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Roles of Output in Foreign Language Learning

Mohammad Nurul Islam, Ph.D.

Abstract

In a foreign language context, grammar is always construed as an indispensable element to learn. It is the question of how to learn it that becomes a key issue to examine. Concern is placed on how grammar instructions can nurture and develop students' grammar interlanguage system. A wave of research ranging from intensive treatment toward specific linguistic features to focus on form in interactions is put forth.

Apart from the insightful research on grammar, some teachers still have a propensity to rely on language input through the adoption of meaning-oriented tasks. A common view held by teachers is that an abundant exposure to language use would warrant the development of students' grammar.

The communicativeness of the tasks is believed to enable the grammar learning to take care of itself. While the view, to a large degree, is justified, it might not be sufficient for the whole processing of the intricate development of L2 grammar learning to occur. Accordingly, Swain (1994) sheds light on roles of output as potential learning mechanisms to facilitate the process.

This study is an attempt to find some evidence of roles of output in L2 grammar learning. In particular, this study probes the degree to which the underlying process of output in a collaborative interactional grammar task can lead to grammar learning and might yield a

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different impact upon different levels of students. It is confirmed that output is vital in facilitating learners' noticing and acquisition of the targeted grammatical forms.

Keywords: Output, Noticing, Grammatical forms, Acquisition.

Roles of Output in Language Learning

'What' and 'how' teaching can nurture and develop grammar learning are two substantial questions that teachers need to answer. In terms of 'what,' 'comprehensible input' that Krashen claims as "the only causative variable" in second language acquisition has been one of the major constructs in language learning. Krashen (1994) argues that if acquisition occurs in a predictable order and learners understand the input, it is hypothesized that he/she can acquire slightly in advance of his/her current level interlanguage system.

Universally, it can be said that input is an inseparable element in SLA. However, despite the fact that comprehensible input and interaction offer linguistic and discursal aspects necessary for learning, their roles are likely to be primarily attributed to learners' comprehension. On the other hand, the development of language form seems to be untouched.

To complement this learning process, Swain (1994) proposes output theory. At a general level, producing language in the sense of practicing can develop fluency and foster accuracy. In contrast to comprehension that, to a large extent, relies on the ability of decoding the language to understand the meaning, producing language necessitates the breaking of the code to discover the linguistic systems in expressing meaning. The link between form and meaning implies that to some degree, output pushes learners to engage in deeper mental processing than comprehension. It is this dimension that provides 'complementary roles' of output.

Emphasizing that output could be part of the learning mechanism itself, Swain in particular proposes three primary functions of output. They are (1) the 'noticing'/ 'triggering' function, or what might be referred to as its consciousness-raising role; (2) the hypothesis-testing function; and (3) the metalinguistic function, or what might be referred to as its 'reflective role.'

Noticing

The role of noticing in second language acquisition has gained attention. Schmidt and Frota (1986) claim that "a second language learner will begin to acquire the target like form if and only if it is present in comprehended input and 'noticed' in the normal sense of the world, that is consciously". The term 'consciously' refers to processes that are "the experiential manifestation of a limited capacity central processor". In other words, different from automatic processing, they are slow and often deliberate.

Gass (1991) believes that unless the target language is consciously noticed, there will be no intake feeding a learner's interlanguage system. In a more detailed explanation, Schmidt and Frota (1986) further suggest that for acquisition to occur, learners need to attend to linguistic

features of the input they are dealing with; and they must notice the 'gap,' i.e. make comparisons between the current state of their developing linguistic system, as realized in their output, and the target language system, available as input. Boulouffe (1986) further claims that to be perceptible, the gap has to be sufficiently narrow.

Using the term 'matching,' Klein (1986) contends that "the learner must continuously compare his current language variety with the target variety". However, different from Faerch and Kasper's (1986) 'matching' of input with 'knowledge' to arrive at comprehension, Klein's primarily aims at developing awareness of the gap. In the same line of arguments, Ellis (1995) with his 'cognitive comparison' asserts that by comparing their output and input, learners are led to restructure their interlanguage. It is at this juncture that output is argued to trigger gap-noticing.

In particular, Swain and Lapkin explain that in attempting to produce language, learners may encounter problems leading them to be aware of what they want to say and what they are actually able to produce. This gap-noticing, in turn, triggers learners' cognitive processes to either search for structure they need in their own linguistic resources or turn into other resources, such as input, resulting in new linguistic knowledge for learners or in the consolidation of their existing knowledge. In so doing, they further state that learners may be pushed to engage in a more syntactic processing mode than the predominantly semantic mode in comprehension.

In addition, it seems also apparent that by noticing, learners are led to be aware of linguistic forms they require to resolve the gap. In other words, output also plays a consciousness-raising role. This role, however, is dependent upon the types of the tasks employed to elicit the language. Kowal and Swain (1994) argue that if the task can be devised to get learners to talk about language, their talk may heighten their awareness of forms and their relationship to the meaning they attempt to express. In a similar vein, Masny (1991) contends that linguistic awareness enables learners to abstract themselves from the normal use of language and to focus their attention on the properties of the language per se, which is said to facilitate second language development.

Hypothesis-testing

The underlying argument of hypothesis-testing function is that producing language provides learners with opportunities to test a hypothesis. Swain further argues that this role of output can be justified at least on two grounds. First, learners modify their output as a result of their hypothesis-testing. In support of output modification, Pica et al. (1989) found that over one-third of the learners' utterances were modified either semantically or morphosyntactically in response to clarification and confirmation requests. Moreover, they state that in modifying their output, learners "test hypotheses about the second language, experiment with new structures and forms, and expand and exploit their interlanguage resources in creative ways". Swain and Lapkin (1995) add that output represents the leading edge of the learner's interlanguage.

Linking learners' hypothesis-testing, modifying output, and learning, Swain states that by far

there has not been direct evidence that the modified output affects learners' interlanguage system. Nevertheless, Nobuyoshi and Ellis (1993) provide some suggestive findings that "pushing learners to improve the accuracy of their production results not only in immediate improved performance but also in gains in accuracy over time". On the basis of this result, they assert that "this augurs well for the comprehensible output hypothesis".

Second, Swain (1994) furthermore argues that partial output modification might indicate that output as hypothesis testing serves not only as a means of generating input but more importantly as 'selector' for what will be attended to. Schachter (1983) states that learners may ignore some of the hypotheses and focus on some others because of the disconfirming evidence or the salience of certain hypotheses. It is this role of selector that accentuates the value of hypothesis-testing.

In selecting what they intend to test, learners to some extent might rely more on syntactic processing mode than on semantic one. The processing becomes deeper as they stretch their interlanguage system to respond to the feedback of their hypothesis testing by modifying their output. In addition, the 'selector' role also allows learners to control the agenda by selecting content to be reflected on, taking risks, and looking for feedback to verify the points of uncertainty they try out.

Similarly, Gass (1997) argues that output can be seen as a way of testing a hypothesis when it is in the form of a negotiated sequence. She further explains that through negotiation and also feedback, learners are led to be aware of their hypotheses. This awareness, in turn, "helps create a proficiency at analysis allowing learners to think about language". Viewed from these perspectives, it seems to make sense to argue that the role of output as hypothesis testing is worth taking into account.

Metalinguistic Function/Reflective Role

Concerning the third function of output, Swain (1994) argues that under certain task conditions, output might serve a metalinguistic function. Masny (1991) defines metalinguistic awareness as "an individual ability to match intuitively spoken or written utterances with his/her knowledge of language". However, in relation to output, this function is operated when learners control and internalize language by reflecting on output as hypotheses themselves using language. Such a function is closely allied to tasks. Swain (1994) states that "a communicative task can be feasible to meet the conditions if it allows learners to reflect on language form while still being oriented to getting meaning across".

Likewise, Fotos (1993) contends that such tasks raise learners' consciousness leading to their noticing of the gap. Employing grammar-consciousness raising tasks which integrate the features of grammar instruction and communicative language use, Fotos (1994) further argues that such tasks yield sufficiently rich negotiation that may be of general benefit to L2 acquisition as claimed by Long's interaction hypothesis.

The feature of reflecting on language form or communicating grammar seems crucial as learners can be "aware of aspects of language without being able to explicitly articulate that awareness" Similarly, Sorace (1985) asserts that at the beginning of their learning process, formal learners seem to be able to analyse their mental representation without being able to apply them in production. This indicates the predominance of their metalinguistic over linguistic abilities.

Accordingly, students' articulating their metalinguistic ability through output would not only promote production in general but also more importantly strengthen the operation of metalinguistic knowledge in language production.

Roles of Interaction: Form and Meaning

It is commonly believed that the deeper learners' involvement in learning, the more effective learning will be. From this point of view, roles of interaction, especially its negotiation mechanism is deemed prominent and has been the subject of investigation. Even Allwright (1984) states that role of interaction in the classroom can be "much more than a superior form of language practice".

Communication in which participants' attention is focused on resolving a communication problem as opposed to communication in which there is a free flowing exchange of information. Due to the fact that miscommunication or incomplete understandings are not uncommon, negotiation of meaning is argued to pave the way for learners to modify their output so as it becomes comprehensible. Unfortunately, while negotiation of meaning can help learners gain better understanding of the message conveyed, it is unlikely to apply to the case of language form.

Giving evidence of the limitation of interaction in general, Sato found that neither the native speaker input nor the naturalistic interaction between her subjects, two Vietnamese boys and their native speaker interlocutors promoted their marking of past time. Another study by Loschky (1994) also showed that while negotiation gave positive effects on comprehension, it was not the case with the retention of lexis or morphosyntax.

Skehan (1998) sharply pointing out the limitation of the effects of negotiation of meaning state: "It is one thing for successful negotiation to take place, but quite another for this to have beneficial consequences for interlanguage development." Far from scaffolding interlanguage development, negotiation sequences may distract the learners and overload the processing systems they are using, with the result that even when successful scaffolded negotiations occur which produce more complex language, these may not have impact upon underlying change because there is no time to consolidate them.

On the other hand, Lyster (1998) sheds light on 'negotiation of form'. Lyster and Ranta (1997) argue that negotiation of form has a more didactic function, in that it encourages learners to do self-repair "involving accuracy and precision and not merely comprehensibility". Underlying this major construct is corrective feedback. Lyster (1998) identifies four feedback moves, namely (1)

elicitation, (2) metalinguistic clues, (3) clarification request, and (4) repetition. He excludes the other two interactional moves, namely recasts (reformulating all or part of the student's utterance) and explicit correction on the ground that they do not provide forum for learners to do peer or self-repair.

In support of self-repair, Lantolf and Pavlenko assert that self-generating repairs through modified output is seemingly a desirable condition fostering learning since learning hinges not so much on richness of input but crucially on the choices made by individuals as responsible agents with dispositions to think and act in certain ways rooted in their discursive histories.

Careful not to make a huge claim of linking the roles of negotiation of form to learning, Lyster (1998) speculates that negotiation of form might be beneficial for learning at least in two ways: (1) providing opportunities for learners to proceduralize target language knowledge already internalized in declarative form and (2) drawing learners' attention to form during communicative interaction in ways that allowed them to re-analyze and modify their non-target output. Extending these potentials to the role of output, Swain (1994) pinpoints that the second point richly offers a forum for learners to test their hypotheses of the target language.

Methodology

This section describes the study, the participants and the design, the task, the procedure, and data collection and data analysis.

The Study

This study, to a large degree, replicated Storch's (1998). Yet, different from Storch's (1998) employing different texts for different groups, this study employed the same tasks for the two groups of learners. In particular, this study investigates the extent to which producing language through a collaborative grammar task might lead to learning. To infer the process of learning, this study poses five questions:

- (1) While attempting to produce language, what is the overt focus of the learners' output.
- (2) What processes are employed in focusing on language problems they encounter in their output?
- (3) How might their focus and the processes relate to the qualitative functions of output, particularly gap-noticing, hypothesis-testing, and reflective role?
- (4) To what degree does interaction promote the functions of output as analyzed in terms of
 - (a) the number of critical language-related episodes (CLREs) emerging, (b) the number of them leading to the resolved answers, either correct or incorrect answers or the unresolved answers, (c) the patterns of interaction

- (5) How does the learners' proficiency level affect their overt focus, the processes they employed, the functions of output, and interaction?

The grammar task

The task adopted in this study was text reconstruction based on Rutherford's (1987) *prepositional cluster*. Students were presented with groups of content words, which constitute semantic units. Based on these clusters, they were instructed "to reconstruct the text by inserting appropriate function words (e.g., articles, prepositions), linking words, inflectional morphemes (e.g., tense and aspect markers, singular/plural markers), and/or changing word order in order to produce an accurate, meaningful, and appropriate text".

A text taken from Wajnryb's (1990) grammar dictation was modified to be this text reconstruction task. The text was carefully chosen so as to balance both levels of learners in terms of its difficulty. In other words, the text was intended not to be too easy for advanced learners and not too hard for the intermediate ones. The task was chosen on the ground that it can provide ample opportunities for learners to devote their attentional resources to form while meaning is still their concern.

Procedure

There were two parts of the procedure: the preparation and the implementation. The preparation of carrying out the task included the explanation of the purpose of doing the task, the nature of the task itself, and the expected processes in accomplishing the task. In addition, at this stage, the participants were presented with a sample from a different text followed by doing the exercise together on the board.

This preparation was conducted together for both advanced and intermediate groups. Its purposes were two-fold: to familiarize them with the task and to ensure they had similar interpretations of the purpose of the task. In so doing, at least the variable of task familiarity and learners' interpretation can be minimized so that the task can manifest the processes of producing output as optimally as it was intended.

At the implementation stage, the participants were familiarized with the topic of the task that they were going to deal with followed by vocabulary discussion. The discussion was intended to prevent the participants from devoting excessive attentional resources to these two aspects in such a way that the processes underlying their output could be clouded. Afterwards, they started working on the task. They were instructed to discuss the task in English so that this study can capture their optimal output. During their interaction, which took about 20-25 minutes, the talk was recorded.

Data Collection and Data Analysis

The data in this study were derived from the transcriptions of the learners' interaction during carrying out the task. The transcripts were analyzed based on these five questions:

- 1) Which parts of the interaction signal the 'critical language related episodes'/ CLREs (indicated in the transcriptions) and how many of them lead to the resolved or the unresolved answer?
- 2) What is the overt focus of the learners' output as indicated by CLREs?
- 3) What processes are employed in focusing on the language problems they encounter?
- 4) How might this overt focus and the processes employed relate to the qualitative functions of output: gap-noticing, hypothesis-testing, and reflective role?
- 5) What pattern characterizes the learners' interaction and how might this promote the functions of output?

Definition of Critical Language Related Episodes

Following Kowal and Swain's (1994) CLRE, a CLRE is defined as an episode in which language is the centre of the discussion intended to resolve a particular language issue, either correctly or incorrectly. In addition, this study also includes learners' unresolved output as parts of the episodes. This is due to the fact that it might be the case that learners go through a long process of discussion even though eventually this does not lead to any final resolutions. Taking into account that it is this process that becomes the primary concern of this study, unresolved episodes are incorporated into the analysis.

A CLRE begins with the identification of a particular language issue followed by either discussion or only explanation and finishes when it has been completed, either with resolved or unresolved answers. A CLRE is considered to yield a resolved answer when the pair comes to an agreement of a resolution either correct or incorrect one. On the other hand, the episode is considered to result in unresolved answers when both learners cannot reach an agreement because they persistently defend their own stance or they do not know the answer.

The Overt Focus of the Learners' Output and the Processes Employed in Focusing on Language Problems

Having been identified, CLREs are further analyzed and classified into four categories portraying the focus of the learners' language episode and the processes employed in focusing on the language problems. Drawing on Storch's (1998) taxonomies of learners' grammatical concern and Swain and Lapkin's (1995) study, as well as based on the data observation, the focuses are classified into (1) grammar, (2) meaning, (3) lexis, and (4) text organization. As for the processes of focusing on their language problems, the analysis is classified into (1) grammar analysis, (2) semantic analysis, (3) lexical analysis, and (4) discourse analysis.

The analysis is then scrutinized into the way the learners perform it. As for grammar analysis, it is differentiated into the one based on articulated, implied rules or analogies. Semantic analysis is further categorized into the one based on the discussion of the use of a particular language structure/a sentence pattern or the learners' interpretation of the context of the sentence. Lexical analysis is examined by looking at via what language the analysis is carried out, English or LI (Indonesian). As for discourse analysis, the analysis beyond the sentence level, no further classification is involved. In addition, based on the data observation, this study also includes intuition, a statement reflecting an innate sense of what sounds right or what does not. The four categories of the focus and its process are listed below together with their examples:

(1) Grammar/Grammar analysis:

- *Articulated rule: Sample I (5): line 24-26 L: the trend starts out S: are you using starts out for parallelism? L: not only that, but trends is up to date, so use present tense*
- *Implied rule: Sample IV (6): line 64-68 Y: ...since the ladder that he was manufactured slippery when it was placed on some wet dog manure A: which he was manufacturing, you mean Y: ehm..ya which he was manufactured A: which he manufactured, or he was manufacturing*
- *Analogy: Sample I (8): line 48-49 S: a five-year term! L: you know a five-year old boy*

(2) Meaning/Semantic Analysis:

- *Meaning derived from the discussion of the use of a particular structure/a sentence pattern:*
- *Sample II (4): line 62-68*
- Y: *...cause if you write their punishment was added into five...five year term, it means that..so er.the number of years they must go through is five years... E: er..ok, ehm..I. I understand what you mean...*
- *Meaning derived from the learners' interpretation:*
- *Sample II (6): line 134-139*

E: er...I don't know which one is correct, maybe we have different interpretation. You said that the dog followed the medical treatment first and the dog has psychological damage but according to my interpretation ehm..the dog has the psychological damage first and then the dog has to follow the medical treatment, that's why the owner of the poodle

sues the vet. What do you think?

(3) Lexis/Lexical analysis

- *Via English: Sample II (I): line 4- 7* Y: why do you write turn into?, because I think turn into is like to.. .to change magically E: yes, I think I have a wrong word because I've just remembered that...er *turn into is to change*
- *Via LI (Indonesian): Sample II (8): 197-202* Y: .'. .how can people make a pretty penny with legal system? E: ehm...maybe we have different interpretation. You said ehm..that *legal system is ehm...sistim hukum* (Indonesian meaning the law system) and I think legal system is system which is legal because we have legal and *illegal*
- *Intuition: Sample IV (8): line 101-105* Y: I heard *injustice* more often than of *justice*
A: I don't know *ehm...just takes little notice of justice just... ehm..ehm sounds..sounds* better. I don't know I use it because of my feeling I think, I don't know *how* to explain. If you use *in*, there is something awkward about it...

(4) Text organisation/Discourse analysis:

Sample III (7) .-line 108-112

L: *in addition, a man was sued million dblla(t,£jt^,,*

Y: *in addition?*

L: yes, because it should relate to the previous examples. *In addition*, you add more examples

The Functions of Output in Learning

For the purpose of inferring, the functions of output in learning are confined to those serving as: (1) gap-noticing, (2) hypothesis-testing, and (3) metalinguistic functions. Besides these functions, other roles of output are more pertinent to the development of productive mode itself, which is beyond the scope of this study. As Skehan (1998) points out, producing language can help learners develop their discourse skills and a personal voice, two attributes indisputably crucial in productive skill.

Analysis and Discussion

Analysis of the Data

The analysis involves four stages: (1) the identification of the learners' language episode/CLRS(s); (2) the overt focus of the learners' output; (3) the processes employed in focusing on the problems; (4) the relation between these processes and the functions of output, and (5) the role of interaction in promoting the functions of output.

The Identification of CLRE(s)

TABLE 1 Quantitative Description of CLRE(s)
Quantitative Description of CLRE (s)

Level of :	CLRE(s) -	Resolved Answers		Unresolved Answers
		correct		
Advanced	75 100%	63 84%	11 15%	1 1%
Intermediate	45 100%	32 71%	11 24%	2 5%

This study revealed that both groups of learners generated different number of interactions. As is shown in Table 1, the advanced groups yielded 75 language episodes while the intermediate, 45 episodes. The discrepancy between the -two groups suggested that the advanced group be engaged in more discussion than the intermediate was.

Table 1 also shows that the resolved answers apparently constituted the major results of both groups' discussion with 99% for the advanced and 95% for the intermediate. It was likely the case that the forum provided them with ample opportunities to discuss and to arrive at solutions regardless whether they were correct or incorrect. Yet it was apparent that the advanced group had a higher percentage of correct answers than the intermediate group did.

The overt focus of the learners' output

TABLE 2
Quantitative Description of the Overt Focus of the Learners' Output

Level of Proficiency Focus	Advanced Level % of total CLRE(s)		Intermediate Level % of total CLRE(s)	
• Grammar	49	65%	28	62%
• Meaning	19	25%	5%	4%
• Lexis	4	3	17	38%
• Text organisation				
TOTAL	75	100%	45	100%

Although both groups differed in terms of the amount of the overt focus of their output, Table 2 shows that both considerably devoted their attention to the aspects of grammar and meaning of their output. In contrast, lexis and text organization obtained much less consideration of the advanced group learners and even no consideration at all of the intermediate group.

Yet in spite of their prime attention, grammar still surpassed meaning in both groups. Approximately both groups shared a similar degree of focus with 65% and 62%, respectively, in

the advanced and the intermediate level. However, there seemed to be a gap in the case of meaning. It occupied 38% of the intermediate learners' focus while it took up only 25% of the advanced learners.'

There might be two perspectives of looking at these findings. The fact that grammars became the primary concern of the advanced group did not seem to be surprising due to their higher proficiency. However, the fact that the intermediate group also placed grammar as their major language focus might lead to a further thought of the potential of the activity they were engaged in. Putting it simply, involving them in a task requiring them to talk about language seemed to push them from predominantly semantic mode to syntactic mode of thinking as Kowal and Swain (1994) argue.

From the second perspective, it might be the case that under a particular task like reconstruction text, the intermediate learners' syntactic processing can be better promoted. Nevertheless, this finding should not cloud the fact that the intermediate learners to some extent still put more emphasis on meaning. In a heterogeneous classroom, such a propensity might affect the way teachers approach their instructions.

The Processes Employed in Focusing on the Language Problems

Concerning the processes the learners employed in focusing on their language problems, Table 3 shows that both groups displayed a similar analysis in discussing grammar and meaning. Focusing on grammar, they based their analysis primarily on articulated rules as it established 59% and 46% respectively of both groups' analysis, followed by implied rules, intuition, and translation. Though not significant given the advanced group's small percentage (2%), the adoption of analogy was the only aspect in which both groups differed.

TABLES 3
Quantitative Description of the Processes Employed

Processes	Level of Proficiency			
	Advanced		Intermediate	
<i>Grammar Analysis</i>				
Articulated rules	29	59%	13	46%
Implied rules	12	25%	7	25
Analogy	1	2%		
Translation	2	4%	1	4%
Intuition	5	10%	7	4%
TOTAL	49	100%	28	100%
<i>Semantic Analysis</i>				
Based on the discussion of the use of a particular structure/a sentence pattern	10	53%	9	53%

Based on the interpretation of the context of the sentence	9	47%	8	47%
TOTAL	19	100%	17	100%
<i>Lexical Analysis</i>				
Via English	2	50%	-----	
Via Translation (Indonesian).	1	25%	-----	
Intuition	1	25%	-----	
TOTAL	4	100%		

Discourse Analysis
Beyond sentence level

Following the dominant use of articulated rules, the number of implied rules and translation occupying both groups' analysis further characterized their similarities. Implied rules similarly constituted 25% of both groups' analysis while translation 4%. In terms of intuition, nevertheless, both groups were quite different. Compared to the intermediate group, the advanced group's analysis utilized a lesser degree of intuition. It took up only 10% whereas it occupied 25% of the total grammar analysis of the intermediate group.

As for semantic analysis, Table 3 shows that again the two groups were very similar, in that they based their analysis on the meaning derived from their discussion on the use of a particular language structure/sentence pattern or from their own interpretation of the context of the sentence. The analysis based on the language structure dominated 53% while on the interpretation 47%.

In the case of lexical and discourse analysis, they were apparently the minor concern of the advanced group whereas they were totally abandoned in the intermediate level. The advanced group made use not only of their knowledge of the target language but also their LI and intuition to cope with the lexis. Yet they tried their best to use their knowledge of the target language as revealed by its 50% via English-conducted analysis.

Scrutinizing the grammatical points that the learners' raised when attempting to solve their language problems, Table 4 shows that *tenses* seemed to be the aspect of most concern of both groups of learners. This finding is consistent with Storch's (1998) which also found a similar concern in her classroom-based study. She contributes this result to the nature of the task. Given the functions words have been removed, the learners are more likely to be pushed to work out the text. The concern might also be attributed to the nature of *tenses* known to be persistent areas of concern even for advanced learners.

Table 4 also shows that tenses were particularly reflected on articulated rules for the advanced group but they dominated both articulated and implied rules for the intermediate group. The results might suggest the possible relationship between the learners' proficiency and the ability to verbalize grammar rules. The other grammatical points were widely distributed throughout the processes.

TABLE 4
Quantitative Description of Grammatical Points Analyzed

Advanced Level		Intermediate Level	
<i>Articulated Rules</i>		<i>Articulated Rules</i>	
• Tenses	16	• Tenses	
• Verb pattern	1	• Parts of speech	1
• Passive voice	1	• Passive voice	2
• Conjunction	2	• Noun reference	1
• Relative Clause	1	• Preposition	1
• Subject-verb	2	• Using number as	1
• Subject omission	1		
• Part of speech	2		
• Preposition	2		
• Definite article	1		
TOTAL	29	TOTAL	13
<i>Implied rules</i>		<i>Implied rules</i>	
• Tenses	1	• Tenses	5
• Verb pattern	2	• Subject-verb	1
• Article	2	• Noun reference	1
• Preposition	4		
• Number as adjective	1		
• Adjective phrase	1		
• Coordinate conjunction	1		
TOTAL	12	TOTAL	7
<i>Analogy</i>		<i>Analogy</i>	
	1		
• Number as adjective			
<i>Translation</i>		<i>Translation</i>	
• Preposition	1	• Passive Voice	1
• Sentence connector	1		
TOTAL	2	TOTAL	1
<i>Intuition</i>		<i>Intuition</i>	
• Preposition	4	• Preposition	2
• Tenses	1	• Part of speech	1

		• Tenses	1
		• Verb Pattern	1
		• Word order	2
TOTAL	5	TOTAL	7

Concerning intuition, the advanced group relied on their intuition for a more limited number of grammatical points—prepositions and tenses. On the other hand, the intermediate learners used their intuition for more varied grammatical points, such as parts of speech, preposition, word order and verb pattern.

Qualitative description of the possible relation between the processes employed and functions of output

Investigating how the processes the learners employ might relate to functions of output, the study finds that it is possible to suggest a correlation between these processes and the functions of output as gap-noticing, hypothesis-testing and metalinguistic role.

On the basis of Table 1, 2, 3 and 4 describing the overt focus of learners' output and the analysis involved, it is likely that output paves the way for the learners to test their language hypothesis. The rationale is that by making explicit the basis underpinning their responses concerning form or meaning, either by using articulated or implied rules, or using the context of the sentence, the learners are aware of their output. From this awareness, it can be inferred that they have selected a particular form or meaning while attempting to produce their output. It is at this juncture of selecting, the learners' output is likely to reveal their hypothesis that might be confirmed or disconfirmed by the feedback they obtain.

In addition, the learners' articulating rules underlying their output also can indicate the metalinguistic function. This is because through this segment of protocol, the learners demonstrate their conscious reflection of the language form allowing them to control and internalize their output.

With regard to the function of output as gap-noticing, the analysis shows that this function does not seem to be overtly shown. For output to function as gap-noticing, it necessitates the speaker herself or himself who is to be aware of what she or he intends to say and what she can say. However, throughout the data of this study, particularly those of the advanced group, the analysis revealed that it was often the listener who seemed to be more aware of the gap in her partner's output than the speaker herself. As a result, gap-noticing in the input rather than in the output seems to be more perceivable. However, in the case of the intermediate group, gap-noticing in output seems more apparent. The following two episodes illustrate the possible roles of output as the learning mechanisms discussed above.

•Advanced learners Sample IV (2): line 12-21

A: the second sentence is people turn to courts and sue compensation money for the misfortunes suffered Y: you joined those two sentences into one sentence, right? Why not people are turning to courts dot. They sue for money as the compensation for the misfortunes they have suffered. I use turning to courts because **that is in process, going on from the past tense until now, so I use the present progressive tense**

A: ehm, it makes sense but why not you joined *people are turning to courts to sue bla bla bla* Y: good, it's better

This episode shows that having suggested combining two sentences and stating her sentence, Y explains her analysis underlying her output, *turning to courts* by articulating the grammar rule of *present progressive tense*. By explicating her analysis, it can be an indication that Y has selected that particular grammar to be tested. In other words, it is unlikely that Y would come to her analysis without having engaged in the process of selecting the grammar rule she intends to employ. This journey from selecting to explicating the rule might reflect Y's hypothesis-testing. And this hypothesis is confirmed when A approves it by saying *ehm it makes sense*.

Besides this function, Y's explicating her analysis by saying **that is in process, going on from the past tense until now, so I use the present progressive tense** also portrays the reflective role of her output. It is this level of her output that allows her to generate *turning to courts*.

However, different from these two roles, function of output as gap-noticing does not seem to be overtly displayed. While attempting to generate their output, **both A and Y** do not seem to overtly notice any gaps. On the other hand, what might be obvious from the episode is gap-noticing in the input. Having received A's sentence as her input, Y comes to realize that A's output is not accurate because of the use of present tense, *people turn to courts*. While Y can notice a gap in A's output, A as the one producing that output is unlikely to be aware of this gap. The similar case is also shown in the third turn when A suggests Y to *join people are turning to courts and they sue for money* by stating *people are turning to courts to sue bla bla bla*. A perceives a gap in Y's output.

Intermediate learners Sample VIII (6): line 60-65

M: *another case, the ladder manufacturer sued or is...was sued?*
F: *was sued...er passive I think because the ladder he manufacture...er ...manufactured ...was slip.....slipped?* that's why he was sued M: *was slip, I guess* F: *are you sure?* M: *ehm not really I don't know just guess, feeling*

This episode shows that while attempting to reconstruct the text, M encounters difficulty with the use of active or passive construction. By explicating some of alternatives of the form of language she might used *sued or is...was sued*, she notices the gap between what she intends to say and the right form of language she is supposed to employ. Confronted by this gap, she is seeking assistance from her partner. On the basis of semantic analysis of the context of the sentence, that is *because the ladder he manufactured slipped, he was sued*, F responds by suggesting using the passive form *was sued*.

Interestingly, while attempting to make explicit the basis of her analysis, F also encounters the difficulty with the form of *was slip or slipped*. It is at this juncture her difficulty also gives rise to noticing of the right form of the verb she is supposed to use. Unfortunately, based on her intuition, M resolves the problem incorrectly by suggesting using *was slip*.

In addition to gap noticing in output, this episode is also illustrative of the hypothesis-testing role of output. This role is reflected on both M and F's giving some alternatives of the forms they are supposed to use. By offering some alternatives, they test which forms will be confirmed.

Moreover, this extract also reveals that by articulating the rule, the passive voice underlying her response *was sued*, F's output has served as a conscious reflection of the form she suggests. In contrast, M's response *was slip* does not perform any metalinguistic function since it is based on her feeling Examining to what degree interaction promotes functions of output as mechanism of learning, the analysis shows that it does provide a rich forum fostering gap-noticing, hypothesis testing, and metalinguistic function of output. Its significant particularly lies in its potential as a forum providing negotiation of form. It is through this level of negotiation, the learners gain opportunities to notice their language problems, to receive feedback that can verify or confirm/disconfirm their hypothesis testing, and also to operate the reflective role of their output. The following episode illustrates this role of interaction.

Advanced learners Sample IV (1): line 1-11

A: *people in US are experiencing rash lawsuits*

Y: why are using *are experiencing* instead of *experience*!

A: because I thought you know ehm, those people right now, they are experiencing they are...they are experiencing rash lawsuits at the moment

Y: ok, that should be the present tense, right?

A: isn't the present tense for...like a habit thing? It's happening at this

moment....ehm..soer I think present continuous Y: well, actually *are experiencing*

also sound better A: ya ya ya that's what I thought too Y: ok, then

This episode shows that doubting A's using of the present continuous tense, *people in Us are experiencing.....* Y requests A's explanation. Responding to Y' s request, A attempts to analyze her output by stressing the time signal. However, it seems that Y is still persistent in using the present tense. Giving i counter argument by explicating rules of the both tenses, A eventually can convince Y about the use of the present continuous tense. This negotiation of the form provides both A and Y with the forum to test their hypotheses.

In addition, through this process of negotiating, A is led to operate the reflective role of her output by making explicit the grammar rule underlying her language. Moreover, it also brings Y to notice the gap between her intention to use the present tense and the more appropriate one, the present continuous tense. In other words, by negotiating Y understands why her choice to

employ the present tense would not be so appropriate to convey the meaning of the sentence.

Based on the quantitative description indicated by Table 1, it seems obvious that interaction can promote functions of output. It leads to 84% and 71% correct answers respectively in the advanced and the intermediate group. The small percentage of the unresolved answer in both groups, 1% and 2% might further suggest that interaction can lead the learners not only to yield quantitatively invaluable negotiation but also more importantly to demonstrate its qualitative substance. This finding might bring some promising insights to roles of interaction that by far have been doubted due to its insufficiency in developing the learners' accuracy.

This study also finds two patterns of interaction emerging from both groups. In spite of being instructed to work collaboratively, the advanced group interaction is heavily characterized by the individual effort to produce the language. In other words, rather than jointly reconstructing the text, they prefer taking turn to produce the text and giving comments on their partner output. Sample IV (2) and IV (1) illustrate such a pattern. A produced her sentence *people in US are experiencing rash lawsuit* without negotiating the form she intends to use.

On the other hand, though this pattern appears in some of the intermediate interaction, their interaction in general is more collaborative work-oriented. This pattern is illustrated by sample VIII (6). Uncertain of the sentence, M attempts to resolve the problem by negotiating the form she intends to use.

Discussion

This section primarily discusses the effects of the learners' different proficiency on the five aspects analyzed. There are at least three points worth mentioning. The first one is related to the great difference of the number of language episodes emerging from both groups. Taking into account that through these episodes, the learners' language development might be engendered, the wide gap between both groups' language episodes should become the concern for teachers.

The gap might be attributed to their different proficiency that in turn seems to affect their patterns of interactions. As mentioned in the analysis, owing to their more collaborative nature of work, some of the intermediate groups tend to negotiate more to resolve their language problems, rather than to take a risk by producing language and testing it against their partners' feedback. As a result, they might come to the resolution faster, thus shortening their discussion. In contrast, the advanced groups relying more on their own individualistic answers opens a greater forum for their partner to challenge, analyze, and discuss the output, generating more language episodes.

Another aspect that seems to be influenced by this pattern of interaction is the function of output as gap-noticing. For the advanced level, this function is more perceivable as gap-noticing in the input rather than in the output. This might happen as the learners tend to produce their output without going through the process of negotiation first but seeking for their partners' comments. As a result, if there appears to be gap-noticing, this gap is perceived by their partner as the gap in

the input which afterwards might also lead the speakers to notice the gap in their output.

On the other hand, in the case of some of the intermediate learners, their output seems to serve as gap-noticing. Aware of language problems either concerning form or meaning while attempting to reconstruct the text, they attempt to solve it either by negotiating or searching into their own knowledge.

The second point concerns the correlation between the learners' proficiency and their overt focus, and the processes employed. The learners' different proficiency does not seem to affect what aspects of language they pay attention to and what processes they employ since both groups similarly concern grammar and meaning and engage in the grammar analysis as well as semantic analysis. Moreover, in terms of grammar analysis, they make use of articulated rules as the primary basis of their analysis. Also, in analyzing meaning, they rely on the use of particular structure and their interpretation.

Yet, it is obvious that the higher proficiency group seems to rely more on their analytical thinking than on meaning. The advanced group relies on articulated rules more than the intermediate does. The ability to verbalize rules seems to indicate higher order ability as "more advanced learners... are able to convert subconscious acquired knowledge into verbalizable statements, and less advanced learners are not". Further support for the advanced group's analytical thinking is also indicated by their less use of intuition in resolving their grammatical problems.

As intuition is concerned, it is also worth discussing that compared to the advanced group's 10% intuition-based answers, the intermediate group takes up 25% of their answers based on intuition. Nevertheless, the advanced group's answers lead to 100% correct while the intermediate's only 43%. This finding suggests the importance of verbalizing rules as a means of developing learners' accuracy.

These differences accordingly seem to affect the functions of output of both groups. Despite the fact that the intermediate learners' output might also serve as gap-noticing, hypothesis testing, and metalinguistic function, the degree to which the output demonstrates these learning mechanisms might be different from those of the advanced group. Due to their tendency to be more critical in analyzing their language problems and their less collaborative pattern of interaction, their output seems to exhibit a higher degree of hypothesis-testing and metalinguistic role. As for their gap-noticing, this function seems to be more perceivable during their negotiation of form, rather than during their attempt to produce language.

Their higher degree of hypothesis testing and metalinguistic role of output is also suggested by their less reliance on intuition in their analysis. This makes sense because if they rely on their intuition as the basis of their output, the roles of output as hypothesis testing would be minimized. Intuition is likely to provide learners with limited feedback that can help learners verify their hypothesis. Moreover, it might also hinder the metalinguistic role of output. Though Masny (1991) claims that metalinguistic awareness is related to one's ability to match his/her

language intuitively with his/her language knowledge, articulating rules is claimed to be a higher order ability.

Based on these accounts, it seems apparent that output can be learning potentials by serving as mechanisms stimulating learning to occur. In particular, as Kowal's and Swain's (1994) claim, learners are forced to come to a deeper processing rather than only to comprehend input.

Conclusion

Producing language through a grammar task putting the emphasis on the accuracy is likely to promote at least three significant learning mechanisms. By engaging in such a task, the learners are involved in some thought processes triggering their analysis of their output and drawing on a number of sources such as their LI knowledge, intuition, and largely on their linguistic knowledge. It is through this analysis particularly reflected on their articulating rules of grammar, learners' hypothesis testing and metalinguistic role of their output are engendered.

These two mechanisms are further facilitated by the learners' negotiating of form through which the learners receive some feedback that might result in new linguistic knowledge for learners or in the consolidation of their existing knowledge. Moreover, this negotiation of form also gives rise to the third learning mechanism, gap-noticing. While attempting to reconstruct the text, the learners might not always be aware of the gap between what they intend to say and what they can actually produce but through negotiating form, they become more aware of the gap.

Gap-noticing triggered by negotiation of form rather than by output seems more evident in the advanced group than in the intermediate group. The advanced learners are likely to be able to make use of all sources, both their linguistic knowledge and their analysis of the text to produce language. As a result, their awareness of the gap does not seem to be evidently shown while attempting to produce language. This ability in turn also influences their pattern of interaction. Instead of going through discussion before arriving at an answer, the advanced group learners tend to show their own answer first and seek for feedback. As a result, their output opens a wider forum for analysis and negotiation. Such a pattern might suggest the higher tendency of the advanced group to make use of their output as a means of testing their hypothesis.

Learners' different proficiency also influences the degree of their overt focus and the analysis employed. While both groups similarly consider grammar aid meaning as their focus and analyze the language problems by appealing mainly to articulating grammar rules, the degree of both aspects in each group is different. The advanced group is more able to make use of the forum of the interactions to promote gap-noticing, hypothesis testing and reflective role of their output than the intermediate group.

In sum, the findings suggest a different degree of processing between intermediate and advanced learners in utilizing output in the course of their interlanguage development. Accordingly, these insights would help the teachers in designing tasks and conduct their teaching. A central idea worth thinking is the role of verbalizing grammar rules for both groups of learners.

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