RE-CAPTURING THE ROLE OF PRACTICE IN SECONDARY SCHOOL IN JAPAN: TO CONNECT THE LINK TO FIT MORE FOR THE LANGUAGE LEARNING BEGINNERS

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Abstract

This study is based on Yamashiro (2021), which implemented practices with the purpose of proceduralization of explicit knowledge, aims to examine the concept of practice from theoretical and empirical perspective in order to further reinforce its basis. The results in Yamashiro (2021) shows that the learners' perception towards grammar study was altered in that to acquire the explicit knowledge is important in the study. The statistical results of the data from writing materials show the significant differences in the learners' variables on complexity (words per t-unit and grammar diversity in use). Based on Yamashiro (2021), implementations have been carried out and produced the reflective comments on practice. Through quantitative text analyses, the results show that the concept of practice subsumes a variety of aspects in L2 teaching and learning. It also suggests that capturing the insights of each keyword, relating them to the others, and emerging them in implementation makes the practice more robust not only as one of the teaching and learning techniques but also as a teaching method with pedagogical perspectives.

1 Introduction

The repeated activities make students utilize the learning grammatical items fluently has been held in secondary school English classes. Practice, however, has been often regarded as activities such as mechanical drills and/or pattern practice traditionally in Japanese EFL context. Considering the skills students have to acquire from the ISLA perspective, recapturing the concept of practice has potentially important implications not only for theoretical rationale but also for pedagogical implementations in classes. The aims of this research are to reflect on the literatures used which expand the concept of practice into L2 teaching and learning situations and to construct a more robust concept of practice meaning not only the mere repeated activity but also the pedagogically consistent concept to promote L2 acquisition effectively.

2 Background
2.1 *The theories of practice in SLA*

The concept of L2 practice has been extended and reappraised notably by DeKeyser (Suzuki 2019). In his studies (1998, 2007), practice is conceptualized from the applied linguistics and cognitive psychology, going beyond mere mechanical drills and pattern practice. DeKeyser (1998) defined practice as "engaging in an activity with the goal of becoming better at it." With

this definition of practice, the importance of communicative drills is described as one of the ways to overcome the potential limitations of purely communication-oriented instruction as follows.

Communicative drills require the student to use the language to convey real meaning, while some recently taught rules, the focus of the drill, can be kept in mind.

Considering that the textbooks being used in secondary schools in Japan, which are towards a grammar-teaching syllabus, the grammar items of the lesson need to be put into the learners' subconsciousness to retrieve as what is called 'skill'. Skill Acquisition Theory in L2 learning (DeKeyser, 1998) has its basis on Anderson (1982), Anderson et al (1997) etc., which insist proceduralization is achieved by engaging in the target behavior - or procedure - while temporarily leaning on declarative crutches (DeKeyser 1998). In DeKeyser (2007), the concept of practice is redefined as "specific activities in the second language, engaged in systematically, deliberately, with the goal of developing knowledge of and skills in the second language." By being included the terms of 'develop' and 'skills', much clearer ways of instruction for the learners' skill acquisition can be done in the light of practice. DeKeyser (2007) also states that practice is not just a one-shot activity, but the repeated and integrated activity for L2 acquisition as follows.

> The real question is not so much whether repeated performance of a narrowly construed task has a role to play in second language learning, but how strongly form-focused activities such as drills should be integrated into the curriculum without reverting to a structural syllabus that merely teaches "the structure of the day" or becoming obsessed with a mere focus on forms instead of focus on form.

Recently new conceptualization of practice that is not drills such as form-focused and meaning-focused input and output practice have significant ramifications in L2 research (Suzuki 2019). Importantly, to make these studies feasible in the context of secondary school in Japan, scaffoldings should be taken into account. In view of these theoretical and empirical insights, Yamashiro (2021) examined the feasibility of teaching and learning procedures which encourage L2 language use (see chapter 3).

2.2   Skill acquisition theory

The basic claim of skill acquisition theory (SAT) is that the learning of a wide variety of skills shows a remarkable similarity in development from initial representation of knowledge through initial changes in behavior to eventual fluent, spontaneous, largely effortless, and highly skilled behavior, and that this set of phenomena can be accounted for by a set of basic principles common to the acquisition of all skills (DeKeyser, 2015). The literature on SAT distinguishes three stages: declarative knowledge, proceduralization of knowledge, and automatizing or fine-tuning procedural knowledge (DeKeyser 1998). For the language learning beginners, it is practically plausible and reasonable to focus on proceduralization in secondary school situation in Japan based on Kanatani (2002, 2015) referring the primary aim to be achieved in secondary school L2 teaching is to make students be able to comprehend and utilize the basic grammar rules in use.

2.2.1 Declarative knowledge

Declarative knowledge may acquire quite a bit of knowledge ABOUT a skill without even trying to use it (DeKeyser 2015). Declarative knowledge is called "knowledge THAT" which is explained as objects of thought (DeKeyser 2017). Explicit knowledge is to be explained along with procedural perspectives (Paradis, 2009; Ullman, 2015) that can be interpreted in the teaching context that the learners are asked to retain not just its structure, meaning etc. individually but as an integrated knowledge in the light of form-meaning-function mapping, declarative knowledge. In SLA theories, it is said, in the weak interface position that explicit knowledge of a grammar rule can help a learner to notice a targeted form in the input and thereby eventually acquire it so that it becomes available for spontaneous production (Ranta and Lyster, 2018).

2.2.2 Procedural knowledge

Procedural knowledge is called "knowledge HOW" explained as the (cognitive) actions to work upon these objects, consists of condition-action pairs that state what is to be done under certain circumstances or with certain date; encode behavior (DeKeyser 1998). Through initial practice they incorporate declarative knowledge into behavioral routines (DeKeyser 2007). It should be pointed out here that though the proceduralization of knowledge is not pariculary arduous or time consuming, yet, a large amount of practice leads to the gradual automatization of knowledge is needed to make declarative knowledge robust and fine-tuned (DeKeyser 2015).

3 Practice research in Japanese secondary school context

In Yamashiro (2021), the effects of practice on proceduralization for the L2 learning beginners was examined. Based on the practice literatures described in the previous chapter, practice is defined as follows:

> Practice is a sequenced, repeated, and deliberated activities to get learners used to utilizing the explicit knowledge which can be recognized as the grammar use learning now (include learned ones) to enforce the form-meaning-function mapping.

Then the teaching procedure was planned and implemented for learners, ages 13 to 14. Explaining about the learners, the subjects in matter are roughly 140 students in secondary school (80 students entering from primary school attached to Tokyo Gakugei University [one of the national universities of education], and the others, about 60 students selected by the exam are from public schools). Most of learners' English proficiency are able to reach the A2 level, while some are able to reach B1 level in CEFR when they graduate from the school. The classes were held for about 5 months, from September 2020 to January 2021.

3.1 The basic design of the practice in teaching

To construct the teaching plans to efficiently connect with the aims of the lesson and each class which prioritizes proceduralization, the practices illustrating its concept were enumerated, planned and implemented. Practice activities (see Table 1) were flexibly chosen, customized, and repeated over many times along with the diagnostic assessment. Table 1 also shows the

section each practice was used. The textbook which was used in the research consists of three sections. Section 1 and 2 is a short dialogue or monologue that focuses mainly on the theme of the lesson which aims the learners to get used to the grammar items.

Table 1. The basic design of the practice activities

Practice activities / Teaching Section	Section 1	Section 2	Reading Section
Pattern practice	X	X	
Communicative drills	X	X	
Oral introduction	X		X
Explicit instruction	X	X	X
Chit-chat	X	X	X
Small output	X	X	X
Teacher talk	X	X	X
Reproduction/Retelling	X	X	X
Read aloud	X	X	X
Output performance activity			X

The reading section is about 200~350 words about the theme. In each lesson, the goal to achieve was set in the output performance activity, which is a challenging task for the learners to express with the learning items such as the grammar, words, and phrases they are learning for the first time. When the lesson begins, the theme of the lesson is introduced orally by the teacher (oral introduction). In section 1 and 2, instructions mainly for the explicit knowledge and its familiarizing activities are carried out through the text sentences, interaction including input enhancement, and pattern practice etc.

In the reading section, the learners read the sentences (Read aloud), comprehend and learn the linguistic items in use in the context. Then with the declarative knowledge learned throughout the lesson, the learners try to express themselves in speaking/writing output (Reproduction, Retelling, and Output performance activity etc.). As the learners are often asked to create sentences to output in performance with the newly acquired knowledge, it makes them utilize the knowledge to connect and to enforce the form-meaning-function meaning.

3.2   Research questions on analysis in Yamashiro (2021)

This study addressed the following research questions on analysis.

1. To what extent does the practice contribute to modify the concept of declarative knowledge?
2. To what extent does the practice contribute to alter the learners' output performance?
3. What kind of strategy do the learners choose for their L2 learning?

3.3   Method
3.3.1   Questionnaire (quantitative text-mining)

The questionnaire passed out after researched period directly asked about the explicit knowledge, e.g. grammar items study was collected. The following two questions were asked to the learners.

Question 1. What was your thought towards grammatical studies when you were 7th grade?
Question 2. What is your thought towards grammatical studies now?

The protocols from both questionnaires were analyzed by KH-Coder (quantitative text-mining analysis soft).

3.3.2 *Quantitative analysis*

Quantitative analysis was conducted for the two types of learners divided by the result of the protocol analysis; those who expressed that learning grammar items are to use them in the context (Focus on Skill group: N=7) and to answer the workbooks well (Focus on problem-solving group: N=7). Pre and post-test writing materials were used to analyze statistically. The topics are as follows:

1. Pre-test: What did you do in the afternoon last week?
2. Post-test: Do you think young people should travel abroad more?

The writings were analyzed by js-STAR (online statistical analysis soft).
Considering the views on previous studies, complexity, which are inferred to be greatly affected by proceduralization, were set up as the dependent variable. To measure statistically in complexity, following independent variables in complexity indices (words per t-unit, grammar diversity in use, the total number of grammar use, subject diversity) were set out.

3.4 *Results*
3.4.1 *Questionnaire*

The results of the questionnaire show the concept towards explicit knowledge was modified to some extent before and after the teaching. Before the teaching, the following perceptions were the thoughts the learners retained: studying grammar is unnecessary, to study grammar means just to remember the structure and meaning, communicating is more important than studying grammar, grammar is only useful to pass a test. The questionnaire completed after period of the instruction, the perceptions of most of the learners were modified as follows: grammar is the foundation of L2 study, just remembering grammar knowledge does not mean it is a good study, to study just the grammar is not enough, it is important to acquire the learned grammar, to study for language use is important. In the research, these learners were characterized as the Focus on Skill group. On the other hand, some did not modify the concept but responded in the questionnaire that to study grammar is to answer the workbooks better. These learners were characterized as the Focus on Problem-solving group.

In these differences of the learners' modification, the new concepts such as language in use, acquisition, and not just remembering through the implementation were highlighted.
Considering how the practice implementation contribute to modify the concepts, the learners were able to understand English sentences by being able to use the learned grammar. It was largely because they were successfully using the knowledge as skills they had developed

through practices. With these results, the additional investigation on what alternation was caused within the learners, Focus on Skill group and Focus on Problem-solving group were analyzed statistically.

Table 2. Results of ANOVA

Characteristic	Variable	Pre-Test		Post-Test	
		Mean	SD	Mean	SD
Focus on Skill (N=7)	WTU	6.95	0.92	9.57**	1.10
	GD	1.29	1.16	2.86*	0.64
	SUM	3.71	4.10	5.14	1.64
	SD	4.57	0.90	4.71	0.70
Focus on Problem-solving (N=7)	WTU	7.25	1.29	8.29	1.95
	GD	1.43	1.17	1.71	0.88
	SUM	2.43	2.13	2.71	1.91
	SD	3.71	0.70	3.86	1.25

** = p <.01; * = p <.05; WTU = Words per T-Unit; GD = Grammar Diversity; SUM = total number of grammar use; SD = Subject Diversity

3.4.2   Quantitative analyses

The statistical analyses (ANOVA) for the complexity indices in writing materials are provided in table 2. As the table demonstrates, Focus on skill group produced longer sentence ($p < .01$) and used more grammar types ($p < .05$). No significant differences were found for the other variables. In terms of proceduralization, the learners, especially Focus on Skill group alter their grammar knowledge in use by making sentences longer and using more grammar types. Then additional investigation was carried out to verify what caused the differences.

3.4.3   Analyses on questionnaire for focus on skill learners

The additional analyses on questionnaire for focus on skill learners were held to investigate what kind of ideas caused the difference in complexity concretely. The following questions were asked and analyzed in KH-Coder.

Question 1: What kind of study are you doing to develop your English use?
Question 2: When do you feel your English use is improved? Why do you think so?

3.4.4   Results

From the analyses on the learners' protocol, they usually choose grammar and vocabulary, reading books, writing, and listening for their study in addition to workbooks. The studies the learner chose as their own work for English study must have caused the positive results in writing. This result seems to correspond with the transfer appropriate processing model, however, the further research with the theory should delve into the field in the context of secondary school in Japan.

4   Empirical insights that construct robust practice concept

Based on Yamashiro (2021), practice implementation has been carrying on and improving since then more consciously. As a reflection, comments the author empirically thinks it is important to improve the practice were accumulated and categorized (see table 3), then analyzed by KH-Coder (see figure 1 and figure 2).

4.1   Results and findings

Figure 1 illustrates co-occurrence networks of the reflective comments on table 3 shows how the words are linked together with the others in the context. To measure the co-occurrence relation, the Jaccard coefficient was used. The darker line shows the higher coefficient. The width of the circle in figures represents the frequency of the word.

There are 49 extracted words with large co-occurrence relations. The word in the square are the external variables, labelling words for categorization.

Table 3. Reflective Comments on Practice

No	Labelling	Reflective Comments on Practice
1	Design	To relate the lesson aims with the each class coherently,
2	Design	construct the each class to achieve the lesson aims with the backward design concept.
3	Design	make clear what kind of skill should be developed though the lesson.
4	Design	set the aims of the lesson with the concept of soft CLIL approach; comprehend the content and output with the learning
5	Design	To check if the each activity of the class is sheer the one to achieve the aims,
6	Design	connect the procedures one after another from the perspectives of efficiency and adequacy.
7	Motivation	To make the learners comprehend the meaning why they are doing the activity,
8	Motivation	make the learners be aware of the improvements they have to tackle with.
9	Design	To reduce the scaffoldings gradually in accordance with what the learners can do,
10	Design	set the activities that are alike with the ones previously done and tell the learners to tackle with the activities independently.
11	Design	adjust the level of the sentences in case the materials that are not from the textbook are introduced.
12	Noticing	To make the learners notice the language gap or hole,
13	Noticing	take in the peer feedback more often.
14	Noticing	show the models from the peer performances.
15	Noticing	practice expressing with the items learning now in a natural context.
16	Design	To make a difference even in the short period,
17	Design	develop the learner positive attitude utilizing the learning items.
18	Evaluation	evaluate the learners positively who are taking in the learning items actively and challenging creatively.
19	i+1	To set the activity that motivates the learners to challenge,
20	i+1	check and make clear from the performance that what the learners have to get over/cannot do well.
21	i+1	convey there are more steps to go or enhance your quality.
22	Design	To make students focus on the learning linguistic materials rather than the others in terms of attentional resources,
23	Design	repeat the similar activities throughout the lesson to reduce the cognitive load to comprehend the procedure how to do.
24	Evaluation	To check the learning development and make the learners modify the path to go, what the learners should focus on, by themselves,
25	Evaluation	give the learners some tips to improve their struggles as feedback.
26	Evaluation	give the learners intermediate evaluation in the activity.
27	Evaluation	give the learners explicit feedbacks on what the learners are making mistakes.
28	Evaluation	share the performance of the learner as one of the models.
29	Noticing	To make the learners always put the learning items under the learner's conscious,
30	Motivation	encourage the learners to utilize when possible.
31	Noticing	make the learners reflect the explicit knowledge more often when they need to check the structure or its use.
32	Motivation	To make the learners motivate to revise their output sentences better,
33	Motivation	get them have an attitude to improve the sentences if the sentences are truly able to convey the message the learners want
34	Motivation	have the learners attitude to reflect the sentences from the viewpoint if the new words and phrases are used, the sentences are complex enough, etc not only the use of what the learners can use.
35	Noticing	make the learners notice the errors they have in the sentences.
36	Belief	suggest the words, phrases, and grammar items which the learners know but cannot be used yet.
37	Design	To explore the practice activities which is interesting enough for L2 learning,
38	Design	create the procedure that the learners find themselves doing over and over again.
39	Design	create the procedure that the learners repeat the activity with change and less scaffoldings.
40	Design	To set up the language activity which the learners can simulate the real situations,
41	Design	make sure the aim of reproduction or retelling, e.g. are to convey the message that the learners get by listening, not just
42	Design	make the learnes have the attitude to interact with and comprehend each other, not just express themselves.
43	Belief	To make the learners learn as possible as they can,
44	Belief	tell the learners the differences of the thoughts, ability, the output they produce are the opportunities to the learners'
45	Belief	consider the variety of roles the teachers have as a L2 learning facilitator.
46	IDs	To construct the language activities that promote Optimal Individual Learning,
47	IDs	use the digital textbook on PC and make them improve the things what to get over indiviudally.
48	IDs	make clear through the data analysis what kind of problems each learner has.
49	IDs	use the ICT equipments, e.g. record the learners' speaking to create more opportunities to use English for each learner.
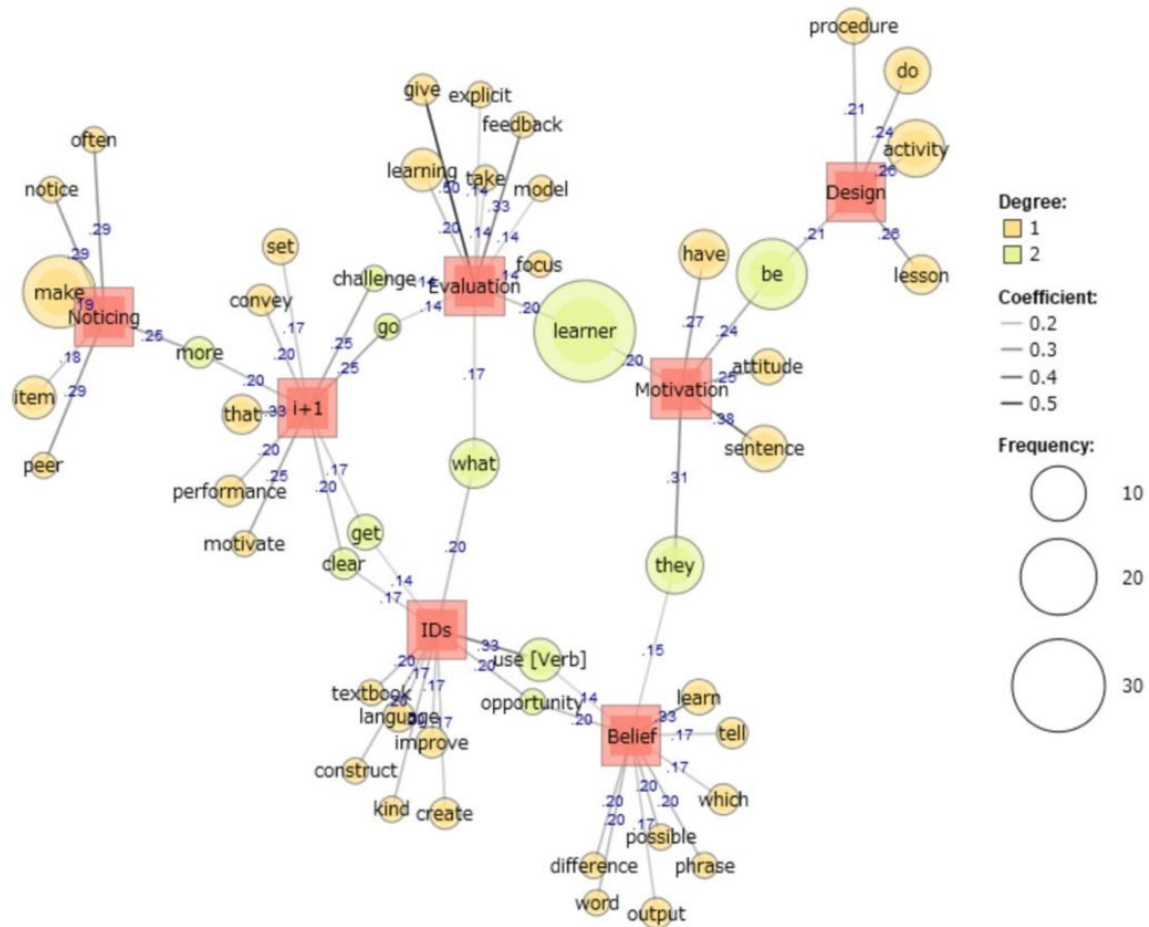
**Fig. 1. Co-occurrence networks of practice reflection comments
(External Variables: Labelling words for categorization)**

In Figure 1, for example, for the 'Evaluation', 'learner', 'challenge', 'go', 'focus', 'learning', 'take', 'model', 'give', 'explicit', 'feedback' are co-occurrent.

Considering the implementation of practice, it is important to have the learners engage in an activity over time. Moreover, from the external variables with the keywords, these findings can be added.

   Finding 1: It is necessary to envision how the classes are structured from the perspective of development of the learners' use and its expansion on what they have learned in the practice.

   Finding 2: It is necessary to intentionally set up the development of practices with linguistic learning, rather than just having the learners engage in the process.

Figure 2 illustrates correspondence analysis that shows how and in what context the words are frequently used. Figure 2 shows 'language', 'learner', 'make', 'improve', 'item', 'practice', 'express', 'motivate' are located near the origin. These words are connected with the other clusters labelled such as Design, IDs (Individual Differences), Evaluation, etc. For example, the cluster 'Design' means that practice needs reinforcement in design (how the practices are implemented). Here, a specific example from 'procedure' shows 'create the procedure that the

learners repeat the activity with change and less scaffoldings' from KWIC (keyword in context) concordance. This represents repeated practice with lessening its scaffoldings will lead the learners to use the learning items effortlessly.
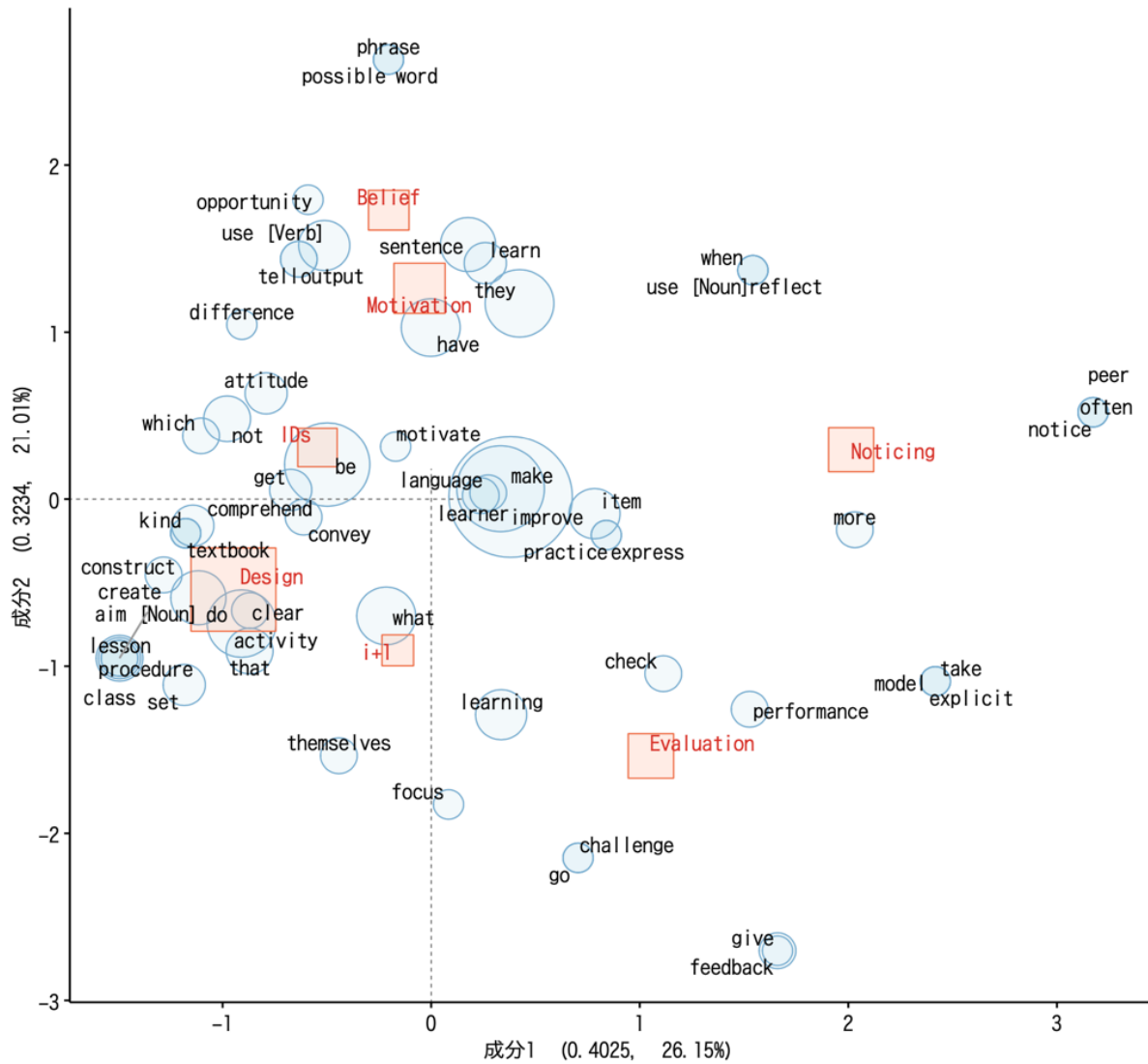
**Fig. 2. Correspondence analysis of practice reflection comments
(External Variables: Labelling words for categorization)**

The findings from the figure 2 need to be examined are as follows.

Finding 1: Items set as external variables need to be further linked; Items such as noticing should be further examined to make it more relevant to and incorporate it into the design.

Finding 2: Practices need to be conceptualized from a more pedagogical perspective to further enhance the quality of instruction.

The more the insights of each keyword in figure 1 and figure 2 are embodied, the more robust the practice can be.

5   Discussion and Conclusion

This study reviewed what is practice based on the previous studies which suggested that the effects of practice leads proceduralization and in accordance with the teaching context in secondary school learners in Japan. The study also verified the possibility of the practice which can play a role as the anchor to rely on the improvement of teaching techniques and the basis of the teaching concept to form effective L2 teaching and learning.

We found that a procedure of practice teaching had an effect on the learners' development in complexity which can be recognized as one of the processes in proceduralization. Also, the procedure led the modification of the learners' perception towards grammar learning. Interestingly, significant differences were found between the learners who focused on the skill and the problem-solving. This result might be accounted by the transfer-appropriate processing; processing that has enough elements in common with the context of transfer for this context to activate the memory traces from this processing (DeKeyser 2017).

Based on Yamashiro (2021), practice implementations have been carried out to enhance the quality and to create more robust concept of practice. From the analysis of reflective comments, practice can be recognized as the teaching method to proceduralize the grammar knowledge.

From the skill development perspective, factors of practice should be incorporated into the activities. Also, practice can be considered as the concept that lights the path on what to teach, which encompasses the variety factors in L2 teaching and learning. For example, practice can be recognized as the driving force for the learners' motivation by lessening the scaffoldings, encouraging the learners' autonomy, and getting the learners have a sense of accomplishment, elongation, and satisfaction. The whole teaching and learning processes can be weaved with the concept of the practice which leads to a much more robust L2 acquisition.

The concept of practice needs further examination from multi angles. First of all, the research implementing the concept should be accumulated in secondary school situation and examined its robustness. Furthermore, light should be shed on the pedagogical perspective; what makes practice good L2 teaching and learning. To examine the robustness from pedagogical perspective, a legitimate peripheral participation (Lave and Wenger 1991) will be the focus of the following research paper.

> Learning viewed as situated activity has as its central defining characteristic a process that we call legitimate peripheral participation. By this we mean to draw attention to the point that learners inevitably participate in communities of practitioners and that the mastery of knowledge and skill requires newcomers to move toward full participation in the sociocultural practices of a community. "Legitimate peripheral participation" provides a way to speak about the relations between newcomers and old-times, and about activities, identities, artifacts, and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice. A person's intentions to learn are engaged and the meaning of learning is configured

through the process of becoming a full participant in a sociocultural practice. This social process includes, indeed it subsumes, the learning of knowledgeable skills.

To examine practice as the concept subsuming not only the mere techniques but also instructive philosophy in L2 teaching and learning that encourages effective L2 acquisition as being conceived as "practice-based teaching" will be an important research endeavor.

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