An Analysis of EFL Learners′ English Sentence Parsing Process after SPCG Practice

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Ⅰ. Introduction

In input (listening, reading), parsing requires EFL learners to deconstruct a sentence into its component words, to reach appropriate understanding, so in EFL teaching it is significant to know how to decode what the learners are reading or listening to i.e., to classify each word in syntactic and lexical categories, while the learners use both bottom-up and top-down processing (Richard 1990; Stanovish 1980). On the other hand, in output (writing, speaking), parsing happens initially in a bottom-up manner, so learners use certain words as a parser to continue their parsing. The bottom-up processing involves constructing meaning

from the smallest unit of the language to the largest one in a linear mode (Nunan, 1998). Thus, leaners need to understand the parsing process by decoding a nexus of words which is linked to form a phrase and clause. Learners can be trained to perform this parsing process, for instance, by the activities that require them to discriminate or compose certain words to make the phrase and clause, since EFL parsing process is restricted due to the knowledge source that feeds the structural parser (Clahsen & Felser 2006).

Parsing is understood as a grammatical manipulation process by which learners manage and construct phrases, clauses, or sentences. In L1 parsing follows the seven fundamental principles, which are Top-down parsing; Right association; Two nodes; New nodes; Closure; Fixed structure; Processing (Kimball 1973). However, in EFL processing, models of parsing (e.g. Frazier & Foder 1978) have presented a bottom-up procedure where the parser's input are surface structures while other researchers (Joshi, 1985) supported a combination of the two mixing bottom-up and top-down procedures in sentence parsing. In fact, parsing takes various procedures to select the sources of structure and vocabulary strings before deciding which parsing rule to apply (Bourdages 1991). On the other hand, there were some more researches that presented a combination of a bottom-up (information-driven),[1] a top-down (knowledge-driven) procedure to compensate the lack of predictive ability (Joshi 1985).

Berwick and Weinberg (1984) presented a specific model of sentence parsing and its role in relation to language acquisition. The process of

1) A bottom-up parsing begins with the word given, which plays a role of parser and builds from the parser upward, working forward and backward to find right word matching as a substring in SPCG activity. The bottom-up parsing starts with grammar structure of English and generate sentences by using parsing strategies of the input information. The basic idea of SPCG activity was from Bourdages (1991) parsing application.

language acquisition is considered a dynamic interaction among universal grammar, the language processor, schemata of language, and provided linguistic data. In this sense, the parsing process is regarded as a modular view of language acquisition. This modular view of research has been expanded to second language acquisition (Zobal 1986). Yet, there are still specific demands of research that might offer an insight into understanding a learner's linguistic cognition and language development in relation to sentence parsing practices.

Therefore, the EFL/ESL language parsing process can be interpreted as an interaction between universal grammar, the language processor, previous language knowledge, knowledge of the world and linguistic data of the target language (Bourdages 1991). For sentence parsing in EFL acquisition, learners need to know word segmentation, semantic- syntactic correspondence between lexical items, and syntactic categories such as NP, VP, PP, AP, and AdvP etc., as well as the proper assignment of arguments to verbs and finally about the basic data structure of the parser and the format of its rules (e.g., Attaching, Switching, and Inserting).[2)]

In sentence parsing, knowing how to construct sentences with phrases and clauses is the main part, which has been considered to be an integral part of language acquisition (Pinker 1984; Trueswell et al. 1999), whereby a card game was devised for learners' parsing practice by composing segments of sentences into clauses, phrases, and sentences. The card game mainly focuses on parsing processing of how learners use verbs to make clauses or sentences. The cognitively dynamic use of verbs leads to the conclusion that more clause construction processes were involved in cognitive processes.

The sentence parsing card game (SPCG) devised for this study provides

2) According to Berwick's model (1985) the parse follows the function of the words according to the three main rules which are attaching, switching and inserting. The acquisition procedure will include practice of these rules.

a high percentage of practice in phrase and clause constructions of parsing. This study examines the use of sentence parsing process before and after the sentence parsing practice by using the SPCG.

With using the SPCG as a tool to observe EFL parsing, the purpose of this study is to understand the properties of EFL learners' sentence parsing process, to explore a way to train sentence parsing with an activity, i.e., a card game, to analyze students' improvement after the SPCG. Accordingly, the research questions include the following:

1. Are there any changes in writing ability after the SPCG?
2. Would there be any preferences of VP or NP attachment when the verbs are action verbs, or perception verbs, or a sentence with RC?
3. What are the characteristic features of Korean EFL learners' parsing strategies after SPCG?

Ⅱ. The SPCG as Syntactic Parsing Practice

The SPCG(Sentence Parsing Card Game) is a kind of artificial environment where EFL learners are asked to practice syntactic parsing strategies while playing a card game. The SPCG was devised for EFL learners to make sentences with given words or phrases from the cards. In order to make the card game similar to cognitive performance of sentence parsing, the SPCG adopts features of EFL/ESL learners' sentence parsing, so that they can intentionally practice sentence parsing without feeling forced to make sentences. The sentence parsing is composed of word by word parsing, from left to right (Kimball 1973). The production of a sentence involves the use of syntactic and semantic information at all major stages of the parsing process.

The features of EFL/ESL learners' parsing sentences adopted in the SPCG are as follows;

First, the SPCG facilitates word and phrase cards as a lexical cue for EFL/ESL learners to make sentences freely. Some studies suggested that EFL/ESL learners depend more on lexical cues than the native speakers and less on purely structurally-based parsing strategies (Papadopoulou & Clashen 2003). One of the significant researches of EFL/ESL learners' sentence parsing is about how linguistic information constructs a particular and valid syntactic parsing for a string of words, phrases, or clauses. The methods how EFL/ESL leaners use sentence parsing with lexical items(Holmes & Ramos 1991, cited in James & Garrett 1991) were adopted in the SPCG. According to Papadopoulou & Clashen (2006), the parsing decision time of EFL is slower than that of L1, even though it is not clearly proved whether the EFL/ESL learners' parsing needs more working memory resources required for processing stratification of a target language or not (Juffs 2004). In the SPCG, EFL/ESL learners have more time for parsing sentences than other skills (speaking, writing, listening, or reading).

Second, the SPCG provides generative grammar[3] as game rules for EFL learners to utilize. The components of a phrase will be manipulated by the sentence structure supervisor (SSS) (Frazier & Fodor 1978) into card rules. The sentence parsing process that EFL/ESL learners adopt is not a static, but a dynamic process for finding a derivation tree to generate a sentence while continually referencing to the target grammar. EFL/ESL learners' unique and systematic linguistic features were observed in some

3) A generative grammar attempts to provide a set of rules that will correctly predict which combinations of words will form grammatical sentences. Noam Chomsky(1956) has argued that many of the properties of a generative grammar arise from an "innate" universal grammar. So the environment to perform parsing is how people fix their parameter of the language.

researches (e.g. Dussias 2001, 2003; Felser, Roberts, Marinis & Gross 2003; Papadopoulou & Clahsen 2003). However, if the given information is insufficient or inadequate for parsing, it would constrain the EFL/ESL learners' grammar use, according to some researchers such as Berwick and Weinberg (1984), Gibson and Wexler (1994), and Schwarts and Sprouse (1994, 1996). Therefore, EFL learners need to be facilitated with an available handy word and grammar reservoir, when they are trying to parse.

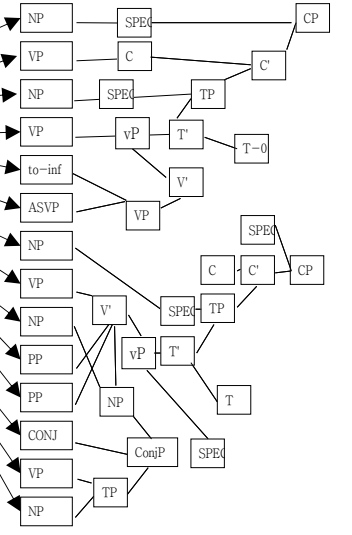
Third, during the SPCG, players of the SPCG are asked to write down the sentences they have finished. Second language acquisition is related to utilizing various and sophisticated grammar structures for the sentence parsing, which is evinced in the study of EFL/ESL writing (Foster & Skehan 1996; Ortega 2003). EFL/ESL learners' writing consists of a flow of linguistic parsing which can be developed into a quantum change by the parsing practice of the clause (Halliday & Matthiessen 2004). It is because making clauses in writing will provide ample parsing experiences of syntactic structure. So, EFL learners' writing gives chances to observe students' sentence parsing and its development. Therefore, after the parsing game, learners are required to write down the parsed sentences.

Fourth, verbs play the role of central parsers in the SPCG, since in sentence parsing, verbs are center (Steinacker & Trost 1982). A verb can be considered an operator of its accompanying noun and prepositional phrases as arguments (Thompson 1973). The verbs as a main parser include syntactic features of a word which c-command other nodes to make phrase structure, as well as semantic restrictions which give thematic roles to the NP in a sentence. The verbs determine which roles need to be filled in a sentence. The thematic roles given by the verbs focus on the lexical information being presented. It allows the linkage and coordination of semantic and discourse information (Christianson et al.

2001). In the SPCG, the verbs were classified as a main operator according to Halliday's categorization (1976:159); behavioral, material, mental, existential, and relational verbs. When learners are parsing sentences and producing sentences, they can make a start to parse a clausal construction since a clause construction is a minimal parsing unit in sentence composition. The set of procedures of a clause construction involves verbs as main parsers that activate parsing. According to Bourdages (1991), the language acquisition procedure within sentence parsing processing can be defined as the acquisition of a series of parsers with increasing sophistication, going from P0 (initial state) to PTL (mature parser of the target language ($P_0 \rightarrow P_1 \rightarrow P_2 \rightarrow \ldots \rightarrow$ PTL).

Fifth, the SPCG facilitates v*P phrase cards to provide a minimal structure of a sentence, in which minimal attachment makes the preliminary phrase package, PPP. The minimal information unit that can be presented in the phase is composed as NP, VP, PP, AP, and AdvP, which were provided in the cards. For the efficiency of parsing practice, the designed card is minimally attached as seen in table 1. For instance VP has NP in a separate card to become a part of CP, while PP has NP in a card, i.e. in the house.

PPP Cards	Minimal Unit	Function
what	NP	F-OBJ
did	VP	TENSE
the man	DP(NP)	SBJ
like	VP	V
to do	to-infinitive	
yesterday	ADVP(Adjunct)	
he	NP	
played	VP	
the tape	DP(NP)	OBJ
in the house	PP	
at seven	PP	
and	CONJ	
liked	VP	
it	NP	OBJ



<Table 1> Generation of PPP Cards: Minimal Unit of Phase Made into PPP, CONJ: conjunction (Kim et al., 2014)

Sixth, the binary parameters of N, Adjm Det, V, Prep, Comp, Infl, and Particles were provided as EFL learners' parsing trees proceeded accordingly in their mind. The sentence parsing is related to whether learners know (+) and (−) parameter of the suggested parser and when they know the information subsequent parsing happens (Chomsky 1982). For instance, an argument (A) has a thematic role, and predicate (P) is assigned a thematic role. EFL learners should acquire the ability to use the detailed parameter of a given parser (i.e., a word such as a verb). In the SPCG, the information of a verb and its complements, θ-marking is utilized for sentence parsing practice. The card was devised according to the parameters of the word as seen in table 2. For instance, the lexical category is distinguished by having different values for the two binary

distinctive features. So an Adj card has +N, −V, +A and +P parameters.

N	Adj	Det	V	Prep	Comp	Infl	Particle
+N	+N	+N	−N	−N	−N	+N	−N
−V	−V	−V	+V	−V	−V	+V	−V
+A	+A	−A	−A	−A	+A	+A	−A
−P	+P	−P	+P	+P	+P	+P	−P

<Table 2> Parameters of Words for Card Creation (Kim et al. 2014)

The second language acquisition implies that learners acquire syntactic knowledge to make the ordering of linguistic elements and the branching direction of the tree structure, the lexicon and the transformational rules (Berwick & Weinberg 1984). Based on the six principles as presented above, the SPCG was devised as a way to give syntactic processing practice in order to provide EFL Korean learners' parsing practice.

Ⅲ. Research Methods

Ⅲ. i Participants and Data Collection

The experimental group participants in this study were 33 highschool first year and second year students (18 females, 15 males) in South Korea, grouped into 6 groups for the card game. All the participants had never been abroad for language learning but have been educated in English at school for about 5−6 years. All the students registered in a 2−year project on the Experimental Research for EFL Learners' Language Acquisition in the Computational Process through Parsing Strategies from

2012 to 2014. They participated in the sentence parsing card game for 60 minutes once a week for 15 weeks. All participants took a diagnostic test and their level was similar in their writing. Their specific profile is presented in table 3.

All the participants took a pre-test and from the pre-test they were divided into three levels (two advanced (A), two intermediate (I), two basic (B)) of six groups[4]. As seen table 3, between Group AE-1 and Group AC-2, Group IE-3 and Group IC-4, and Group BE-5 and Group BC-6 got under the .05 level of significance in the *t*-test of independent samples. The respective two A Groups, two I Groups, and two B Groups showed they have homogeneous ability of English writing, which means there are not noticeable differences in the writing ability. Group AE-1, Group IE-3 and Group BE-5 are experimental groups while Group AC-2, Group IC-4, and Group BC-6 are control groups.

Groups	n	Average of Pre-test (%)	M	SD	t.	p
Group AE-1	6	92.9/100 (%)	19.14	3.315	-1.131	0.251
Group AC-2	5	96.2/100 (%)	20.31	3.602		
Group IE-3	5	76.7/100 (%)	15.05	4.168	-0.265	0.754
Group IC-4	5	78.8/100 (%)	14.23	3.962		
Group BE-5	6	45.2/100 (%)	8.65	4.614	-0.315	0.721
Group BC-6	6	47.5/100 (%)	9.14	4.129		

<Table 3> Result of Participants' Pre-test

When learners of the experimental groups practiced the sentence parsing card game, they were supposed to write down their sentences after they

4) From the pre-test result, the control group participants were divided into three groups (advanced, intermediate and basic groups). For the SPCG activity, all the group were composed of 5 or 6 members, as was ideal for the observation of the learners in the preliminary practices.

made sentences with cards and all of them were added up to 1,800 sentences after 15 weeks.

Ⅲ. ii The Syntactic Aspects of SPCG

For EFL parsing practice, learners of experimental groups were introduced to the sentence parsing card game about syntactic constituents and their interrelations. For this parsing practice, the sentence parsing cards and game rules were created. SPCG is for a group card game and the participant may be grouped into 2 to 6 learners. The participants in the SPCG should make a complete sentence with the card given and tell the rest of participant to ask if this sentence is '*allowed*'. If all of the participants 'allow' the sentence by saying '*allowed*', the participant can have the cards which will be counted at the end of the game to find a winner. Participants take turns to do the game.

The major target of the SPCG is to make appropriate sentences, which let the learners parse when they find a possibility of making a sentence by parsing with the cards given. The SPCG generates sentence parsing chances with the given cards and all the given cards can play a role as parsers to generate a sentence. For instance, the NP can connect to the VP and the VP can connect to an NP. If a participant has a NP s/he will look for a VP or other parts of a sentence. At the beginning of the SPCG, EFL learners had an explanation of the game's rule which reflect a system of phrase structure rules like this:

S → NP VP
NP → (Det) (Adj) N (PP)
VP → V (NP) (PP)
PP → P NP

The 200 cards in the game are composed of groups of words such as NP, VP, Adj., Adv., Pronoun, determiner, preposition, conjunction, relative clause, interrogatives, which are sub-categories based on function. (Klammer, Schulz, & Volpe, 2009). For parsing strategies, Fraizer and Fodor (1978) presented a preliminary phrase packager (PPP) and a sentence structure supervisor (SSS). The card game adopts the PPP hypothesis in creating phrase cards. For instance, some cards are preposition phrases such as 'in the sea,' 'over the bridge,' and 'on the desk.'

Ⅲ.ⅲ Data Analysis

3.3.1 Result Analysis of Writing Test

The collected data was analyzed with an SPSS 12.0 program. In order to classify learners' specific writing features, a descriptive statistic method program was used, and in order to prove reliability and probability, Cronbach's Alpha value and factor analyzing method were used. For analysis of the experimental group's changes, a *t*-test (independent -sample *t*-test) was used and for the differences before and after sentence parsing practices, the *t*-test (paired-sample *t*-test) were used. When applying inferencing statistics, significance value was $\alpha = .05$.

This study attempts to explore if sentence parsing practice with a card game is efficient or not in improving writing ability and parsing strategies. The collected test result explores how parsing strategies may change, and notable differences have been identified in each respective comparison of the respective groups' parsing changes and through comparative analysis between control groups and experimental groups. For the analysis of the experimental group's changes after sentence parsing practice, the result is shown in table 4.

As seen in table 4, the advanced Group (Group AE-1) which participated in the sentence parsing practice card game showed a statistically significant difference at standard of levels (t=6.623, p <.05) between the pre-test and the post-test. In the post-test the grades (M=4.89) were higher than that in the pre-test (3.58), while the control group had a pre-test score of 3.35(*SD*) and post-test score of 3.17(*SD*). This result showed that the experimental group improved their general writing ability compared to the control group. In the result of both pre-teat and post-test of control group, there is no statistically significant difference between the two test results.

Factors		Pre-test.			Post-test		
Writing Levels		M(SD)	T	P	M(SD)	T	P
Advanced	EG	3.58(.70)	.472	.641	4.89(.47)	6.623	.000
	CG	3.35(.61)			3.17(.36)		
Intermediate	EG	3.66(.88)	-1.064	.256	4.78(.35)	4.916	.000
	CG	3.23(.51)			2.97(.71)		
Beginner	EG	3.37(.46)	.232	.815	4.63(.44)	5.332	.000
	CG	3.18(.69)			3.14(.62)		

<Table 4> Difference of Writing Test for the Learners having Sentence Parsing Practice

The intermediate group who participated in sentence parsing practice card game showed statistically a significant difference at standard of levels (t=4.916, p<.05) between pre-test and post-test. In the post-test the grades (M=4.78) were higher than that in the pre-test (3.66). In both pre-test and post-test of the control group, there is not statistically significant difference between two test results. So, the result suggested that the experimental group had improved their general writing ability compared to the control group.

The beginner group who participated in sentence parsing practice card game showed statistically a significant difference at standard of levels (t=5.332, p<.05) between pre-test and post-test. In the post-test the grades (M=4.63) were higher than those in the pre-test (3.37). From this result the experimental group showed higher writing ability compared to the control group after the practice. On the other hand, in the result of the pre- and post- test of control group, there was no statistically significant difference between two test results.

For the analysis of the experimental groups, matching t-test for pre-test grades and post-test grades was performed. The result is showed in table 5. The analysis of table 5 showed whether there were differences between before and after the sentence parsing card game of the experimental groups.

Levels	Pre-Test	Post-Test	T	P	Variance
	M(SD)	M(SD)			
Advanced	3.58(.70)	4.89(.47)	-3.834	.006	-.765
Intermediate	3.66(.88)	4.78(.35)	-4.237	.003	-1.457
Beginner	3.37(.46)	4.63(.44)	-2.472	.029	-.868

<Table 5> Difference of Writing Test before and after Sentence Parsing Card Game Practice

As seen in each level of the test result analysis, advanced groups showed a higher level of the post-test (M=4.89, SD=.42) than the pre-test (M=3.58, SD=.47), which was statistically significant (t= -3.834, p<.05). In the similar tendency, the intermediate groups showed higher level of the post-test (M=4.78, SD=.35) than pre-test (M=3.66, SD=.88), which is statistically significant (t= -4.237, p<.05). Similarly, the beginner groups showed a higher level on the post-test (M=4.63,

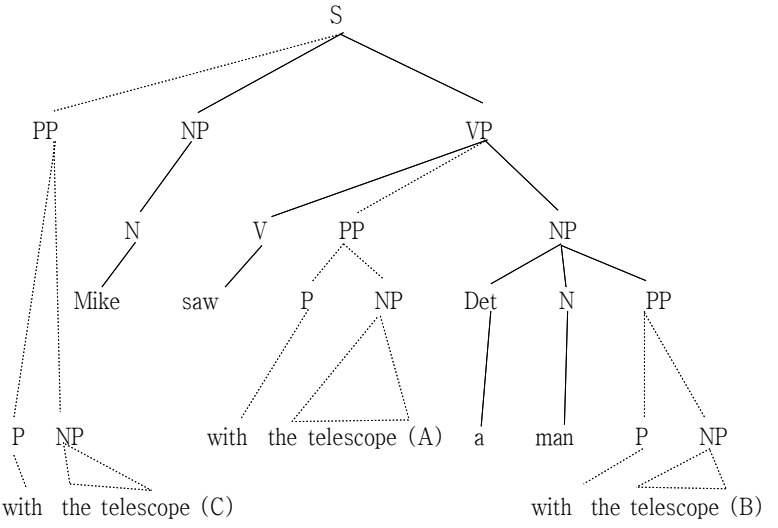
SD=.44) than on the pre-test (M=3.37, *SD*=.46), which was statistically significant (t= −2.472, p<.05). Additionally, the variances of each level of the experimental groups showed −.765 in the advanced group, −1.457 in the intermediate group and −.868 in the beginner group. That suggested that sentence parsing practice with card game is effective for improving EFL learners' writing ability.

3.3.2 Analysis of Syntactic Preferences of EFL Learners' Parsing

EFL learners' parsing in the sentence parsing card game exhibited EFL learners' syntactic preferences, which were as follows.

First, EFL learners have a preference for the left positions of the PP modifier. According to this syntactic tree, PP can posit three places. Since '*saw*' is a transitive verb, the string "*saw a man with the telescope*" is a constituent. In this case, EFL learners' parsing tend to associate a modifier *with a telescope* as a NP attachment rather than a VP attachment in B position.

(1) a. Position A; Mike saw with the telescope a man.
b. Position B; Mike saw a man with the telescope.
c. Position C; With the telescope Mike saw a man.



However, when the participants were asked to choose a sentence from three possible positions they can consider, EFL learners tended to choose the modifier *with the telescope* modifying the close NP *a man* as the first priority as seen in position C followed by position B or position C.

Position	N	Preferences	NP-attached	VP-attached
A	211	20 (9.4%)	1 (5%)	19 (95%)
B		79 (37.4%)	58 (73.4%)	21 (26.5%)
C		102 (48.3%)	7 (6.8%)	95 (93.1%)

<Table 6> Frequency counts of NP attachment

As seen in table 6, position C for '*with the telescope*' is highest preferences with VP-attachment (93.1%) to NP-attachment (6.8%). In Pearson's chi-squared test, it revealed that the frequency distribution of VP-attachment of C-position is consistent and exclusive. VP-attachment is χ^2 (1) = 45.26, p< .0001, which means the interaction between C

position and VP-attachment is robust. The attachment was highly biased toward VP when it is in position C (6.8% vs. 93.1%).

Table 6 shows that the position clearly affects the attachment frequencies for PP. High frequency of the VP attachment in C position is most plausibly accounted for by the presupposition of the PP for a sentence. In the well-known forms of sentences, Subject+Verb+Object+PP and PP+Subject+Verb+Object+PP, the task for EFL learners is to determine whether the PP modifies the object '*a man*' or the verb '*saw*' when the PP appears in a different position.

Second, EFL learners have preference of the relative clause to NP2 attachment in their parsing. EFL learners prefer to pose the relative clause to the NP2 attachment, which is known as low attachment for sentence (2).

(2) Mike was looking for the boy of the mother that was in the room.
NP1 NP2

Source	N	M	SD	t	df	*p< .001
NP1 attachment	211	8.34	3.12	2.452	105	0.00312
NP2 attachment		12.78	3.40	3.347	118	*0.00016

<Table 7> The preference for NP attachment

On the bases of the results of the *t*-test and one-way ANOVA, overall the participants preferred NP2 attachment, t (118) = 3.347, $p< .00016$. EFL Korean learners' preference for this sentence showed NP2 attachment. This result is identical to the native English speakers' NP2 attachment preferences, which is called as low attachment preference (Cuetos & Mitchell 1988; Carreirs & Clifton 1999).

Third, EFL learners prefer the VP attachment over the NP attachment

whether the verbs are action verbs or perception verbs. Based on the lexically given information, action verbs should show preference for the VP attachment and perception verbs for the NP attachment.

(3) a. The boy thought of the mother with a book (perception verb).
b. The boy hugged the mother with a book (action verb).

Table 8 shows that EFL learners prefer the VP attachment with action verbs (M=12.48 for VP; M= 1.31 for NP). For perception verbs, EFL learners in the same way prefer the VP over the NP attachment (M−=11.55 for VP; M=3.31 for the NP). To see the preference clearly for VP attachment, a z−test was conducted.

Verbs	N	NP attachment	VP attachment
Action verb	211	M = 1.31 SD = 1.62	M = 12.48 SD = 1.82
Perception verb		M = 3.45 SD = 2.93	M = 12.58 SD = 2.15

<Table 8> Learener's The preference for NP or VP ttachment

The result indicates that the preference for VP attachment to action verbs (12.48 vs 1.31) is significant (z= 2.76m p< .05). In the same way, the mean difference between NP and VP attachment for perception verb is significant (z= 3.12. p< .05). The two z−tests suggest that the VP attachment is preferred regardless of the lexical information of verbs.

Ⅳ. Conclusion

In this study, sentence parsing practice with card game is effective for improving EFL learners' writing ability, even though there are some limitation that it focuses on quantitative research, which can not present how learners explore their parsing. However, during the PSCG the study shows that there are more chances that EFL learners use the bottom-up procedures. After the PSCG the grammar operating faculty is likely to be more skillful in combined operation of both bottom-up and top-down process.

As researched in the study, there is the relation between sentence parsing practice and the process of second language acquisition. As seen in the study result, after sentence parsing practice with the card game the experimental groups showed significant changes in advanced, intermediate, and basic groups, and this sentence parsing practice has influence on the language acquisition in terms of how to use the syntactic structure with parsing.

For the specific features of EFL learners, the study presents some interesting points regarding EFL learners' sentence parsing process. The study showed that learners after SPCG produced more VP attachment in the left position, and more NP attachment in the right position. This suggested that during the bottom process of SPCG, learners develop other parsing principles. EFL learners tend to acquire the parsing strategy of the target language.

First, EFL learners have preference for the left positions of PP modifier and in this case they prefer VP attachment.

Second, EFL learners have low attachment preference in the relative clause parsing. This is very similar to the native speakers' parsing. Generally, the learners preferred to attach the relative clause high to the

first NP (a high attachment preference). However, after SPCG process practice, the learners explored NP2 attachment frequently when they met ambiguous sentences containing a complex NP (NP1-of-NP2) followed by a relative clause, which is similar to native speakers of English.

Third, EFL learners have preference of VP attachment over NP attachment whether the verbs are action verbs or perception verbs.

Overall, the study tried to show that learners features of parsing process were affected by parsing practice rather than lexical semantic information. Considering the presented result, EFL learners' parsing practice is important steps. After the parsing practice had been implemented, their attachment preferences have been changed from high to low attachment preferences as was shown in their frequent use. According to Anderson (1985) second language acquisition occurred through perception, parsing, and utilization. The cognitive activity can re-rank parsing decision and induce further parsing. Sentence parsing experience can provide opportunities to parse a sentence and re-rank the decision to parse.

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Abstract

An Analysis of EFL Learners' English Sentence Parsing Process SPCG Practice

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The purposes of this study are to understand the properties of EFL learners' sentence parsing process, to explore a way to train sentence parsing with an activity i.e., a card game, and to analyze students' improvement after the sentence parsing card game. T-tests and the one way ANOVA were used to test if there were significant differences in sentence parsing of two groups of students before and after 20 times of card game (once a week). The results are as follows: (A) the group who had card game became spastically more inclined than other groups to conduct complex parsing strategies in their writing (i.e., use more clauses that include various verbs); (b) effects are moderately significant for the writing test after sentence parsing practice, compared with other groups who neither had card game nor sentence parsing instruction. The result hints that the EFL students could be more vigilant in improving sentence parsing of complex clauses if they have training for sentence parsing process. This has important pedagogical implications that learners may improve more by focusing on sentence parsing practices rather than learning expository aspects of target grammar.

Key Words: SPCG (Sentence Parsing Card Game), Parser, Parsing, Parsing strategies, Parsing process
문장파싱카드게임, 파서, 파싱, 파싱전략, 파싱처리

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