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A Study on NNS Teachers' Language Awareness

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The goal of the study is to examine non-native speaking (NNS) English teachers' language awareness in relation to their metalinguistic knowledge and language proficiency. Data was collected from sixty-two (N=62) NNS in-service teachers who had teaching experiences in South Korea and forty-four (N=44) NS pre-service teachers in a TESOL certificate or degree program in the U.S. All participants were asked to complete a series of tests to check their levels of metalinguistic knowledge (MK). The tests of MK consisted of 34 test items asking participants' grammaticality judgement and 15 items of metalanguage use. In addition, NNS participants answered a self-report questionnaire of their English language proficiency (LP). The results from the tests and questionnaire were examined using t-tests, correlation, and regression analyses. The findings indicated that the NNS group performed differently on the tests of two types of MK; the NNS group outperformed the NS group on the test of metalanguage use knowledge, whereas the NS group performed better than the NNS group on the test of grammaticality judgement. Also it was found that the scores of grammaticality judgement in the NNS group were correlated to the scores of LP at statistically significant levels. In regression analysis, the grammatical judgement on the indefinite article appeared to be the only predictor of LP. Implications and suggestions from the findings are discussed.

Keywords: NNS teacher language awareness, metalinguistic knowledge, language proficiency

Introduction

A teacher's language awareness is 'the knowledge that teachers have of the underlying systems of the language that enables them to teach effectively' (Thornbury, 1997). For L2 teachers, language awareness involves both knowing an L2 (language proficiency) and knowing about an L2 (metalinguistic knowledge) (Andrews, 2001). It has been argued that the relationship between the two are complex because L2 itself is involved in language teaching as content, a tool, and a goal of instruction. Andrews (2003) suggests that an L2 teacher's language awareness includes an extra cognitive dimension of reflection on both knowledge about an L2 and knowledge of an L2, and such quality of teacher language awareness has a potentially crucial effect on 'filtering' (mediating) output from the teacher or learner. In this respect, an L2 teacher's language awareness provides a basis for planning and teaching the tasks that are more easily available to the learner.

Due to such said nature of language awareness, studies on L2 teachers' language awareness have shown a great interest on how two key components involved in language awareness, metalinguistic knowledge and language proficiency, interact with one another. Particularly an L2 teacher's metalinguistic knowledge has drawn much attention from researchers because the role of metalinguistic knowledge has been one of the central issues to discuss L2 teachers' teaching practices. Investigation into

metalinguistic knowledge of L2 teachers has found a higher level of metalinguistic knowledge of non-native speaking (NNS) teachers when compared to native speaking (NS) English teachers (Erlam, Philip, & Elder, 2009; R. Ellis, 2005, 2006; Kelly, 2014) while some studies showed a lack of metalinguistic knowledge of both NNS and NS teachers (Gutiérrez, 2013). Much empirical work has also examined the relationship between metalinguistic knowledge and language proficiency. The data from the previous studies is inconclusive. Elder, Warren, Hajek, Manwaring, and Davies (1999) found no correlation between metalinguistic knowledge and L2 proficiency whereas Elder and Manwaring (2004), Kim (2009), Renou (2001) and Roehr (2008) found a strong correlation between the two. Despite the different results, all these studies emphasize the relation of metalinguistic knowledge and L2 proficiency, with an assumption that the two are closely associated with teacher language awareness in practice.

The purpose of the present study is twofold. First, the paper investigates the levels of metalinguistic knowledge of NNS English teachers, particularly drawing on the measurements of two types of metalinguistic knowledge, grammaticality judgement and metalanguage use. Measures of grammaticality judgement and metalanguage use have been widely used in relation to measuring metalinguistic knowledge. Investigating participants' performance on these two measurements would yield insights into their explicit knowledge about a language and ability to determine linguistic form and language rules. Secondly, the study examines how L2 teachers' metalinguistic knowledge and language proficiency is related to one another. To this end, correlations between the two types of metalinguistic knowledge and the subskills of language proficiency will be examined, and also examinations of correlations between the specific grammar features and language proficiency are conducted. Investigations of the levels of metalinguistic knowledge and correlations of metalinguistic knowledge and language proficiency can provide useful information on how L2 teachers' language awareness, particularly who had teaching experience in a secondary school in South Korea, might be operationalized through different types of knowledge.

Research Background

Language Awareness of an L2 Teacher

Language awareness is defined as the explicit knowledge about language, and conscious perception and sensitivity in language learning, language teaching, and language use (Association for Language Awareness, 2016). Research on L2 teachers' Language awareness (LA) has placed strong emphasis on the complexity of LA. Not to mention the uniqueness of the L2 language teaching situation where both the content and the medium of instruction are intertwined, there are a number of factors contributing to the complexity of LA. LA involves both language competence and knowledge of pedagogical content such as knowledge of curriculum or subject matter. At the same time, according to Andrews (2001), L2 teachers' LA requires the teacher to have more than just the possession of such knowledge. The L2 teacher needs to reflect upon her/his knowledge of the underlying systems of the language in order to ensure that her/his students receive maximally useful input for learning. In this sense, an L2 teacher's LA essentially entails metacognitive knowledge and metalinguistic awareness of L2.

The question of what components construct an L2 teacher's LA has been discussed in a number of studies (Andrews, 2003; Bailey, 2006; Bartels, 2009; Braine, 2010; Ellis, 2012). There is general consensus that two areas of linguistic knowledge base, language proficiency and metalinguistic knowledge, are key components constructing LA. Wright and Bolitho (1993) stated that successful language teaching requires proficiency in language use, knowledge about language, and knowledge of teaching methods, and that an L2 teacher's language awareness is directly involved in these three areas. Wright (2002) proposes three domains in which an L2 teacher's LA operate: the user domain, the analysis domain, and the teacher domain. In the user domain, an L2 teacher's ability to appropriately use an L2 in a variety of situations but also an awareness of the social norms which underlie such appropriate

use is essentially involved. The analysis domain covers knowledge of language. It includes understanding of the forms and functions of language systems such as grammar, vocabulary and phonology, and an ability to describe such knowledge of language. Lastly, the teacher domain involves awareness of how to create and exploit language learning opportunities, the significance of classroom interaction and of learner output. An L2 teacher's LA can successfully operate when the three conceptualized domains work well.

Research on how language proficiency and metalinguistic knowledge are relevant to LA was conducted in several studies. Andrews (2001, 2007) examined L2 teachers' LA in relation to grammar knowledge. Through tests and interviews, he found that participants' knowledge about language, especially grammar knowledge, is an essential attribute of LA. Some other studies (Andrews & McNeil, 2005; Biglelow & Ranney, 2005; Ferguson, 2002; Murray, 2002) also examined in-service or pre-service L2 teachers' language awareness in terms of a number of factors such as language proficiency, grammar knowledge, and teacher output through task performance, class observation, and interviews. The results of the studies suggest such language-specific factors interact in a variety of ways with differing consequences and play a vital role in the application of L2 teachers' LA in the pedagogical practice.

Metalinguistic Knowledge of an L2 Teacher

In recent years, the term language awareness appears to have focused attention on the relationship to metalinguistic knowledge. Metalinguistic knowledge is defined as the declarative and conscious knowledge that is learnable and potentially verbalizable. Thus, metalinguistic knowledge of the language is often interchangeably used with the explicit knowledge (Ellis, 2009).[1]

Recent studies on metalinguistic knowledge are mainly focused on two concerns: How metalinguistic knowledge (MK) can be measured and how MK is related to language proficiency. First, the measurement of MK has been discussed by a number of studies involving a range of test batteries, such as identification errors, correction of errors, verbalization of rules, and grammaticality judgement. Metalinguistic knowledge is often examined using a combination of these measures. (Alderson, Clapham, & Steel, 1997; Elder & Manwaring, 2004; Elder, Warren, Hajek, Manwaring, & Davies, 1999). One widely used method is verbalization of rules with metalinguistic terminology. Since most grammar rules are not possible to verbalize without using proper technical terms, verbalization of rules is arguably tapping into an L2 teacher's metalinguistic knowledge directly. Hulstijn (2002) suggests that metalinguistic knowledge should be operationalized as knowledge that can be verbalized with semitechnical or technical terms (i.e. terminology). Ellis (2009) argues that how easy or difficult it is to verbalize a rule should affect rule difficulty, and the more technical the metalanguage needed to formulate a rule, the more language awareness will be required.

Another measurement for metalinguistic knowledge is a grammaticality judgement test (GJT). It has been argued that in performing GJT, L2 learners may respond intuitively, but they also use their linguistic knowledge to locate and describe errors, which requires a certain degree of conscious analysis. Ellis (2006) proposes that test-takers of GJT may undergo a three-step process: 1) semantic processing (understanding the meaning of the sentence), 2) noticing (searching incorrectness), 3) reflecting (considering what is incorrect about the sentence and why it is incorrect). Ellis argues that giving test-takers unlimited time to perform a GJT allows them potentially to perform all three operations, which draw on their metalinguistic knowledge.

Discussions on the relationship between metalinguistic knowledge and L2 proficiency have been done in a number of studies, but the results are still inconclusive. For example, Elder et al. (1999) found weak or no correlations between metalinguistic knowledge and L2 proficiency. On the other hand, Renou (2001) and Roehr (2008) found a strong correlation between metalinguistic knowledge and L2 proficiency measured as knowledge of grammar, structures, and vocabulary. Elder and Ellis (2009) investigated the

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[1] This view is adopted in the present study

relationship between implicit and explicit knowledge and language proficiency. They found that the implicit and explicit measures of the same structure were not both related to proficiency. For example, implicit knowledge of the grammatical features was more strongly related to oral proficiency than to written proficiency while the reverse was the case for explicit knowledge.

Operational Definitions of Terms

There has been differing understanding of concepts and terms regarding language awareness, metalinguistic knowledge, and language proficiency. Since the concepts and terms being used can vary in meaning depending on research, this study has set operational definitions based on discussions from relevant studies. The concepts are operationalized as follows:

1) *Language awareness* involves knowledge of a language, knowledge about a language, and conscious perception in language use and language (Andrews, 2001).
2) *Language proficiency* entails an ability to read, listen, speak, and write in English (Council of Europe, 2000).
3) *Metalinguistic knowledge* involves conscious knowledge of and about English that is accessible and learnable by L2 learners. Metalinguistic knowledge can be represented by the measures of two types of knowledge; grammaticality judgement and metalanguage use (Gutiérrez, 2013).
4) *Grammaticality judgement* task requires participants to respond to the items dichotomously (Yes/No), in the untimed way. The untimed grammaticality judgement task allows learners to access their knowledge consciously (Loewen, 2009).
5) *Metalanguage use* refers to learners' knowledge of metalingual terminology to describe language rules and errors (Ellis, 2009).

Method

Research Questions

1) Is there a significant difference between the levels of metalinguistic knowledge of the two groups of teacher trainees (NNS and NS)?
2) To what extent is the NNS group's metalinguistic knowledge related to its L2 proficiency?

Participants

One-hundred and six participants (N=106) participated in the study, and each participant belonged to either the NNS group or the NS group. Of the participants, sixty-two (N=62) in the NNS group were in-service, non-native speakers of English teachers who had been teaching in secondary schools in South Korea. Forty-four (N=44) participants in the NS group were pre-service, native speakers of English teachers who enrolled either in the undergraduate or graduate (master's) TESOL degree program at a university in the United States. The NNS group consisted of fifty (N=50) female and twelve (N=12) male teachers, and before participating in this study, all of them had completed both an intensive (720-hour) in-service teacher training program in Korea and one-month overseas training program in the United States or Australia. The NS group consisted of thirty-two (N=32) female and twelve (N=12) male participants, and they were all majoring in English Language with a TESOL specialization. There were twenty-two (N=22) participants in the master's program and twenty-two (N=22) in the bachelor's program in the NS group when the study was conducted.

Materials and Scoring

Participants responded to the test of metalinguistic knowledge (MK)[2]. The test on MK consisted of 49 questions on two subsections, such as the test of grammaticality judgement (MK1, Appendix A) and the test of metalanguage use (MK2, Appendix B). A total of 34 test items asking participants' knowledge of grammaticality judgement and 15 items for metalanguage use were included on the test. The MK1 test items were developed based on the items used by Ellis (2009). The test items were designed to provide measures of participants' knowledge of English grammatical structures. The 17 grammatical structures, which were known to be universally problematic to L2 learners, were selected to include both morphological and syntactic features (Ellis, 2009). Each of the structures was presented twice with one grammatical sentence and one ungrammatical sentence. The participants were required to indicate whether each sentence was grammatical or ungrammatical, and each item was scored dichotomously as correct or incorrect with items not responded to, to be scored as incorrect.

The test items for metalanguage use (MK2) were asking (1) whether the participants identify grammatical errors and (2) they can state a rule using appropriate technical terms. The MK2 test items were devised based on the items used by Alderson, Clapham, and Steel (1997). The original version of the MK2 test was a multiple-choice format asking the test takers' metalanguage use about 15 specific language structures. In this study, 15 sentences containing 15 different grammatical errors were presented as an open-ended response format that would enable the researcher to ascertain whether the participants could give adequate explanations for errors. Responses to the test of MK2 were scored according to two criteria. The first was the correction of an error and the second was the use of metalingual terminology to account for the error. For each sentence, participants were given a score from 0 to 5 depending on how their responses met the two criteria. For example, the response that provided correction and an adequate use of terms scored 5 while the response that provided correction and the use of metalanguage term, but not the accurate term scored 4. The response with correction but no use of metalanguage term scored 3. The response with no correction but the use of an accurate metalanguage term scored 2 while the response with no correction, the use of metalanguage term, but not the accurate term scored 1. Neither correction nor term use scored 0. The maximum possible score in the test of MK2 was 75.

English language proficiency (LP) in this study was assessed using the NLSC (National Language Service Corps) tests. The NLSC tests are a self-assessment tool that foreign language learners use to check their proficiency of a target language. The NLSC test is divided into 4 sub-sections assessing reading, writing, speaking, and listening skills and each test item follows a format of can-do-statements. Test-takers respond to each statement with Yes or No. This study selected and adopted a total of 88 statements: 22 statements from reading, 22 from writing, 21 from listening, and 23 from the speaking section. The NNS group answered each statement with Yes or No with the score of one given to the response of Yes, and a score of zero to the response of No. A total score was calculated from the four sections and the maximum possible score in the test of LP was 88.

Procedure

All of the participants were recruited on a voluntary basis. The NNS group completed the two tests of MK and the tests of LP online. Participants in the NNS group were provided the address of a web link where a consent form and test questions were presented. When they clicked the link, the consent form and questions were presented in order, and the participants completed and submitted them online. All the data were collected confidentially since no personally identifiable information was collected or released. All the results were released in aggregated form so that individuals could not be identified.

The NS group completed the tests of MK using a paper form. Those who agreed to participate in the

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[2] The test materials used in the present study were the same ones used in Kwon (2015). The test results from the NNS group on the MK1 and MK2 in Kwon (2015) were partially used in the present study.

survey were given the survey forms during their TESOL class. They were asked to take the forms with them, take sufficient time to complete to the surveys, and bring them back to class when they are ready. All the data were converted and stored into an electronic file to analyze. In doing the tests of MK, no time limit was required for both groups because a time factor was considered to be a possible variable that could affect the performance of the participants on the tests in this study.

Results and Discussion

A Comparison of Metalinguistic Knowledge in the NNS and NS group

The test of MK obtained a Cronbach's alpha coefficient of .761 and the tests of LP obtained a Cronbach's alpha coefficient of .811, which indicated that all the tests were reliable. Table 1 shows the means and standard deviations for the tests of MK1 and MK2 for the two different groups. First, the descriptive measures of MK1 show differences between the groups in the expected direction; the mean score of the NS group in the MK1 test was higher than that of the NNS group. Results show that NS participants score a mean of 31.50 out of a maximum total score of 34 for their ability to judge grammaticality of the sentence while the NNS group scores a mean of 29.35. The t-test was conducted to see if there was a statistically significant difference between the groups on MK1. The result clearly shows the group difference at a statistically significant level, suggesting the NS participants possess a higher level of ability on judgement of grammatical structures.

Second, the group comparison in the test of MK2 shows that the NNS group performed better than the NS group on the test. On average, the NNS group scored higher than the NS group achieving a mean of 64.56 out of 75, when compared to a mean of 57.14 from the NS group. The t-test was conducted to see if there was a statistically significant difference between the groups on MK2. The result clearly shows the group difference at a statistically significant level, implying the NNS participants showed a higher level of metalanguage use. The scores of two tests, MK1 and MK2 were combined and compared between the groups. Both descriptive and t-test measure indicate that the NNS group scored higher than the NS group at a statistically significant level.

TABLE 1
Group Comparisons of MK1, MK2, and MK Total

	NNS teachers (N=62)				NS teachers (N=44)					
	M	*SD*	Min.	Max.	*M*	*SD*	Min.	Max	*t*	*p*
MK1	29.35	2.77	16	34	31.50	2.10	24	34	-4.316	.000**
MK2	64.56	9.08	32	75	57.14	8.38	30	70	4.280	.000**
MK Total	93.91	9.81	59	106	88.64	8.89	62	104	2.835	.006**

Note: MK1 Possible Max.= 34; MK2 Possible Max.= 75; MK Total Possible Max.= 109
*p < .05, ***p* < .01

The results from the group comparisons in MK1 and MK2 are consistent with some previous studies. Elder and Ellis (2009) found that in the test of explanation of errors using metalingual terminology (MK2), the NNS group showed a higher level of metalingual knowledge than the NS group. The researchers suggested that a higher level of the NNS group's metalingual terminology could come from explicit training on verbalizing rules that the NNS group had previously received during its study for a language related degree, which the NS group had not received. Loewen (2009) showed that the NNS group and NS group did not perform differently in terms of identifying grammatical features (MK1) at a statistically significant level. However, Philip (2009) found that the NS participants scored best either in the untimed or timed grammaticality judgement test (MK1).

To see which grammatical features were correctly or incorrectly answered, test items were grouped according to morphological and syntactical structures. In the test of MK1, 14 items represented 7 different

morphological structures and 20 items represented 10 different syntactical structures. In the test of MK2, six items represented six different morphological structures and nine items represented nine different syntactical structures. Table 2 presents, for each participant group, the average score of morphological and syntactical items in MK1, MK2 and MK total. In the test of MK1, the NS groups outperformed the NNS group at a statistically significant level on both morphological and syntactical items. On the other hand, the NNS group outperformed the NS group in the test of MK2, on morphological items at a non-significant level, and on syntactical items at a statistically significant level. When it comes to total scores in the test of MK, no significant difference between the groups was found on the morphological items while there was a significant difference between the groups on syntactical items at a statistically significant level (t=3.327, p=.001).

TABLE 2
Group Comparisons of Morphological and Syntactical Items in MK1, MK2, and MK Total

		NNS		NS			
	Items	*M*	*SD*	*M*	*SD*	*T*	*p*
MK1	Morphological	12.27	1.54	13.04	1.01	-2.893	.005**
	Syntactical	16.74	1.94	18.45	1.42	-4.978	.000**
MK2	Morphological	25.90	3.63	24.64	2.74	1.943	.055
	Syntactical	38.66	6.28	32.50	6.25	4.986	.000**
MK Total	Morphological	38.17	3.98	37.68	2.86	.698	.487
	Syntactical	55.40	6.93	50.95	6.56	3.327	.001**

p < .05, **p* < .01

To see more details of performance of each group on test items, scores of each grammatical feature were compared between the groups. Table 4 shows the results of the test of MK1. In the test of MK1, a significant difference was found with only two morphological features: indefinite articles and possessive -s. The NS group scored higher in the test items of indefinite articles and possessive -s at a statistically significant level, which implies a higher level of knowledge of the NS groups than the NNS on both features. The other items in the morphological features do not show any difference between the groups. This result indicates that a group difference in the test of MK1 came from the group difference on knowledge of articles and possessive -s mostly.

In Table 3, syntactical features that were identified by the least number of NNS students were ergative verbs (the mean score of 1.31), comparatives (1.50), relative clauses (1.55), dative alternation (1.63), and adverb placement (1.68). With these five features, the group differences were found at a statistically significant level. The group difference was also found in the item of embedded questions, but the NNS group performed better than the NS group.

One thing to note is that seven features that were answered by the less number of NNS participants in the test of MK1 have been reported as being 'difficult' in learning. That is, whether they are morphological or syntactical features, the features that showed a significantly lower level of knowledge of the NNS group, such as indefinite articles, possessive –s, ergative verbs, comparatives, relative clauses, dative alternation, and adverb placement, all represent late acquired grammatical features due to their learning difficulties (Pienemann, 1989, 2003). What makes a particular grammar feature difficult or easy is not the specific question to be answered here, but this study yields evidence that there are certain developmental stages L2 learners go through in the acquisition of grammar points. SLA research has offered much evidence to predicable development in the acquisition of some grammar features (Goldschneider & DeKeyser, 2005; Larsen-Freeman & Long, 1991), and the results of the MK1 in this study are in favor of this idea.

Descriptive statistics and t-test results for the two groups' performance on the test of MK2 are presented in Table 4. Regarding the morphological features, the item asking knowledge of Yes/No questions, and plural -s were found to be answered by the least number of the NS participants, which resulted in the significant group difference.

TABLE 3
Group Comparisons of Morphological and Syntactical Features in MK1

	Item	Feature	NNS M	SD	NS M	SD	t	p
Morpho-logical	5/22	Regular past tense	1.77	.46	1.86	.41	.986	.326
	8/24	Yes/No questions	1.94	.25	1.86	.35	1.286	.201
	9/18	Modal Verbs	1.95	.28	1.86	.35	1.473	.144
	13/26	Indefinite article	1.34	.70	1.88	.32	-4.759	.000**
	15/28	Possessive -s	1.60	.64	1.91	.37	-2.870	.005**
	16/29	Plural -s	1.74	.51	1.91	.29	-1.911	.059
	19/30	Third Person -s	1.95	.28	1.93	.26	.395	.693
Syntacti-cal	4/21	Verb complements	1.68	.54	1.81	.39	-1.423	.158
	6/23	Question tags	1.94	.31	1.98	.15	-.814	.418
	10/25	Unreal conditions	1.94	.31	1.86	.35	1.162	.248
	1/11	*Since* and *for*	1.92	.27	1.91	.29	.221	.826
	14/27	Ergative verbs	1.31	.67	1.77	.48	-3.883	.000**
	20/31	Relative clauses	1.55	.53	1.79	.41	-2.505	.014*
	12/32	Embedded questions	1.94	0.25	1.65	.53	3.692	.000**
	3/33	Dative alternation	1.63	0.52	1.88	.32	-2.850	.005**
	2/34	Comparatives	1.50	0.62	1.63	.58	-1.067	.288
	7/17	Adverb placement	1.68	0.50	1.98	.15	-3.766	.000**

*p < .05, **p < .01

For syntactical features in Table 4, group differences were found with seven7 syntactical features, out of nine syntactical features. The t-test results show that there were group differences at a statically significant level on all these seven syntactical features. The NNS group scored much higher in rule verbalization of verb complements, question tags, unreal conditions, relative clauses, comparatives, and adverb placement. Except the item of embedded questions, these features were found to be answered by a larger number of the NS participants, showing that the NNS participants were able to perform to a higher level when required to verbalize syntactic rules of target structures.

TABLE 4
Group Comparisons of Morphological and Syntactical Features in MK2

	Item	Feature	NNS M	SD	NS M	SD	t	p
Morphological	8	Regular past tense	4.44	1.23	4.73	.86	-1.336	.185
	11	Yes/No questions	4.43	.79	3.71	.94	4.221	.000**
	1	Modal Verbs	3.84	1.11	3.85	.87	-.055	.956
	9	Indefinite article	4.04	1.27	4.42	.68	-1.799	.075
	7	Possessive -s	4.59	.96	4.57	.81	.141	.888
	5	Plural -s	4.53	.61	3.33	.79	8.747	.000**
Syntactical	2	Verb complements	4.49	.94	3.97	1.06	2.639	.010*
	13	Question tags	4.11	1.56	3.11	1.80	3.023	.003**
	3	Unreal conditions	4.49	1.20	3.52	1.20	4.097	.000**
	14	*Since* and *for*	3.79	1.35	3.38	1.07	1.694	.093
	6	Ergative verbs	3.71	1.53	3.92	.94	-.814	.418
	15	Relative clauses	4.66	.66	3.42	1.14	6.996	.000**
	10	Embedded questions	4.44	.89	3.40	1.03	5.536	.000**
	4	Comparatives	4.53	.61	3.97	.95	3.640	.000**
	12	Adverb placement	4.39	.85	3.76	1.25	3.098	.003**

*p < .05, **p < .01

A Relation of Metalinguistic Knowledge to Language Proficiency in the NNS group

In order to determine the relation between metalinguistic knowledge and LP, Pearson product moment correlations were conducted. It turned out that a significant relation was found between the MK1 and the speaking score, writing score, and total score of LP. When correlation analysis was done with two sub-scores of morphological and syntactic features, syntactic features appeared to be related to reading and

writing scores while morphological features were related only to the writing score. No significant relation was found between the MK2 and any language proficiency. The results suggest that the NNS groups' MK1 knowledge is related to language proficiency, in particular, the syntactic features of MK1.

TABLE 5
Correlation of MK1, MK2 and LP of NNS Group

		Language Proficiency Total				
		Listening	Speaking	Reading	Writing	LP Total
MK1	Morpho	.132	.207	.099	.298*	.208
	Syntac	.133	.203	.275*	.445**	.301*
	Total	.175	.256*	.231	.463**	.320*
MK2	Morpho	.067	-.114	.072	.054	.025
	Syntac	.179	-.005	.228	.200	.175
	Total	.150	-.049	.186	.160	.131

*$p < 0.05$, **$p < 0.01$

To identify the predictive power of MK1 on LP, linear regression analysis was conducted using LP as an independent variable and each score of morphological and syntactical features in MK1, MK2. In stepwise regression analysis (Table 6), total score of MK1 appeared as an only predictor with the model summary for MK1 on LP, R^2=.102. This result suggests that knowledge of grammaticality judgement explains about 10.2% of the variance in LP. Beta data in Table 6 illustrates the percentage of increase in the independent variable (LP) and the resultant change in the dependent variables. Given the data, the scores on LP increase by .320 for each percentage of increase in MK1 scores.

TABLE 6
Model Summary of Regression for MK1 on LP in NNS

Model		*B*	Std. error	beta	*t*	sig	*R*	*R2*	*F*
1	(Constant)	27.804	15.234		1.825	.073	.320	.102	6.833
	MK1	1.351	.517	.320	2.614	.011			

To see which grammatical features of MK1 was significantly correlated to LP, correlation analysis was conducted between each of the 34 test items and scores of LP. Significant correlations were found in 6 grammatical features and the results are presented in the Table 7.

TABLE 7
Correlation between Specific Features in MK1 and LP of NNS Group

		Language Proficiency Total				
MK1	item	Listening	Speaking	Reading	Writing	LP Total
Comparative	2	.253*	.203	.182	.297*	.266*
Adverb Placement	7	.236	.277*	.322*	.428**	.360**
Modal Verbs	18	.223	.215	.189	.359**	.280*
Third Person	19	.223	.217	.108	.352**	.278*
	30	.236	.248	.190	.372**	.297*
Embedded	22	.257*	.283*	.160	.311*	.287*
	32	.223	.215	.189	.359**	.280*
Indefinite Article	26	.313*	.253*	.369**	.395**	.381**

*$p < 0.05$, **$p < 0.01$

To identify the predictive power of MK1 on LP, linear regression analysis was conducted using LP as an independent variable and grammatical features that have shown significant correlation to LP as a dependent variable in analysis. In stepwise regression analysis (Table 8), two grammatical features appeared as predictors; indefinite articles and embedded questions. Model I has only the indefinite article as a predictor with the model of summary of R^2=.145, and Model 2 has both the indefinite article and embedded questions as predictors of LP with the model summary of R^2=.238. This result suggests that knowledge of an indefinite article explains about 14.5% of the variance in LP. And knowledge of both an

indefinite article and embedded questions explains about 23.8% of the variance in LP. Beta data in Table 8 illustrates the percentage of increase in the independent variable (LP) and the resultant change in the dependent variables. Given the data, the scores on LP increase by .381 (Model 1), or by .395 (Model 2) for each percentage of increase in indefinite article scores and increase by .305 (Model 2) for each percentage of increase in embedded questions.

TABLE 8
Model Summary of Regression for MK1 on LP in NNS

Model		B	Std. error	Beta	t	sig	R	R2	F	p
1	(Constant)	62.407	2.104		26.659	.000	.381	.145	10.108	.002
	Indefinite Article (26)	8.935	2.801	.381	3.191	.002				
2	(Constant)	46.488	6.268		7.416	.000				
	Indefinite Article (26)	9.268	2.669	.395	3.472	.001	.488	.238	9.207	.000
	Embedded Questions (22)	16.532	6.168	.305	2.680	.010				

Note: Dependent Variable: LP (=Language Proficiency)

Conclusion

This study was conducted to provide exploration of two different domains in which an L2 teacher's language awareness is involved. To do so, this study examined the levels of NNS teachers' two types of metalinguistic knowledge and its relation to language proficiency. As a baseline of comparison, the NS group's performance on the two tests of grammaticality judgement and metalanguage use were compared with the NNS group's performance. The results in this study provide detailed information about NNS teacher trainees' metalinguistic knowledge. First, it appears that the NNS teacher's knowledge about grammaticality judgement and metalanguage use are interrelated but may operate separately. The data showed the NNS group had a lower level of grammaticality judgement, but a higher level of metalanguage use than the NS group. The group differences were found to be statistically significant in both types of tests.

The results from the group comparisons in this study conform to findings from other investigations of grammaticality judgement and metalanguage use of advanced foreign language learners (R. Ellis, 2005, 2006; Erlam, Philip & Elder, 2009; Gutiérrez, 2013). In this study, performance of the NNS group and NS group on the tests of grammaticality judgement and metalanguage use appeared different. It is likely that the NNS group performed better on the metalanguage use due to their prior teaching experience and the intensive teacher training program before the study. However, the NNS group performed poorly on grammaticality judgement when compared to the NS group, showing that significantly less participants of the NNS group judged incorrectly on the seven out of seventeen grammatical features. It is interesting to note that these seven features that were answered by the less number of NNS trainees represent structures as reported for L2 learners to acquire at the late stage of development (Pienemann, 1989). This implies that some of the NNS teacher trainees in this study might not have mastery of certain structures reported as difficult or late developmental features, and that the learning difficulty of language structures significantly influenced the NNS teachers on their performance of the grammatical judgement task.

Both untimed grammaticality judgement and metalanguage use are considered as metalinguistic knowledge in the sense that they require knowing a 'rule' rather than 'feeling' (degree of awareness), and that they both emphasize focus on 'form' rather than 'meaning' (utility of knowledge of metalanguage) (Ellis, 2009). However, it seems that NNS teachers' grammaticality judgement and metalanguage use in this study can be a quite different type of knowledge in terms of learning difficulty of structures and the training experience. In this study, the NNS teacher group that had prior training on metalanguage use showed a good command of metalanguage use, whereas showing rather poor performance of grammatical judgement on several structures reported as difficult. These findings address further investigation of how

difficulty of language structures or training experience can affect the NNS teachers' utilizing two types of metalinguistic knowledge.

Another question addressed in this study is the extent to which the NNS group's metalinguistic knowledge is related to its language proficiency. The correlation analysis and regression analysis were conducted, and results showed a moderate correlation between scores of grammaticality judgement and self-reported LP. Also, it was shown that the correlation between the grammaticality judgement and LP was mostly due to significant correlations of syntactic features and LP. From the regression analysis, the only significant predictor to LP was an ability of grammaticality judgement of indefinite articles. Given that many Korean English learners experience difficulty mastering the use of articles, it seems reasonable to propose that the level of grammatical judgement on the indefinite articles may possibly indicate the L2 learners' self-reported general proficiency. This study supports the claim that L2 learners' grammaticality judgement can play an important role in accounting for language proficiency. In fact, many studies have proposed conflicting views about whether or not GJT provide a significant measure of language proficiency. In the past, it has been suggested that grammatical knowledge does not provide a direct measure of L2 language proficiency; however, now it is acknowledged by many researchers that GJT does not provide a direct window into L2 learners' linguistic ability and proficiency (Loewen, 2009; Pienemann, 1989). The results of this study add evidence that there are clear grounds for believing that grammar is an important component of sub-skills of L2 linguistic ability, and grammatical judgement is a good predictor of language proficiency.

In terms of the correlation between metalanguage use and language proficiency, no significant correlation was found in this study. Given that the question of whether metalanguage use is related to language proficiency is still inconclusive, it is interesting to note that this result might constitute evidence that metalinguistic knowledge is related to some structures and skills, but not for others. A number of studies have shown that L2 teachers' metalanguage use is not necessarily related to their language proficiency, and also proposed that it is not possible to ascertain whether development of metalinguistic knowledge leads to the development of L2 proficiency or vice versa (Gutiérrez, 2013). For the participants of this study, metalanguage use is not related to any subskill of language proficiency. One of the possible reasons speculated here is the actual test design. Although reliability of all of the tests was confirmed, it is likely that self-assessed language proficiency or the limited number of test items contained on the test of metalanguage use (15 items) may not be able to provide sufficient information of how participants performed on the tests. It seems necessary to revisit the relation of metalanguage use and language proficiency with different test designs.

This study has an implication for designing the teacher training program. The result of the study demonstrates that NNS teachers' grammatical judgement knowledge can be a crucial factor to predict how proficient they are in an L2. This implies that the test of grammatical judgement knowledge might be used as a reliable tool to examine the status of trainees before or after the program. However, this study has several limitations. First, the fact that measuring of metalinguistic knowledge and language proficiency was carried out with only one testing instrument must be cautioned. Measures of grammaticality judgement, metalanguage use, and language proficiency can be attempted with different methods, and if different methods had been employed to cross-check with one another, measuring metalinguistic knowledge and language proficiency might have resulted in a greater reliability of data. Second, the results of this study were based on relatively limited number of participants, which may not be large enough to generalize the results. To get a more comprehensive and reliable picture of an L2 teacher's metalinguistic knowledge, as well as the relationship between metalinguistic knowledge and proficiency, additional measures should be examined along with multiple studies with a larger number of participants.

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Appendix A

Sample Items from the Grammaticality Test

* Please mark the following sentences as either <u>grammatical or ungrammatical.</u>
1.   He has been living in New York since three years.
2.   Pam wanted to know what I had told John.
3.   They had the very good time at the party.

Appendix B

Sample Items from the Metalanguage Use Test

*There are 15 sentences below and they are <u>all ungrammatical</u>. The part of the sentence containing the error is underlined. For each sentence, if you know a rule that explains why the sentence is ungrammatical, and how the error should be corrected, write it in English in the space provided.

	Example Item	Rule	Correction
	l have lost <u>mine ring</u>	Before a noun, use the possessive adjective, not the pronoun	'mine'→ 'my.

1.   I <u>must have to</u> wash my hands.
2.   If Jane had asked me, <u>I would give</u> her some money.
3.   Learning a language is <u>more easier</u> when you are young.