Comparing Pair and Self Dynamics of Scaffolding by Written Languaging in English as a Foreign Language Learning

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Research Article

Keywords: Pair Languaging, Scaffolding, Self-languaging, Translation, Written Languaging

DOI: https://doi.org/10.21203/rs.3.rs-723022/v1

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Abstract

This study investigated the extent to which dynamics of scaffolding (self vs. pair) would impact the language learners’ written languaging in terms of quantity, focus, conceptual processes of languaging, and language learning improvement. To this end, in a pretest-posttest research design, we assigned 60 English-as-a-Foreign-Language undergraduate students into two groups of pair languagers and self-languagers before they engaged in three-stage (translating, comparing to the model translation, revising) Persian-to-English translation tasks. Content analysis of written languaging episodes (WLS) indicated that while pair languagers produced more WLS than the self-languagers, both groups used WLS in a descending order from Stage 1 to 3 in translation tasks. Also, distribution of lexis-focused (L-WL) and grammar-focused (G-WL) episodes indicated despite the fact that both pair and self-languagers produced more L-WL than G-WL episodes, pair languagers produced a larger amount of L-WL episodes than self-languagers who had relatively a higher record in production of G-WL episodes. Moreover, the proportions of conceptual processes incorporated into WLS was found to be uneven and more in favor of self-assessment and hypothesis formation by both groups. Finally, statistical analysis of variance (ANOVA) reported the advantage of pair languagers in language learning improvement over self-languagers, despite their mutual progress. The paper was concluded with a number of pedagogical implications.

Introduction

A growing number of studies in second language acquisition (SLA) have been conducted on the mediating role of language as a semiotic tool after Swain [39] introduced the concept of languaging [26, 33, 39, 42, 45]. Within a sociocultural framework, empirical findings proved the claim that written or spoken languaging by others or the self contributes to second language (L2) learning [32, 40, 41, 46, 47], since L2 learners “externalize their thoughts and then, these externalized thoughts transform into artefacts that allow other learners to contemplate” ([38], p. 478).

In SLA research literature, there has been a greater focus on the mediating role of oral languaging (i.e., collaborative and private speech) than languaging in written mode [7, 39, 37]. Suzuki [36] acknowledged two important advantages of written languaging (hereafter, WL) as (a) giving more time to language learners to process, and freeing them from the pressure of instant responses, and (b) converting into an external memory accessible to the L2 learners in the future. To date, WL has mostly been utilized as a medium of data collection [10, 11, 15], rather than an important mediator of L2 learning only in a few studies [36, 37]. It underscores the demands for further research.

From a rather different perspective, [44] and [19] in a series of experiments redefined languaging as a self-scaffolding device the languagers can use to perform on cognitive tasks in the L2 learning context. In other words, self-scaffolding by languaging (i.e., self-languaging) mediates the internalization of mental processes in L2 learning. Self-languagers are assumed to transform social interactions into private speech in order to self-regulate. Similarly, peer languagers are assumed as the agents creating a zone of collective scaffolding [8] through social interactions, when they respond to each other’s ideas and shape their own and others’ cognition and language learning [39]. But the key question is whether self or peer dynamics of languaging would generate different qualities of mediation in language development. It is a venue in languaging which inquires further empirical research.

Literature Review
Languaging in SLA Research

By definition, languaging is “an action - a dynamic, never-ending process of using language to make meaning” ([39], p. 96). Grounded in Vygotskyian sociocultural theory (SCT), languaging is a semiotic tool that language learners use to regulate their mind while performing on cognitively demanding tasks [48]. Swain [39] maintained that languaging is verbalized mediation of the brain with “the cognition and recognition of experience and knowledge” (p. 106) in learning a language. She argued that L2 learners can produce double outputs - primary L2 output and languaging – when they are languaging about L2 - which in turn enhances the noticing and metacognitive functions.

Languaging as learning mediation can take place either through collaborative dialogue with others, or self-addressed dialogue as private speech. Swain and Lapkin [40] reintroduced Donato’s [8] ‘collaborative dialogue’ as peer languaging or the “dialogue in which speakers are engaged in problem solving and knowledge building” (p. 102). A few years later, Negueruela and Lantolf [27] paralleled private speech to self languaging and defined it as “the intentional use of overt self-directed speech to explain concepts to the self” (p. 86). Both dynamics of languaging were supported as effective scaffolding mediation in several SLA research studies [6, 19, 41, 36, 49].

Languaging is not always in oral mode. Suzuki [35] introduced the concept of written languaging and defined it as an “equivalent of private speech, but in writing” (p. 4). He maintained that through WL, the L2 learners’ co-constructed cognition is transformed into written mediation for further critical reflection. Suzuki [36] claimed that WL might “stimulate more elucidation and clarification of thoughts than oral languaging, in the absence of audience in person” (p. 4).

Recent SLA studies on languaging have narrowed their scope to the interconnection between languaging and L2 learner language proficiency [32], task type [37], and the focus of languaging episodes [12]. In a case study with two Mandarin English-as-a-second language (ESL) learners, Qi and Lapkin [32] investigated how language-related noticing was related to composing and reformulation in a writing task and reported the benefits of both in promoting noticing; however, the noticing quality was different in high and low proficiency languages. Their analysis of recorded language-related episodes indicated that contrary to high proficiency languager, the low proficiency language paid more attention to lexis than grammar while comparing her essay to the reformulated version. In a seminal study with 141 Japanese EFL learners, Suzuki and Itagaki [37] operationally defined WLEs as ‘written languaging episodes’ or “written retrospective reports about how [languagers] solved the exercises” (p. 221). They investigated the interactions among two types of orientation in WL (i.e., grammar-based and lexical-based), two types of discrete grammar tasks (i.e., comprehension and production-oriented translation), and L2 learners’ higher and lower levels of proficiency. Their analysis of WL episodes indicated that the total number of grammar-based WL was much more than lexical-based WL in both comprehension and production types of grammar tasks. Analysis of WL episodes also reported that high proficiency languagers produced more grammar-based WL episodes than low proficiency languagers.

Apart from their remarkable findings, Suzuki and Itagaki [37] promoted the pedagogical implication of translation as a discrete, form-focused grammar task which has a critical role in teaching language in real classroom context. Similarly, in a research with 14 Japanese EFL learners, Ishikawa [13] explored the role of WL in the performance of self-languagers on Japanese-to-English translation task. She introduced the concept of metanote as “any language used by learners to reflect on their language use while they work on a task, with or without metalinguistic terminology” (p. 220). Her reports indicated that the self-languagers produced L-notes (metanotes on
word formation and word choice) much more than G-notes (metanotes on use of articles or voice) on translation tasks.

**Languaging in Translation Tasks**

Recently, translation has been viewed as a versatile language skill which is actively used by “intercultural mediators, foreign trade experts, international marketing professionals, global content managers, multilingual secretaries or diplomats” ([4], p. 14). Despite a general negative attitude towards using the mother tongue (L1) in foreign language classrooms [18], translation is becoming important as a communicative activity and as a learning tool particularly in non-native contexts [5, 13, 18, 23, 37].

Emphasizing the mediating role of translation in the L2 learning context, Nord [30] argued that a contrastive analysis of the inter-lingual commonalities between the source and the target language can develop metalinguistic awareness which in turn improves language learning. By introducing a functional model of translation, Nord [30] defined the act of translation as a target-text function, and argued that the functions a text fulfills in the target culture will determine the language and rhetoric alternatives that a translator chooses in the process of translation. In other words, translation can raise L2 learners’ awareness to make smart decisions on their lexical and grammatical choices. Nord’s approach to translation tasks has had strong pedagogical and research implications in SLA, including studies on L1 transfer competence [17], and linguistic and cultural competence in the source and the target languages [18].

Further support for the benefits of translation tasks goes back to Brooks and Donato [3] who reported L1-mediated oral interactions by L2 learners and supported the facilitating role of L1 as a common and ‘normal psycholinguistic process’. During the L1-mediated interactions, “utterances in L1 mediate the cognitive processes that learners use in problem solving tasks, specifically, to reflect on the content and the form of the text” ([1], p. 238). Therefore, using L2 learners’ L1 in translation tasks is believed to generate content, to foster scaffolding and to externalize private speech in terms of languaging [13].

**Purpose of the Study**

Despite several arguments for the comparable impacts of oral and written languaging on L2 learning [39], there are also counter-arguments which speculate such equivalence [35, 36]. Moreover, some research findings emphasized the superiority of written over oral languaging for its capacity of lowering the time pressure on languagers or its relative permanency [36]. As our review indicated, current SLA research has mostly focused on oral self-languaging [33, 37], whereas the effectiveness of peer languaging in the written mode is under-researched and worthy to further exploration. Finally, SLA research literature on languaging lacks the cross-examination of WL by self and peer languagers.

To fill in the gap, we attempted to analyze the quantity and quality of WL episodes across the self and pair (peer-peer) dynamics of languaging in the platform of L1-to-L2 translation tasks. To fulfill the objectives of the study, we raised the following research questions:

1. Does the dynamics (pair vs. self) of written languaging make any difference in the quantity of WL episodes?
2. Does the dynamics of written languaging make any difference in the focus (i.e., grammar-based and lexis-based) of WL episodes?

3. Does the dynamics of written languaging make any difference in the conceptual processes (i.e., paraphrasing, inferencing, analyzing, self-assessment, rereading) underlying WL episodes?

4. Does the dynamics of written languaging make any difference in language learning improvement (i.e., performance on translation tasks)?

**Method**

**Participants**

This research was conducted a few months before the COVID-19 pandemic in 2019. A total of 60 Persian-speaking EFL learners (25 females and 35 males) who were undergraduate students in the 4-year English Translation Studies university program took part in this study. The participants were non-randomly selected through the convenience method of sampling among a pool of 71 volunteers. Their ages ranged from 23 to 26 years ($M = 24.02$, $SD = .99$) and the average length of their exposure to English in formal schooling was 12.2 years. The participants had been receiving instructions both in English and Persian (as their L1) in course-related subjects, such as translation of political, journalistic and literary texts. However, English was the dominant medium of instruction in their classrooms, adhered to the curriculum. The researchers in this study were two university professors whose Ph.D. was in Teaching English as a Foreign Language (TEFL) and had been teaching various translation courses for almost 14 years, as well as a professional translator with a master’s degree in English Translation Studies.

Since findings in [14] and [49] indicated that the L2 learners’ language proficiency level can play a critical role in optimizing the quality and amount of languaging, we decided to select a homogeneous sample of participants of higher proficiency by running an Oxford Placement Test (OPT, Version 1.1, 2001). The participants’ OPT scores determined their language proficiency as advanced (48-54, C1 in OPT ranking system) ($M = 50$, $SD = .41$, Cronbach’s $\alpha = .802$, representing a strong test reliability).

**Translation Tasks**

A set of Persian-to-English three-stage translation tasks ($n = 3$) were prepared as the treatment in this study (Appendix). The source texts were authentic and extracted from a Persian news website ([www.mehrnews.com](http://www.mehrnews.com)) in December 2019. The content of the translation tasks consisted of 4 to 6 sentences, 86 to 108 word counts ($M = 94$), and the readability index of 55.1 in the Flesch Reading Ease scoring system, which was interpreted as challenging enough for the participants to trigger a large quantity of languaging. The participants were required to engage in translating and written languaging for a total of 40 minutes. The corresponding English model translation to every task was prepared by the researchers collaboratively (Cronbach’s $\alpha = .901$) and presented to the languagers.

**Pre- and Posttests of Translation**
We adopted a pretest-posttest design to assess the participants’ learning outcomes and explore the fourth research question in this study. To perform on the pre- and posttests, the participants were asked to work on a Persian-to-English translation task (without languaging) in 20 minutes. The passage consisted of six Persian sentences with word counts of 115, downloaded in December 2019 from the Mehr News website. The readability index of the passage was measured as 57.3 (i.e., fairly difficult to read) in the Flesch Reading Ease scoring system.

We adopted the target quality criteria of the accuracy of lexical choices and grammatical structures for assessment of the pre- and posttests. The translations were co-rated by calculating the percentages of the correct translated items. The inter-rater reliability was measured as Cronbach’s $\alpha = .782$, representing strong raters’ agreement. The discrepancies in rating were consulted and resolved case-by-case.

Data Collection Procedure

Since written languaging is not a natural practice in any language learning experience, we strongly believed that training to languaging would be necessary. Therefore, this study commenced by launching a two-day extracurricular workshop on ‘Languaging in Translation’. It was held for four sessions of 90 minutes. In this workshop, the 71 attending volunteers were introduced to the notion of languaging and its seven conceptual processes (i.e., paraphrasing, integration, elaboration, hypothesis formation, analyzing, self-assessment and rereading), following Swain et al. [44]. In the first session, one of the researchers demonstrated how to translate a Persian sentence into English while languaging in written mode on the whiteboard:

$$ Arya \text{ dar sokout goosh fara midad.} \ (= Arya \text{ was listening in silence.})$$

When the researcher was translating the verb *goosh fara midad* into ‘was listening’, she wrote a red-colored sentence on the margin of the whiteboard (should I use a simple verb or should I use –ing form here?) (as an example of Integration process), or when the researcher was translating *dar sokout* which was moved from the mid-position between the subject and the verb in Persian sentence to the final position in English ‘in silence’, she wrote on the margin of the board (Let me see it sounds better if I write it between auxiliary ‘was’ and ‘listening.’) (as an example of Hypothesis formation process).

The participants intensively engaged in translating and self or pair (interchangeably) languaging in written mode while we were guiding them to solve their problems. As SLA research suggested that the learners’ L1 can be used as a cognitive tool to mediate the process of complex tasks [41], the participants were allowed to language both in Persian and English. After the workshop, the Oxford Placement Test was administered. Next to excluding 11 outliers whose scores were below the threshold, the remaining participants were voluntarily assigned into the pair languagers group (hereafter, PL) ($n = 15$ pairs), and the self-languagers group (hereafter, SL) ($n = 30$ individuals). In Week 2, they worked on a pre-test of translation (without languaging) for 20 minutes. In Weeks 3-5, the participants in both PL and SL groups were required to engage in WL in either L1 or English while they were translating (Stage 1), comparing their translation output against a model translation and noticing the differences (Stage 2), and revising their translation (Stage 3) (Table 1). In Week 6, the participants worked on a posttest of translation identical to the pre-test (without languaging) for 20 minutes.
To minimize the chances of oral languaging and verbal interactions, we required the participants to share their user IDs in Telegram™ – the free and open-source mobile application popular with students – so that the weekly translation task could be sent to the private chatrooms of the pairs languagers and self-languagers. We saved and printed the uploaded text-based WL episodes and the submitted translations for content analysis. The whole procedure was coordinated by us as the administrators of the Telegram chatrooms.

### Table 1 Data Collection Framework

| Week 1 | Two-day Workshop of Languaging in Translation (6 hours: 4 sessions) |
|--------|---------------------------------------------------------------|
| Week 1 | Oxford Placement Test (45 m) + grouping                      |
| Week 2 | Pretest of translation (20 m)                                |
|        | Stage             | PL Group                  | Duration | Stage       | SL Group                  | Duration |
| Week 3 | 1                 | Translating + pair languaging         | 20 m     | 1           | Translating + self-languaging | 20 m     |
| Task 1 | 2                 | Comparing to the model translation + pair languaging         | 10 m     | 2           | Comparing to the model translation + self-languaging | 10 m     |
|        | 3                 | Revising translation + pair languaging                     | 10 m     | 3           | Revising translation + self-languaging                  | 10 m     |
| Week 4 | Three-stage Task 2 (40 m)                                   |
| Week 5 | Three-stage Task 3 (40 m)                                   |
| Week 6 | Posttest of translation (20 m)                               |

### Analysis of WL Episodes

Swain and Lapkin [40] defined a languaging episode as “any part of a dialogue where the students talk about the language they are producing, question their language use, or correct themselves or others” (p. 326). To analyze the languaging data, we collaborated in counting the WL episodes produced by the pair and self-languagers and
reached an inter-rater agreement of 98.4%. To examine the focus of WL episodes, we operationally defined WL episodes in terms of their orientation into:

1. Grammar-focused (G-WL) or any grammatical term (e.g., subject-tense agreement, object, reference, adjective)
2. Lexis-focused (L-WL) or any segment or comment on word meaning, or L2 equivalence

Those WL episodes such as 'OK', 'really?', or 'wait a minute', which could not be labeled for their focus, or the WL episodes on the words spelling or punctuations were eventually eliminated from analysis. Finally, WL episodes were analyzed in terms of the conceptual processes or 'units' of languaging, following the classification in Swain et al. [44]:

1. Paraphrasing: repeating a conceptual unit in the source text;
2. Inferencing: including integration (using the metalinguistic terms while translating), elaboration (comparing and contrasting the equivalents in L1 and L2), and hypothesis formation (formulating hypothesis about the quality and accuracy of translation);
3. Analyzing: breaking the sentence in the source text into different parts of speech or semantic roles;
4. Self-assessment: monitoring one's own understanding of the source text; and
5. Rereading;

**Table 2 illustrates the samples of WL episodes by pair languagers in PL group and a self-languager in SL group.**

Table 2 Samples of WL episodes by pair and self-langugagers
**Translation Task 3**

**Stage 1: Translation**  
*Nirouhaye raahdari dar amadehbash hastand. (= The road maintenance force is standby.)*

| Pair languagers in PL group | WL Focus | WL Process | A self-languager in SL group | WL Focus | WL Process |
|-----------------------------|----------|------------|------------------------------|----------|------------|
| A: I think *rahdari* doesn’t have an equivalent in English! | L-WL | elaboration | - I am not sure. Can I say ‘sheriff’? | L-WL | hypothesis formation |
| B: ‘keeping road’? | L-WL | hypothesis formation | - I don’t have any word for it. But I am sure I have seen this word before! | L-WL | self-assessment |
| A: I haven’t heard it before. | L-WL | self-assessment hypothesis formation | - …. are ready? | L-WL | hypothesis formation |
| A: What about ‘road police’? | L-WL | hypothesis formation | - Ready for what? | G-WL | analyzing/integration |
| B: You mean like ‘patrol’? | L-WL | - *dar amadehbash,* is it a verb or an adverb in this sentence? | G-WL | self-assessment |
| A: Yes! Road patrol. | L-WL | - It was a difficult sentence for me! | |
| B: OK | L-WL | | |

Uploaded output:  
Road patrolmen are on standby.

Total WL episodes: 6

**Stage 2: Comparing to the model translation:** The road maintenance force is on standby.

| A: Oh, ‘road maintenance force’! We had it before. | L-WL | re-reading | - My translation was completely wrong! | G-WL | self-assessment |
| B: Really? | L-WL | self-assessment | - ‘Road maintenance officers or force?’ | L-WL | elaboration |
| A: Yes, we had it last semester. | L-WL | self-assessment | - I think it should be ‘officers’. | L-WL | hypothesis formation |
| A: We were correct about ‘standby’. | G-WL | analyzing/integration | - ‘Standby’ is a good adjective! | L-WL | integration |
| A: The word ‘force’ shouldn’t be plural in meaning? | G-WL | hypothesis formation | - I totally forgot ‘standby’! | L-WL | self-assessment |
| A: So why not ‘… are standby’? | G-WL | self-assessment | |
| B: I don’t know! | | | |

Total WL episodes: 7

**Stage 3: Revising translation**
B: Do we want to change any word, anything else?
A: Nothing! It is fine.
B. OK.

Submitted output: The road maintenance force is on standby.

Submitted output: The road maintenance officers are on standby.

Total WL episodes: 2

Results

The produced WL episodes by the pair and self-languagers were collected, printed and collaboratively analyzed for quantity, focus and the conceptual processes underlying WL episodes in order to explore the first three research questions. Next, the percentages of correct translated items on the pre and posttest performances of the PL and SL groups were obtained and statistically analyzed by running a one-way analysis of variance (ANOVA) to address the fourth research question.

Quantity of WL Episodes

The first research question explored the possible differences in the amount of WL episodes produced by pair and self-languagers. As Table 3 displays, the pair languages produced more WL episodes than the self-languagers (2398 to 2100) at three stages of the translation tasks. Moreover, it can be seen that the quantity of WL episodes dropped off from Stage 1 (n = 2413) and Stage 2 (1602) to Stage 3 (480) in both groups.

Table 3 The proportions of WL episodes by pair and self-languagers

| Task | Group | Stage 1 | Stage 2 | Stage 3 |
|------|-------|---------|---------|---------|
| 1    | PL    | 380     | 192     | 80      |
|      | SL    | 340     | 184     | 64      |
| 2    | PL    | 428     | 318     | 80      |
|      | SL    | 404     | 240     | 72      |
| 3    | PL    | 444     | 380     | 96      |
|      | SL    | 420     | 288     | 88      |
| (%) of Total | PL | 1252 (52.42) | 890 (55.55) | 256 (53.33) |
|      | SL    | 1161 (47.58) | 712 (44.44) | 224 (46.67) |
### Distribution of G-WL and L-WL Episodes

To address the second research question, we examined the distribution of G-WL and L-WL episodes produced by pair and self-languagers in PL and SL groups at three stages of the translation tasks. Accordingly, the pooled number of G-WL episodes was maximum at Stage 2 (n = 432) and minimum at Stage 3 (n = 70) in both groups. Moreover, the amount of L-WL was the highest at Stage 1 (n = 873) and lowest at Stage 3 (n = 154) in both groups. In comparison, it can be seen that while pair languagers produced more L-WL episodes (1688 to 1323) than the self-languagers, self-languagers produced more G-WL episodes (774 to 710), at three stages of translation tasks.

#### Table 4 The proportions of G-WL and L-WL episodes by pair and self-languagers

| Task Group | Stage 1 | Stage 2 | Stage 3 |
|------------|---------|---------|---------|
|            | G-WL    | L-WL    | G-WL    | L-WL    | G-WL    | L-WL    |
| 1          |         |         |         |         |         |         |
| PL         | 80      | 278     | 102     | 112     | 20      | 60      |
| SL         | 91      | 284     | 120     | 93      | 25      | 39      |
| 2          |         |         |         |         |         |         |
| PL         | 87      | 326     | 102     | 231     | 12      | 68      |
| SL         | 78      | 189     | 151     | 162     | 23      | 49      |
| 3          |         |         |         |         |         |         |
| PL         | 112     | 269     | 175     | 268     | 20      | 76      |
| SL         | 103     | 259     | 161     | 185     | 22      | 66      |
| (%) of Total |         |         |         |         |         |         |
| PL         | 272 (49.37) | 873 (54.49) | 379 (46.73) | 611 (64.24) | 52 (42.62) | 204 (56.82) |
| SL         | 279 (50.63) | 729 (45.50) | 432 (53.26) | 440 (37.75) | 70 (53.37) | 154 (43.17) |

### Distribution of the Conceptual Processes in WL Episodes

The third research question probed the relative proportions of the conceptual processes which were incorporated into WL episodes by the pair and self-languagers. According to Table 5, both pair and self-languagers made use of the conceptual processes in similar patterns but in different proportions so that while the processes of self-assessment (n = 1576) and hypothesis formation (n = 1420) received more attention by both pair and self-languagers, rereading (n = 144) was the least frequent process in both PL and SL groups. Moreover, pair languagers were engaged in a moderately higher proportion of conceptual processes (53.33%) than self-languagers in the three translation tasks.

#### Table 5 The proportions of conceptual processes in WL episodes by pair and self-languagers

| Task Group | Stage 1 | Stage 2 | Stage 3 |
|------------|---------|---------|---------|
|            |         |         |         |         |         |         |
|            |         |         |         |         |         |         |
|            |         |         |         |         |         |         |
|            |         |         |         |         |         |         |
|            |         |         |         |         |         |         |
|            |         |         |         |         |         |         |
|            |         |         |         |         |         |         |
Dynamics of Scaffolding and Language Learning

To address the fourth research question, we conducted a one-way ANOVA with dynamics of scaffolding (pair vs. self) as the between-group variable, and time as the within-group variable. Before running the statistical test, a primary descriptive analysis reported the average percentages of correct translated items in the pre and posttests of PL (M<sub>pre</sub> = 40.65 ± 7.19), (M<sub>post</sub> = 85.60 ± 6.12), and the pre and posttest of SL (M<sub>pre</sub> = 36.72 ± 7.05), (M<sub>post</sub> = 73.27 ± 5.73) groups, respectively. The results of the ANOVA indicated no significant effect of time [F(1, 58) = 2.875, p = .099 > .05], but a significant effect of dynamics of scaffolding [F(1, 58) = 40.698, p = .000 < .05, η<sup>2</sup> = 2.12, interpreting as a strong effect size]. In other words, while both pair and self-languagers showed considerable improvement in language learning, pair languagers outperformed self-languagers on the posttest of translation.

Discussion

In this study, we conducted both a microgenetic analysis of a large corpus of WL episodes for quantity, focus and conceptual processes and a statistical analysis of the performance of PL and SL groups on the pre and posttests of translation. The analytical results indicated a greater number of WL episodes produced by pair languagers than self-languagers to accentuate the role of collaboration in language learning. Our findings are supported in several studies anchored in Vygotsky’s sociocultural theory which empirically substantiated the role of social mediation from more knowledgeable others (e.g., teachers) or peers in the language learning context [8, 34, 49]. As Donato [8] suggested, the collaborative mode of languaging can become a “collective cognitive activity which serves as a transitional mechanism from the social to internal planes of psychological functioning” (p. 8). In another study that compared students’ L1 and L2 as the mediums of languaging, Storch [34] reported that the languagers’ collaborative writing might enhance language learning more than the individual writing tasks. Similarly, in an experiment with Japanese EFL learners, Watanabe and Swain [49] argued that once L2 learners take part in peer-

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| Task Group | Paraphrasing | Integration | Elaboration | Hypothesis formation | Analyzing | Self-assessment | Rereading |
|------------|--------------|-------------|-------------|----------------------|-----------|----------------|-----------|
|            | N            | N           | N           | N                    | N         | N              | N         |
| 1          | PL 40        | 40          | 24          | 216                  | 56        | 260            | 16        |
|            | SL 24        | 32          | 48          | 224                  | 48        | 244            | 32        |
| 2          | PL 56        | 32          | 56          | 274                  | 88        | 298            | 24        |
|            | SL 40        | 56          | 48          | 204                  | 88        | 208            | 8         |
| 3          | PL 72        | 72          | 80          | 256                  | 120       | 280            | 40        |
|            | SL 64        | 48          | 48          | 246                  | 80        | 286            | 24        |
| (%) of     | PL 168       | 144(51.42)  | 160(52.63)  | 746                  | 264(55.00)| 838(53.17)     | 80(55.55) |
| Total      | SL 128       | 136(48.57)  | 144(47.36)  | 674                  | 216(45.00)| 738(46.82)     | 64(44.44) |

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peer collaborative dialogues they would benefit more in learning vocabulary and grammar than learning in solitary. Yet, our finding was contrary to Borer’s [2] who found evidence of equally positive effects of oral collaboration and self-talk on learning five unknown words by eight English-for-academic-purposes (EAP) students when they were completing tasks alone and in pairs.

In our study, the number of WL episodes dramatically decreased from Stage 1 when the languagers in both groups actively engaged in languaging and translating, to Stage 3 of revising the translation. We assume that such a descending order of the quantity of WL episodes might be due to the unloading cognitive demands on both pair and self-languagers once comparing their task outcomes to the model translation (Stage 2) and revising them (Stage 3) which required less selective attention or substantive noticing in the absence of teacher corrective feedback [9, 31, 38].

The findings on the proportional distribution of grammar-focused and lexis-focused WL episodes produced by pair and self-languagers were two-fold. It was found that the total number of L-WL exceeded the G-WL episodes by both groups, while pair languagers preferred to use more L-WL episodes than self-languagers who actively used more G-WL episodes. In other words, it was observed that pair languagers focused on the content of the task (i.e., lexis) more than self-languagers whose concern was more on the grammatical forms. To account for this observation, we pinpoint the scaffolding role of negative and positive evidence in pair languaging. Positive and negative evidence refers to sending/receiving signals about what is or is not possible in the target language [22]. In pair languaging, the abundant peer feedback, recasts, or requests for clarification, as common techniques of negative and positive evidence, might stimulate selective attention to the content and “incidental focus on form” ([21], p. 361). In the absence of such external noticing resources, self-languagers had to language more on the target forms to self-repair and revise their translation output.

Our findings were supported by [10] and [50]. To explore the noticing effects of output on language learning, Hanaoka [10] examined 37 Japanese EFL college students with a four-stage (output, comparison, revision 1, revision 2) writing task. His findings proved that the collaborative writers noticed lexical choices much more than grammatical features and incorporated them more into subsequent writings. Williams [50] similarly examined the chances of spontaneous learner-generated focus-on-form (FoF) with eight EFL learners and found that except for the cases of requests for assistance from the teachers, the L2 learners scarcely and randomly attended to language form.

The findings in this study were in partial contradiction with [36] and [51]. To examine the impact of direct written corrective feedback (DWCF) on language learning, Suzuki [36] required 24 Japanese EFL learners to complete a three-stage (drafting, languaging, revising) writing task and to notice the received feedback on both their lexical and grammatical errors. At the next stage, participants languaged in written mode about the DWCF they received. Analytical findings reported the constructive role of DWCF and the grammar-oriented nature of students’ written languaging which assisted them with successful revision. Yang [51] also explored the impacts of collaborative languaging on eight Chinese EFL learners’ performance on a three-stage (composing, comparing, revising) story re-writing task. The participants’ collaborations were later analyzed in terms of content-related episodes (CRE) and language-related episodes (LRE). Results reported that at the composing stage, the participants were engaged in co-construction of the story so they generated more CREs. However, at the comparing and revising stages, they used more LREs and languaged more on grammatical features and language use.

Our findings also screened the proportions of conceptual processes the pair and self-languagers incorporated into WL episodes and reported that both pair and self-languagers relied more on self-assessment and hypothesis
formation processes in translation tasks. In other words, through languaging, students were able “to form and test their hypotheses about the appropriate and correct use of language, as well as reflect on their language use” ([45], p. 3). We speculate that, both pair and self-languagers’ formation of hypothesis followed by self-assessment could raise an opportunity for critical reflection, especially at the stage of comparing their task output to the model translation (i.e., input). Even though the participants were expected to learn from the incoming input, when they noticed some mismatches they did not always accept the model. In Table 2, for instance, where a self-languager doubted the “road maintenance officers or force”, she continued self-languaging “I think it should be officers”, and “I think force is not correct for those who protect the roads!” Eventually, the self-languager refused to revise the translation according to the model (i.e., unsuccessful resolution).

Our findings on the unequal proportions of WL conceptual processes by both groups were to some extent corroborate [44] and [19]. In a case study with French L2 learners, Swain et al. [44] explored the role of oral languaging about the concept of voice in a grammar course. They suggested a dependency between the number and nature of oral languaging, by analyzing the languaging episodes into five major conceptual units of paraphrasing, inferencing, analyzing, self-assessment and rereading. They further reported that while the high proficiency languagers used languaging episodes rather evenly, and they self-assessed more than the languagers at mid and low proficiency levels. On the other hand, the mid and low proficiency languagers, used languaging units disproportionally and preferred rereading more than other conceptual processes of languaging. To further examine the quality of languaging in successful language learners, Knouzi et al. [19] analyzed the languaging process of a high proficiency and a low proficiency languager and traced their learning of voice in French grammar. They also reported ‘better-quality’ of languaging in the higher languager and suggested that students who could keep a balance among languaging conceptual processes would benefit more from languaging.

Finally, the obtained statistical results of the one-way ANOVA not only indicated the improvement in language learning by pair and self-languagers in both groups, but also the advantage of pair languagers over the self-languagers. From the Vygotskyan viewpoint, we might deliberate this outperformance as a result of collaboration, since the pair languagers externalized and shared their thoughts much more frequent than the self-languagers, they came to a deeper understanding of the ‘unknown’ in the target language. Seemingly, through synchronous translation and languaging, pair languagers could regulate each other’s cognitive activities, co-construct complex language structures, and eventually optimized their own language learning progress [51].

The statistical results of our study are to some extent in line with [28] who investigated the relative impacts of performing on two collaborative tasks of speaking and writing on eight pairs of Chinese EFL learners’ focus on forms. Niu [28] is one of the few comparative studies on the modes of languaging in the SLA literature. Her analysis of the participants’ collaborative languaging estimated the higher quantity of language-related episodes (LREs), more attention to language forms, and better records of language learning improvement by the pairs who performed on collaborative writing tasks.

Conclusions And Implications

The present study examined the extent to which the dynamics of scaffolding (pair vs. self) would cause differences in the quantity, focus and conceptual processes of written languaging by EFL language learners. In light of the findings of this study, a number of notions can be mentioned to the future SLA researchers and practitioners. First and foremost, the pedagogical standpoint of oral and written languaging in L2 teaching can have an interesting and
worth-thinking prospect. Therefore, language teachers are highly recommended to create opportunities for different modes of languaging both in and out of the classroom through training L2 learners to language [25]. In order to benefit more, the ‘teacher-imposed’ languaging can be actively carried out [29]. Teacher-imposed languaging redefines languaging ‘as a task’ rather than a task ‘by-product’, so that it can enhance the students’ language development and enable the teachers to have access to the students’ inner talks.

Next, in terms of task outcomes, the languaging which takes place in translation tasks can suitably take the important role of facilitating cognitive comparison and raising language awareness [11]. According to Källkvist [16], the translation tasks can provide a forum in which the students explore a wide range of language features including lexical, grammatical and writing conventions. In other words, “this forum can generate more genuine communication than other tasks” (p. 229), such as picture description, dictogloss, or jigsaw. Therefore, in EFL contexts where students and teachers speak similar L1, such as Japan [12] or Iran [24], translation task can play a scaffolding role in both L2 teaching and learning. Finally, the languagers’ agency and perception towards languaging which was beyond the scope of this study has been under-documented and requires further research. Languagers’ stance for different dynamics of scaffolding (i.e, self, pair or peer), languaging modes (i.e., oral or written) or modalities (i.e., face-to-face or computer-mediated) can engage them more in languaging and mediate their language learning progress.

This study was limited in two different ways. One of the major limitations was the time restriction which was imposed on us due to the surge of COVID-19 pandemic and lockdowns which caused several adjustments to our communications for data analysis and follow-up discussions. The next limitation was the non-random method of sampling of the participants. The selected participants were the volunteer EFL university students whose advanced level of language proficiency could have positively affected the quantity and type of languaging [20], so that the generalizability of the findings to L2 learners with different proficiency levels should be done cautiously.

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