning of the text (text-based revision) or do not affect it (surface revisions). Other researchers classified revisions into two types: local and global revisions (Cho & Schunn, 2007; Yang & Meng, 2013). The first type refers to changes in grammar errors or sentence structure, while the latter refers to changes at organization, text development and style.

However, whether students will reflect a responsive community of learners is important. Students being too critical of their peers' writing, 'prescriptive' and authoritarian rather than collaborative may be seen as aggressive and unfriendly by their peers (Nelson & Murphy, 1992). In examining ESL learners' social dimensions of interaction in PR, Nelson and Murphy (1992) found that the participants did not tend to be an ideal community of writers. This is because they showed aggressive behavior through their negative comments on writing which resulted in some members defending themselves without offering assistance and withdrawal from the discussions. Other learners tended to avoid participating in PR, because they felt they lacked the authority to be critical of other students' work and they thought that this would damage their relationships (Connor & Asenavage, 1994). Moreover, learners who are accustomed to a very teacher-centered approach to writing may not feel comfortable engaging in PR in a more student-centered environment (Braine, 2003). This suggests that modeling PR should not focus on the writing aspects and ignore the social dimension of the process. This is to ensure that learners act as a collaborative community of learners and those being more critical can be encouraged to be collaborative assistants while those showing avoidance of participation can be motivated to comment on their peers' work. Therefore, learners' responsiveness to the instruction or training needs to be further investigated in PR activities beyond classroom contexts where learners revise written texts as part of a shared practice in an online learning community for further language development.

3   Methodology

3.1   Setting of the study

The current study focused on online PR activities among EFL Arab learners in a Facebook group as an online learning community. This is because of the wide use of Facebook among EFL learners, its capability in facilitating learners' collaboration and participation and its value as an interactive learning environment where learners can find a space to use English for language development beyond the classroom context (Razak & Saeed, 2014). The Facebook group which was used as an online learning environment for peer revision activities in this study was developed as a joint effort between three EFL lecturers (one of them is the researcher) in June 2011. It aims to provide EFL Arab learners with more opportunities to practice English beyond the university context. This Facebook group was selected as the context of this study, since it represents the EFL Arab context widely and these activities could be accessed and traced to collect the data. Furthermore, it has been observed to generate dynamic interaction and foster members' social presence through daily and weekly posts and group discussions.

Among the various activities posted by the instructors or lecturers for the members of the Facebook group are those PR activities. The PR activities, including those activities reported in this study were designed by the instructors in order to assist EFL Arab university learners in developing their writing in English beyond the university writing courses. This is because EFL Arab learners have insufficient classroom opportunities to practice writing and PR and they are also challenged by the limited time and physical environment to write and revise their texts in groups in the classroom. In other words, the PR activities were not related to specific university writing courses in English, but they supplemented learners in their development of writing skill in English.

3.2   Participants

The participants in this study were 15 EFL university students (13 females and 2 males; see Table 1), who are members of this Facebook group. They represent a heterogeneous group in terms of their backgrounds, gender, levels of English at college and their membership level in this group. They were all university learners of English in their second year (S3, S5, S10, S13 & S15), third year (S4, S6, S7, S9 & S14) and fourth year (S1, S2, S8, S11 & S12). Their joining dates recorded in the Facebook group showed that 10 of the participants were old-timers (Joined the group 6 months to over a year prior to this study), while the newcomers were five learners who joined the group only one week prior to the activities reported in this study.

Table 1. Profile of the samples in the current study

Id Name	Country	Gender	Membership Level
S1	Sudan	F	Old-Timer
S2	Syria	F	Old-Timer
S3	Yemen	F	Old-Timer
S4	Algeria	F	Old-Timer
S5	Yemen	F	New
S6	Tunisia	F	Old-Timer
S7	Egypt	F	Old-Timer
S8	Yemen	M	New
S9	Yemen	M	New
S10	Yemen	F	Old-Timer
S11	Algeria	F	Old-Timer
S12	Yemen	F	New
S13	Tunisia	F	New
S14	Yemen	F	Old-Timer
S15	Algeria	F	Old-Timer

The instructor who trained the EFL Arab learners in PR of paragraph writing in this study is a lecturer of English at a Yemeni university. As one of the founders of the Facebook group, he served as a volunteer instructor, who used to post activities in writing. The instructor, with the researcher's cooperation, designed the tasks of writing and the instruction for training the EFL learners in how to revise their written texts in group or jointly.

3.3 Modeling PR through training and instruction

After introducing paragraph revision activities to the participants as part of the weekly shared practice in the Facebook group, the online instructor trained the EFL Arab learners on modeling the PR process for two weeks in 2013. So, there were two group discussions for training on PR. However, prior to PR training, two participating learners were assigned by the instructor to individually write two different paragraphs. Then, the instructor posted these written paragraphs in the Facebook group for training the EFL learners on PR in two group discussions, as previously stated.

Each week, the learners were engaged in one group PR discussion, during which they were trained by the instructor on how to discuss the written draft and how to revise it based on corrective feedback. They were guided by the instructor on modeling PR through the three steps: task identification, evaluation and strategy selection adopted from Yang and Meng (2013).

Task identification refers to the step of PR in which the learners are offered clear instruction, including the focus of the task of the PR (Yang & Meng, 2013). Therefore, in this study, the instructor provided the learners with explicit instruction through comments in the form of probing questions for guiding them on what to focus on their PR. These explicit comments posted by the instructor during the training phase concern four focus areas of learners' PR: content, unity of the text, language (meaning and grammar) and mechanics. The sample comments in the form of questions provided in Appendix A focus only on the content of written texts. The learners referred to these comments in each PR group discussion for the entire period of the current study.

Evaluation refers to the step of PR in which the learners are guided on how to discuss their written texts by giving their opinions of the four focus areas specified in the task identification step (Yang & Meng, 2013). Thus, in this study, for the evaluation step during the trained PR, the instructor kept posting comments seeking learners' evaluation, identification of the problems, suggestions and so on.

 Strategy selection refers to the step of PR during which learners decide how to revise their written texts and fix the problems identified in the previous step (Yang & Meng, 2013). For the trained PR in this study, the instructor modeled strategy selection by revising parts of the text through various operations (e.g. addition, deletion and substitution) at various levels, depending on the problems, including at the word, phrase or even sentence levels. In other words, the instructor modeled revising some parts of the texts by fixing some problems identified in the evaluation step (e.g. substituting sentences for clear expression of ideas).

Then, the learners were guided step-by-step in revising each area of these two paragraphs during the two weeks of modeling PR. In revising each paragraph, they modeled these three steps in two phases (see Figure 1). In each phase, the learners followed the same steps: identifying the task by following the instructor's probing questions, evaluating the paragraphs by commenting on them and strategy selection by revising such paragraphs. The first phase ended with posting multiple revised drafts (1). Then, in the second phase, the learners read such multiple revisions (1) and followed the same three steps to produce multiple revised drafts (2). Finally, in brief, during the trained PR activities, the instructor played several roles, including that of a modeler, scaffolder and an active participant, as he modeled commenting and revising the texts, provided frequent scaffolds and actively engaged in the PR activities.
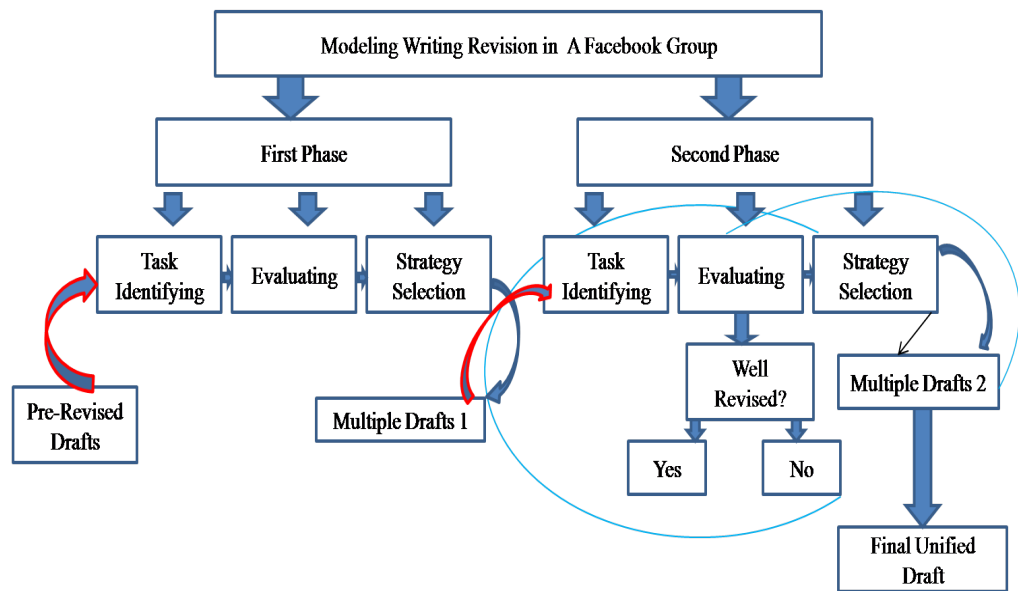
Fig. 1. Steps of the modeled PR process

3.4   *The online writing and PR tasks*

Following this modeling of PR, each participant was assigned to write a paragraph on a topic of his/her own choice and asked to submit it to the instructor on the same day. Then, the participants were requested to provide suggestions for scheduling the PR activities. Thus, it was decided that the activities would cover a period of three months, during which the participants revised 15 pre-revised paragraphs in 15 discussions over a period of 15 weeks in 2013. They were also reminded to follow the same guide questions covering the four aspects and the same procedure followed in the training stage. The instructor also intervened when necessary.

3.5   *Data collection and analysis*

The study used three means of data collection: students' revision-related feedback exchanges, their written texts (multiple revised drafts 1 and 2) posted by them during the PR activities, and their reflective statements as responses to the questions (Appendix B) posted at the end of the study period.

The current study adopted a content analysis of the data. First, the participants' revision-related feedback exchanges were counted (N=339) and read carefully to identify their reflective or exploratory functions (see Appendix C). However, in some cases, a single comment seemed to be a combination of two or three reflective or exploratory functions (e.g. agreeing and justification in one comment), and therefore, these comments were counted in terms of their exploratory functions. Secondly, the learners' multiple full drafts (N=181) and fragmented drafts (N=197) of the 15 pre-revised paragraphs (see the two samples of fragmented drafts in Appendix D for sentence-level additions) were read carefully and text revisions were highlighted and assigned to: (a) their size – (1) below word, (2) word, (3) phrase, (4) clause and sentence; (b) types of operations – (1) addition, (2) substitution, (3) deletion, (4) distribution, (5) permeation and (6) consolidation; and (c) their revision focus areas as guided and modeled by the instruction – (1) content, (2) unity and organization, (3) language (grammar and structure & meaning) and (4) mechanics. The frequency distribution and percentages of these categories of revision-related feedback exchanges and text revisions were calculated and each category and sub-category in terms of the size, type and focus areas were represented by samples below.

In analyzing the EFL learners' reflective statements, the researcher used a qualitative content analysis: coding, categorization, description, and interpretation, as described by Yang and Meng (2013). Moreover, these categories and patterns were identified as features characterizing the EFL learners' reflection on their experiences in online PR.

4   Results and discussion

4.1   How were the EFL learners responsive to the instruction in modeling PR in this online learning community?

To answer the first research question, the results reflecting PR as a process of evaluation and strategy selection are presented as follows:

4.1.1   Evaluation

The learners' various functions (N=370) of their revision-related feedback exchanges (N=339) that reflect their responsiveness to the modeled revision process in terms of its evaluation step (Table 2) were counted. In this evaluation step, the EFL learners involved themselves in identifying various problems in their texts (80=21.62%), evaluating one another's drafts and revisions (57=15.41%), expressing agreements and disagreements (52=14.05%), clarifying previous comments or intended meaning (45=12.16%), exchanging suggestions on how to fix such problems (42=11.35%) and seeking one another's clarification of previous feedback (37=10%) Moreover, the participants posted comments functioning as justifications (33=8.92%) and confirming their understanding or expressing a lack of understanding (24=6.49%) of points or revisions.

Table 2. Frequency and percentages of types of revision-related feedback exchanges

Categories	Frequency Distribution	Percentage
Identifying Problems	80	(21.62%)
Evaluating	57	(15.41%)
Agreements and disagreements	52	(14.05%)
Clarifications	45	(12.16%)
Suggestions	42	(11.35%)
Seeking for clarifications	37	(10%)
Justifications	33	(8.92%)
Confirming and lack of understanding	24	(6.49%)

4.1.2   Strategy selection

Strategy selection refers to the step of PR in which how the EFL learners acted to fix the problems identified in the evaluation step. The learners' text revisions identified in their multiple full drafts (N=181) and fragmented drafts (N=197) that reflect their involvement in the strategy selection step were calculated in this study (N=1296). Further identification of these text revisions in terms of operations as in Table 3 shows that substitution, addition and permutation ranked as the three most frequent categories among other types of revision operation, since they accounted for 56.17% (728), 30.71% (398) & 7.95% (103) of the operations, respectively. The next most frequent revision operation was deletion of various elements (40=3.09%). The other two types of revisions, consolidation and distribution, were the least frequent types of revisions (14=1.08% & 13=1.00%).

Table 3. Frequency distribution of types of text revisions in terms of operations

Categories	Frequency Distribution	Percentage
Substitution	728	(56.17%)
Addition	398	(30.71%)
Permutation	103	(7.95%)
Deletion	40	(3.09%)
Consolidation	14	(1.08%)
Distribution	13	(1.00%)

The learners' text revisions were also analyzed in relation to the size or level. The results show that the learners made text revisions at sentence, clause, phrase, word and below-word levels, but with varying distribution frequencies and percentages. Table 4 illustrates that the word-level text revisions scored the highest in terms of frequency and percentage (914=70.52%). This was followed by sentence-level text revisions (195=15.04%) and phrase-level revisions (112= 8.64%). For those text revisions below-word level, they were 58 revisions that accounted for (4.48%). However, the clause-level text revisions recorded the lowest frequency (17=1.31%).

Table 4. Frequency distribution of text revisions in terms of the size/level

Categories	Frequency Distribution	Percentage
Word-level revisions	914	(70.52%)
Sentence-level revisions	195	(15.04%)
Phrase-level revisions	112	(8.64%)
Below word-level revisions	58	(4.48%)
Clause-level revisions	17	(1.31%)

The EFL learners' text revisions were also analyzed in terms of their focus areas based on the instruction in the training stage (see Table 5). As the learners engaged in the strategy selection of trained PR, they modeled the instruction in terms of the four focus areas: content, unity and organization, language and mechanics. The participants' highest number of text revisions focused on the language in terms of grammar (574=44.29%). Specifically, such text revisions were intended by the learners to correct various grammatical errors in tenses, verb forms, missing elements and sentence structure. The second highest focus area of text revisions was meaning (241=18.60%). The learners also attended to the unity and organization of their texts (206=15.90%). The lowest number of text revisions were those focusing on mechanics (164=12.65%) and content (111=8.56%), respectively.

Table 5. Frequency & percentages of the focus areas of text revisions

Categories	Frequency Distribution	Percentage
Language (form/grammar)	574	(44.29%)
Language (meaning)	241	(18.60%)
Unity and organization	206	(15.90%)
Mechanics	164	(12.65%)
Content	111	(8.56%)

Regarding the content of their texts, it was found that of the overall substitutions (N=728), 43 (5.91%) substitutions at the sentence level were used by the learners to express their ideas more concisely. This is evidenced by Excerpt 1, showing how the learners, once they identified the problem(s) in one first draft, decided to fix it by substituting an entire sentence.

Excerpt 1. Text revisions focusing on the content in terms of clearly expressed ideas

(3) S6: I think the topic sentence states the writers' argument against the topic but not clearly expressed as I think it needs to be more general.

S13: We need a topic sentence that unifies arguments all of them.

S4: My suggested topic sentence "It has been argued that social networks have negatives impacts in the way we are socializing and communicating with others".

S2: My suggested topic: However, it is undeniable that these Social network sites have affected people's social life and communication negatively.

S13: My suggested new topic sentence is: Although SNs roles are seen of a great importance, some shortcomings are still argued to be affecting the way we communicate and socialize.

Other ways of enhancing the content of texts were addition and elaboration of ideas at the levels of clauses (27=6.78%) and sentences (41=10.30%). This can be illustrated by S2's addition of the sentences in Excerpt 2, containing a new added idea and supporting details for their paragraph.

Excerpt 2. Text revisions focusing on the content in terms of idea elaboration

(4) S2: I think the ideas are all relevant however, they are not so sufficient. I mean we can come up with more or explain more!

3. Example:
"Recently, it has become a global phenomenon to see a family gathering only for dinner or lunch while spending the rest of their time contacting their online friends and communicating with them. By doing so, they are destroying the family atmosphere for the sake of the cyber socializing they entertain themselves with, and thus creating a gap among the members of the family."

Another focus area of text revisions is the unity and organization of text, which was realized through the deletion of irrelevant ideas and details (5=12.5%) at the sentence level. An example of this is shown in Excerpt 3, where the learners expressed their agreement (S1) and disagreement (S2) about the relevance of one idea to the topic of their paragraph and pursued the argument until they reached an agreement that this idea is irrelevant to the topic of the paragraph.

Excerpt 3. Text revisions focusing on the unity and organization

(5) S1: Ok I have a remark I do agree with the writer here that the idea about the effect of social networks on health as it has been argued is relevant. That is my point of view!

S2: But health is not our point here, dear.

S1: Oh but the excessive use of SNs leads to health problems so it is kind of relevant Zaina as we talk about the negative impacts but I got what u mean. What u think?

S4: The topic is about the communication and the socialization.

S1: Actually, I thought about it and found a way to include the health sentence! Because it goes on in a circle >>>>> excessive use of SNs leads to bad health, lead to sickness, lead to a person's inability to communicate and socialize well! And so on!!!

S2: You should major in marketing, dear as you have a good way to convince others. But I still think it's not so related!

S13: Health shouldn't be included in here coz it is not socializing and communicating.

S1: So, I agree with u all about deleting that idea.

The learners also re-ordered or re-organized ideas at the sentence level (70=67.96%). The interactional exchanges in Table 6 is extracted from a longer written dialogue initiated by S2's disagreement about S10's and S6's organization of a group of sentences of the 7th first draft (see Appendix E). This is a sample of how the participants negotiated the logical orders of the sentences or ideas.

Table 6. Sample interactional exchanges on the unity and origination of ideas

Team A	Team B
- S2: Dear, I think that we can't put this sentence there as this separated the main idea from its supporting detail. What do you think?	- S10: I think the sentence (This is where he stayed and then went to university) shows that like it was a final decision, and another reason is that Sam can have Fun even he was old. Thus, there were no words that show that he was a student! So I can pick it free.
- S1: For your point of view, I don't agree because I think the writer here meant that Sam used to have fun in two different places!	
- S2: They are not similar, of course. The first is about the way Sam's family when he was at primary school and the other when he was a teenager so how that comes??	- S6: Ok, I think these 2 sentences are similar and they can`t be put at the same time in this paragraph. So your paragraph will be more coherent. I do agree with you too. I think she is more logical than both of us (y).
- S1: Sorry, I agree with her point of view for the reasons I explained above!	- S3: I agree with your order (Later, when he was a teenager, his family decided to stay in Australia). This is where he stayed and then went to university) as (This is related to Australia).

The unity of the text was also approached by the EFL learners through word-level (103=25.88%) and phrase-level (29=7.29) additions that assisted them to link among sentences and make them more coherent. Pair (A) of sentences by S11 (Table 7) is an example illustrating learners' addition of phrases to achieve coherence.

The learners also modeled the instruction in relation to the meaning of their written texts. This is obvious through their substitutions of various linguistic elements, especially words (144=19.78%) and phrases (32=4.40%). Sentences (B) & (C), taken from S6's and S2's first drafts with the phrases and words in italics, are examples of text revisions focusing on expressing accurate meaning. The learners could also enhance the meaning by adding words (50=12.56%) and phrases (15=3.77%), respectively. In pair (D) of sentences, S7 added the phrase "of standing" as a way of enhancing the meaning.

Table 7. Sample text revisions focusing on cohesion & meaning

Pre-Revised Drafts	First Drafts
A - Facebook now attracts and gathers millions of users every day.	Facebook, *as an example of learning communities*, now attracts and gathers millions of users every day.
B - I tried to catch the desk to help me to stand up.	I tried to catch the desk to *regain my position and remain standing*.
C - Do not worry! I am blind.	Do not *panic*! I am blind.
D - One day, when I was explaining a lesson, I felt tired.	One day, when I was explaining a lesson, I felt tired *of standing*.

Accurate grammar, including accurate forms of verbs and nouns, use of tenses, accurate prepositions and articles, represented one of the main focus areas of the EFL learners' text revisions. This was realized through their substitution of words (392=53.85%) and phrases (7=1%). For in-

stance, in Table 8, pairs (A) & (B) of sentences illustrate that S3 and S1 replaced words and phrases to attend to accurate tenses and accurate verb forms in English. They also added words to add important linguistic elements missing in their drafts (79=19.85%), as illustrated in pair (C) of sentences. Another strategy used by the learners to correct grammatical errors was the deletion of words and phrases (27=67.5%). For instance, in pair (D) of sentences, S11 deleted the repeated subject pronoun "they" and explained the detected error.

Table 8. Sample text revisions focusing on accurate grammar

First Drafts	Second Drafts
A - I hate chemistry. I am not sure if I can describe it.	I *hated* chemistry. I *was* not sure if I *could* describe
B - Nowadays, I am losing grammar rules.	Nowadays, I *feel like* losing grammar rules.
C - I did not let them feel that I embarrassed.	I did not let them feel that I *was* embarrassed
D - Even my friends *they* could not help me.	Even my friends could not help me.

Accurate sentence structure was also a part of the grammatical focus area of the EFL learners' text revisions. The learners could correct sentence structure by re-ordering linguistic elements at word (5=4.85%) and phrase levels (28=27.18%). In Table 9, S3's and S2's permutation of the words and phrases in (A) & (B) is a sample of how they fixed errors related to sentence structure. Moreover, the learners engaged in sentence-level distributions (13=1.00%) and consolidations (14=1.08%), as illustrated by (C) and (D), taken from S14's and S13's second drafts, respectively. Such distributions and consolidations at the sentence level assisted the learners to vary the sentence structure from simple to compound or complex and vice versa.

Table 9. Sample text revisions focusing on sentence structure

First Drafts	Second Drafts
A - And they reflect clearly the learning community.	And they *clearly* reflect the learning community.
B - Learning in Facebook groups is useful for learners in creative and interactive way.	Learning in Facebook groups is *a useful, creative and interactive way for learners*.
C - That could be proved when learning is reflected on the intellectual development of many postgraduates having more than one specialization field.	*That could be proved when learning is reflected on the intellectual development of many postgraduates. This happens when they have more than one specialization field.*
D - They should have developed such inner faculties earlier. These inner faculties are long-term advanced skills.	*They should have developed such inner faculties earlier and they should have acquired long-term advanced skills.*

Finally, the EFL learners were less responsive to the instruction in modeling PR in terms of mechanics. The learners made text revisions on correcting spelling of words and capitalizing initial letters of words (106=14.56%). They also made successful attempts to achieve accurate mechanics through addition (54=13.57%) and substitution (4=1%) of punctuations. For instance, in this pair

of sentences: "When the teacher saw me he said, go home little boy" and "When the teacher saw me, he said 'Go home little boy'", S2 added the missing comma and the quotation marks to the pre-revised sentence, thus, changing the sentence into direct speech. This can be seen in the sample interactional exchanges in Excerpt 4, in which S9's comment on S3's lack of awareness of punctuation was replied to by S3's willingness to attend to such mechanics in her revisions:

Excerpt 4. Text revisions focusing on mechanics

(9) S9:   I observed that most of you aren't aware here to put period, commas, etc.) If you use these punctuation marks no space between the words.

S3:   Okay I will try my best to pay attention to punctuation, and I will focus in punctuation in your comments. From you we get a lot of benefits. Thank you so much.

Based on the above results, Figure 2 is a diagram representation of how the EFL Arab learners modeled the instruction in PR, specifically, the strategy selection step in terms of the operations, the size or levels, and the major focus areas of text revisions.
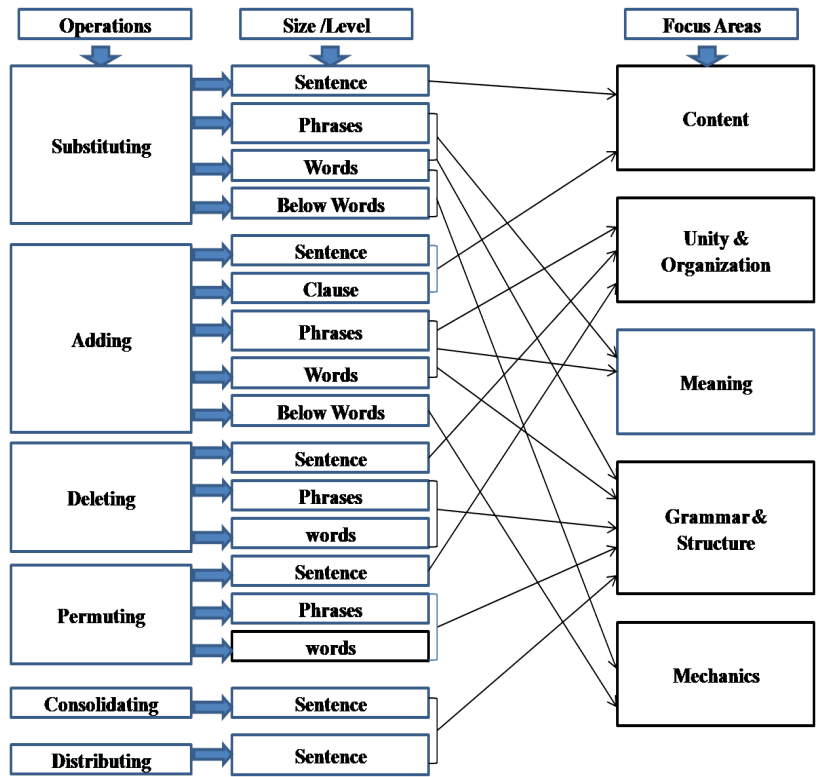

Fig. 2. Representation of the modeled revision changes in terms of operations, levels & focus areas

In discussing the above results of the first research question in relation to the theoretical perspectives and previous related research, the results of this study showed how the EFL students were responsive to the instruction in modeling online PR within the cognitive perspective of writing process (Kroll, 1990; Leki, 1990; Zamel, 1985). In this study, the learners followed the modeled process of PR in both steps: evaluation and strategy selection. While the first step refers to how the EFL learners reflected on their texts as a means of evaluating them, the strategy selection step refers to how they revised their texts. As they evaluated their drafts, the EFL learners engaged in feedback exchanges that reflected their cognitive involvement in these activities. This particular

interesting result supports the cognitive nature of the PR process as claimed and argued by several tenants of the cognitive perspective of writing process (Flower & Hayes, 1981).

As the EFL learners engaged in strategy selection, they revised their drafts through various operations (e.g. additions, substitutions and deletions) at levels that varied from sentences to below-words. These text revisions enhanced learners' written texts in relation to content, unity and organization, language, and mechanics. This goes in line with previous research on text revisions (Faigley & Witte, 1981; Hall, 1990; Min, 2005; Porte, 1996). Thus, text revisions at the sentence level helped the learners to express their ideas more clearly, organized these ideas in each paragraph logically, and attended to the relevance of these ideas. This is partly consistent with findings by other researchers (Cho & Schunn, 2007; Yang & Meng, 2013) in terms of global revisions reported by Min (2005). Revisions at word and phrase levels were not only oriented towards grammatical error correction, but also accurate meaning (Min, 2005). It is also evident that such revisions focused on mechanics (Cho & Schunn, 2007; Yang & Meng, 2013).

From socio-cultural theory (Vygotsky, 1978), such revision-related feedback exchanges mediated the EFL learners' cognition including their understanding of and solving the problems in their written texts (Hansen & Liu, 2005; Hu, 2005; Liu & Sadler, 2003; Lundstrom & Baker, 2009; Razak & Saeed, 2014; Wang & Lee, 2014; Yang & Meng, 2013). Such exchanges also show how the learners widened their reflection through comparison of their revisions and decisions to accept or reject suggestions (Yang, 2010). Taking both the above interpretations of what revision is, the PR process, as modeled in this study, can be a cyclic process of both constant reflection and operation.

4.2   How did the EFL learners view their experience in PR beyond the classroom context?

The qualitative analysis of the EFL Arab learners' reflective statements to the questions posted by the instructor at the end of the study period showed that there were several themes showing the EFL learners' reflection on their experience in online revision activities as a communally situated learning. These themes were represented by a few sample quotes. Thus, the EFL learners expressed a shared purpose of joining this Facebook group in general and specifically in relation to their participation in the revision activities, as seen in S3's statement: "… because our goal is to learn how to write in a perfect way and all learning from each other." These activities, as a shared practice, are implicitly defined as the learners' responses to the emerging situations which are evidenced by their ownership of their learning: "This collaborative work has a great impact on our writing skills." (S8) This is also obvious from their sense of autonomy in their learning: "I have a role, as a learner, in this learning process not only a negative consumer." (S2) Learners' involvement in cognitive processes such as thinking is one feature of their experience, as stated by S1: "It helps one to think more deeply and at many times, I challenge myself as to come up with creative ideas."

The EFL learners perceived this Facebook group as a supportive learning environment where they felt comfortable and motivated to collaborate in these revision activities: "During the writing revision activities, it is good for a member to feel comfortable to participate in it, feel less stressed and freer to express their ideas. Having the feeling of being a member in the group as family rather than a learning group has always motivated me to participate." (S4) As an asset-based learning environment, this group assisted learners to socialize, communicate and experience collective learning. According to S5, it "offers us a very good chance to strengthen our social skills and in communication and learning how to work within a group (collective work)". It also facilitates the participants' collaboration and interaction in revision activities: "But I can say that Facebook serves better in putting collaboration into practice and ensures a comfortable atmosphere of interaction." (S13)

Relationship building was another feature of the learners' experiences in PR in this Facebook group. It is based on support, kindness and care, as stated by S6: "One I like about this group is that making new friends who are helpful, kind and caring." Such online relationships are also built on a common interest, which is learning English. S7 stated that "making new friends and new relations in this group are based on our love of learning English". As a result, the learners became

more responsive to one another in these activities: "It's clear when someone asks could find a response or a solution for it." (S8) The online relationships were seen by most of them as good opportunities to mediate their learning and especially writing skill, as indicated by S4: "Knowing that my friends whom I have spent much time with will criticize my writing based on their will to help me improve my writing skills."

The fourth feature describing their writing revision experience is the learners' engaged diversity, including engaging in sharing diverse ideas and styles in writing: "When the members comment on my sentences in writing and they share different ideas and show me other different ways to write them, I really feel the progress." (S12) This is also inclusive of their engagement in collaborative learning as opposed to traditional classroom contexts: "This community through collaborative work and discussing in an academic way mixed with a delightful spirit by all members has helped me to get better in one of the most challenging skill for me." (S4)

A final feature of this notion of a communally situated learning characterizing the EFL learners' experience in writing revision is their developed sense of community. It is evident that being involved in such revision activities for a relatively long period of time, the learners gradually developed this sense of belonging to the online learning community. According to S10: "Here, really, I don't feel like I'm in a Facebook group, but it's like I'm within my friends and family. I do feel a sense of belonging."

Based on the above findings, the EFL learners expressed their collective understanding of their joint activities through shared purpose and sense of ownership and autonomy in their revision activities. It was argued (e.g. Lieberman & Wood, 2003) that motivating and engaging learners in a community may not work out well without their sense of collective understanding and sense of autonomy. This is also in line with Kwok's (2008) argument that peer PR fosters learners' understanding of their texts. Moreover, the EFL learners valued this Facebook group as a supportive learning environment, which implies that the EFL learners felt comfortable engaging in PR in a more student-centered environment (Braine, 2003). Likewise, the EFL learners reported their relationship building as part of their learning experience in revising their paragraphs together, thus, showing care and social support. As opposed to what Nelson and Murphy (1992) found, the EFL learners represented a collaborative learning community rather than being aggressive or unfriendly in this study.

5   Conclusion

There are several implications of the findings in this study. First, engaging learners in modeling PR through task identification, evaluation and strategy selection is beneficial for fostering learners' reflective or exploratory cognitive capabilities, including evaluation, clarification and justification. Moreover, modeling PR assists EFL learners to be involved in revising each draft and producing multiple drafts of one single paragraph with enhanced content, unity and organization, language and mechanics. Another implication is that using SNSs such as Facebook groups for enhancing EFL learners' writing through PR activities beyond the classroom courses may not be effective without training the learners in PR through good and effective instruction. However, in online PR beyond the classroom courses, as in this study, EFL learners need to be responsive to the instruction out of their desire to develop their writing rather than having to engage in activities which are part of college writing courses. Therefore, learners can be responsive to the instruction and pursue their active engagement in online PR activities beyond the classroom context, when they feel that they are a community of learners who seek further learning and development. In this regard, the findings underlie the role of learners' sense of community in making them more responsive to the instruction, supportive to one another and active learners.

Although the results of the study demonstrated the role of modeled PR through training in engaging learners' in cognitive processes, including evaluation and strategy selection, by which the learners enhanced their written texts, there are several limitations that should be addressed for future research. The first limitation is the small number of EFL Arab learners, and therefore, the findings cannot be generalizable. Secondly, no attempt was made to trace or record each individual

learner's contributions to their paragraphs because, in the online PR activities reported in this study, the learners were of different levels of English at the university. Moreover, they worked as one group in revising their texts rather than in separate groups or in pairs of learners with equal levels in English. Therefore, in this study, we did not evaluate each individual learner's performance in writing through scores prescribed to their first and revised drafts. This might have affected the findings of the study. Finally, though the learners, in modeling the instruction and in revising their paragraphs, attended to global revisions or text-level revisions, this was still insufficient compared to other levels of revision changes. This could be attributed to the limited focus of the study, which is on revising paragraphs rather than essays.

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Appendices

Appendix A

The instruction on modeling PR

1 - Content of the paragraph: Make sure your focus on the content of the paragraph only here by following these four aspects and questions:
1.1. What do you think of the content of the paragraph?
1.2. Does the topic sentence state the writers' main idea of the paragraph clearly?
1.3. Do the ideas and supporting details give sufficient information about the topic of the paragraph?
1.4. Do you think that these ideas and supporting details provide sufficient information (enough) about the topic?
1.5. Are these ideas and supporting details clearly expressed for readers?
Note (1): In case, you see there are problems, please do state that problem clearly, clarify them, provide reasons and suggestions.
Note (2): After this, please everyone should revise that part and post it in a comment (e.g. add, replace, delete, etc.)

Appendix B

Questions for reflection on experience in PR

1. What do you think of these revision activities in this Facebook group?
2. In what ways, do you think that these writing activities reflect your similar purpose that is almost shared by all your friends who participated in them? Explain?
3. Since you participated in these revision activities, how do you see this Facebook group as a learning environment for you? Or what features does this Facebook have in facilitating your revising together?

4. What do you think of your relationship with other friends who participated with you in these revision activities in the Facebook group?

5. Any other things related to you together that connect you? Explain please.

Appendix C

Sample coded revision-related feedback exchanges

Revision-Oriented Feedback Comments	Codes
S1: dear >>>> inserted A topic (don't forget the articles) !!!! :))).	Problem identification
S8: thanks dear but I do not agree it does not need article (A) inserted A topic.	Disagreement
S1: oh it needs an Article because the word inserted is not an adjective!! we should say : inserted a topic !!!	Justification
S8: yup thanks for u:) I agree with you	Agreement
S4: Only some correction in your punctuations... Suddenly (,) I fell to the ground .I tried to catch the desk to help me to stand up (,) but unfortunately (,) it fell over me.	Problem identification
S3: Thank sister. I got your correction :).	Confirming understanding
S7: why did u changed too into very?	Seeking Clarification
S2: dear, both have the same meaning but I tend to use" too" when we talk about something that is unnecessary extra.	Clarification
S7: yeah I got you now.	Confirming understanding
S13: In the paragraph, we should complete the first statement directly.	Suggestion
S6: of course I loved the emotional sentences that were added by you Also the way she described the situation with details which helped the reader to get a clear image of it. That was such a great enhancement	Evaluation

Appendix D

Sample pre-revised draft & last unified draft showing learners' substitution and addition at sentence levels to enhance the content

Pre-revised Draft (10)	Last Draft (10)
Social networks have played a remarkable role in bringing about changes in the way we communicate and socialize. On the other hand, it has been argued that Social networks have negative impacts on our communication and socialization. Actually, this may lead to build up an introvert personality as users become somehow addicted to the virtual world, while they need to pursue real contact with their surroundings. However, I believe that this problem should be avoided as it has been proven that Social networks can enhance communication skills if they are used wisely.	Social networks have played a remarkable role in bringing about changes in the way we communicate and socialize. On the other hand, it has been argued that Social networks have negative impacts on our communication and socialization. Actually, this may lead to build up an introvert personality as users become somehow addicted to the virtual world, while they need to pursue real contact with their surroundings. However, I believe that this problem should be avoided as it has been proven that Social networks can enhance communication skills if they are used wisely. Many online users also think that Social networks such as Facebook can destroy the intimate social relationships. Recently, it has become a global phenomenon seeing a family gathering only for dinner or lunch while spending the rest of their time contacting their E-friends. In fact, by so doing, they are destroying the family atmosphere and creating a gap among the family members for the sake of cyber socialization and communication.

Appendix E

Sample pre-revised draft & last unified draft showing permutation strategy at sentence level

Pre-revised Draft (7)	Last Draft (7: A)	Last Draft (7:B)
(28) This is where Sam stayed and then went to university. Later, when he was a teenager, his family decided to stay in Australia. On weekends, the family used to go out, and Sam had fun with his family as to get relieved from school stress. After a few years, Sam started his primary school, and went to one of the best primary schools there. On weekends, the family used to go out, whereas Sam used to have fun with his Australian friends. =	After a few years, Sam started his primary school, and went to one of the best primary schools there. Later, when he was a teenager, his family decided to stay in Australia, this is where he stayed and then went to university. On weekends, the family used to go out, whereas Sam used to have fun with his Australian friends.	After a few years, Sam started his primary school, and went to one of the best primary schools there. On weekends, the family used to go out, and Sam had fun with his family as to get relieved from school stress. Later, when he was a teenager, his family decided to stay in Australia. On weekends, the family used to go out, whereas Sam used to have fun with his Australian friends. This is where he stayed and then went to university.