An Analysis of Semantic Knowledge of L2 Adult Learners of English Concerning Implicative/ Non-implicative Verbs*

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Shim, Jaewoo & Lee, Heechul. 2012. An Analysis of Semantic Knowledge of L2 Adult Learners of English Concerning Implicative/Non-implicative Verbs. *The Linguistic Association of Korea Journal. 20*(2). 23-40. This study attempts to investigate perceptions of non-native speakers of English on two semantic categories of implicativeness and non-implicativeness manifested in a limited number of verbs. The 54 preservice and inservice teachers of English responded to a 23-item instrument that asked the respondents to choose if each verb had an implicative meaning or not. Their answers to the instrument were submitted to SPSS 18 and then transported to Winstep 3, a Rasch model analysis software. The results indicated that there exists some hierarchical order of difficulty, that is, from easy to medium difficult and to highly difficult on a continuum. The implications of this study included that the semantic meanings of the two types of verbs should be either deductively or inductively taught as part of grammar instruction.

Key Words: implicative meaning, non-implicative meaning, grammar teaching, Rasch analysis

1. Introduction

This paper focuses on the implicativeness and non-implicativeness, a

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semantic aspect of a limited number of verbs perceived by non-native speakers of English. Most native speakers of a language including L1 English can decide correctly whether or not the meaning of a verb of action has been actually completed as stated. For instance, in the following English sentence,

(1) My teacher told me to write a summary of the chapter.

L1 English speakers may point out that it is not clear if 'me' the agent of the verb 'write' actually wrote the summary, simply based on the single sentence. It is because the verb 'tell', a non-implicative verb, does not imply that the action was taken or followed through. Thus, L1 English speakers who find 'told' as a non-implicative verb do not need to confirm the nature of the verb in terms of implicativeness or non-implicativeness, even if they read the following sentence somewhere in the other section of the text

(2) My teacher scolded me for not having summarized the chapter.

This type of semantic knowledge may be automatic and unconscious. However, L1 English speakers who wrongly assume 'told' as implicative would think that the subject did the summary and would want to go back to the sentence (1) for cross-checking the semantic meaning.

On the contrary, concerning the following sentence,

(3) The street dog scared my friend's pup away from entering the park.

L1 English speakers' intuition may say that 'my friend's pup', the agent of the verb 'enter' could not go into the park because of the implicative meaning of the verb phrase, 'scared away'. Accordingly, the following sentence stemming from (3) above would not make any sense at all, if it appeared suddenly somewhere in the text.

(4) The pup seemed to enjoy walking in the park.

Yet, L2 learners of English, who do not have this type of implicative or

non-implicative semantic meaning are likely to be confused as they process implicative and non-implicative meanings in certain verbs. This research attempts to answer the following questions concerning the semantic meaning difference.

1) Do non-native speakers of English subjects find some levels of difficulty in responding to the semantic aspect of implicativeness and non-implicativeness in a selected number of verbs?
2) If so, what is the pattern of the distribution of these verbs?
3) What are the implications of the semantic aspect for teaching English to L2 learners of English?

2. The Literature Review

2.1. Givon's Implicativenss and Talmy's Force Dynamics

The mental lexicon of native speakers of a language is claimed by linguists to have three different categories of information on word entries: syntactic, semantic, and phonological information. There may be many ways to represent semantic information of some verbs in the lexicon. One way of classifying them can be in terms of implicativeness vs. non-implicativeness (Givón, 1984; Karttunen, 1971, 2012). Let us consider an example as follows:

(5) Bill forced Monica to kiss him.

The above sentence shows that the transitive verb *force* takes an NP followed by *to*-infinitive. This kind of syntactic information is represented as its subcategorization. The syntactic features are taught to and learned by L2 learners of English together with its meaning. However, it is not certain whether L2 learners of English understand its correct meaning. Native speakers of English know that the sentence in which the verb *force* occurs in the matrix clause implies the proposition expressed by the embedded clause (Givón, 1984; Karttunen, 1971, 2012). In other words, the above sentence implies that Monica kissed Bill. Therefore, the verb *force* is implicative as part of its meaning. Let us consider a parallel Korean sentence in which a corresponding Korean verb

kangyo-hata occurs, as follows:

(6) Chelswu-ka Yenghi-eykey caki-eykey kisuha-lako kangyoha-essta
Chelswu-NOM Yenghi-DAT self-DAT kiss-CLM force-PST

According to the intuition of Korean native speakers, the above sentence does not imply that Yenghi kissed Chelswu, nor does it imply that Yenghi did not kiss Chelswu. Without the context around the sentence, it is not known whether Yenghi kissed Chelswu or not. Thus the Korean verb *kangyoha-ta* is non-implicative as part of its meaning. In summary, the verb 'force' and its allegedly equivalent Korean word *kangyoha-ta* are different from each other in view of implicativeness. Considering the difference of the two verbs in terms of implicativeness, the correct translation of sentence (5) into Korean may be:

(7) Bill-i Monica-lul/eykey kangyoha-ye kisuha-key ha-essta
Bill-NOM Monica-ACC/DAT force-CLM kiss-CLM do-PST

Therefore, it may be necessary to teach L2 learners of English such a correct and detailed translation.

Let us consider another example in (8):

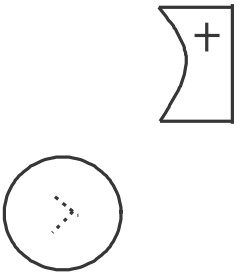
(8) The professor permitted the student to ask him a question.

The above sentence shows that the transitive verb *permit* takes an NP followed by *to*-infinitive. This kind of syntactic information is the same as that for the verb *force*. With respect to its meaning, however, native speakers of English understand that the sentence in which the verb *permit* occurs in the dominating clause does not necessarily imply the proposition expressed by the embedded clause (Givón, 1984; Talmy, 1988, 2003). Sentence (8) does not necessarily imply that the student asked the professor a question. Nor does it necessarily imply that the student did not ask the professor a question. In short, it is not known, with no hint of surrounding context, if the student asked the professor a question or not. Therefore, the verb *permit* is non-implicative as part of its meaning. It can be said that we do not get to understand the meaning of the

above sentence until we know what the sentence implies.

Talmy (1988, 2003) agrees with Givón (1984) in that the verb *permit* is non-implicative as part of its meaning and gives a detailed explanation in terms of force dynamics, as shown in the following Figure 1.

Figure 1. The non-implicativeness of the verb *permit*



The above diagram shows force dynamics between the agonist, represented as a circle, and antagonist, represented as a trough sideways. The plus sign (+) inside the trough stands for the antagonist having greater force than the agonist. The dotted arrow inside the circle means the agonist's decisional behavior: that is to say, the action to be taken by the agonist depends upon his decision. As seen in the diagram, the antagonist stays out of the agonist's way, making it possible for the agonist to do whatever he wants to.

Applying the diagram to the above sentence in which the verb *permit* occurs, its interpretation is that the professor made it possible for the student to ask a question if he wants to or not to ask a question if he wants not to. So whether the student asked a question or not relies upon the student's decision, which is not known. Therefore, it is not known whether or not the student asked the professor a question. Namely, the sentence does not necessarily imply that the student asked the professor a question, nor does it necessarily imply that the student did not ask the professor a question.

Givón (1984) divides a limited number of verbs into two groups according to whether they are implicative or not as shown in Table 1.

Table 1. Implicativeness vs. Non-implicativeness

Implicative		Non-Implicative	
Positive	Negative	Positive	Negative
make	prevent	permit	forbid
let	stop	tell	
help	talk out of	ask	
have	dissuade	order	
force	scare away from	suggest	
cause		tempt	
trick		allow	
enable		encourage	
(persuade?)			

This paper will follow Givón's (1984) way of dividing verbs in view of implicativeness.

2.2. Grammar and Semantics

Semantics or the system of meaning is considered as an important dimension of grammar along with phonology, morphology, syntax, pragmatics, and vocabulary (Purpura, 2004). As for teaching semantics as part of grammar, Larsen-Freeman (2001) indicated that teaching of semantic meaning should be practiced in teaching grammar. For example, Larsen-Freeman (2001) explained *possessives* in terms of form, meaning, and use. That is, 'POSSESSIVE' has forms of '*s* or *s*' and is pronounced as /z/ and /s/, with meanings of "'POSSESSION', 'DESCRIPTION', 'AMOUNT', 'RELATIONSHIP', 'PART VERSUS WHOLE', 'ORIGIN', and 'AGENT"'. In addition, according to her, native speakers tend to prefer to use '*s* if the head nouns are performing some action. This example of 'POSSESSIVE' suggests that grammar teaching may be considered complete only if the three dimensions of form, meaning, and use are addressed to learners of English. The treatment of the three dimensions indeed requires a new perspective named 'grammaring', which sees grammar teaching as a way of teaching multiple skills (Larsen-Freeman, 2001).

However, some teachers of English would still say that grammar is all about syntactic features despite the importance of teaching meaning as part of grammar. Even the majority of grammar books introduce formal aspects

of grammar, though one exception to this would be a grammar book titled 'Grammar Dimensions' (Frodesen & Eyring, 1993) in which form, meaning, and use are equally dealt with. The tendency to put more stress on syntactic aspects of grammar may be due to the easiness of teaching forms over teaching meaning and use, especially by the non-native teachers of English and due to the unavailability of specific semantic data or practice problems addressing the semantic dimension of L2 English. For instance, teachers of English would teach students the possible word order associated with verbs and hardly consider the meanings of implicativeness or non-implicativeness in verbs.

2.3. Doing Focus-on-form on Semantic Meanings

The task-based instruction (TBI) framework provides the teacher with the exceptional opportunity to analyze a semantic meaning before or after a task. For example, the teacher may opt to give a preemptive corrective feedback on a semantic meaning at the pre-task stage. A preemptive corrective feedback refers to a type of feedback on a grammar point that is most likely to occur while doing the main task. Thus, if the teacher judges that learners may need to know some meanings as part of the main task, he or she can teach them to learners before the main task.

In this case, any teaching of semantic meanings are different from preselected grammar points within the 3P language teaching model, which consists of presentation, practice, and production stages. In the pre-task, learners can be guided to be aware of semantic meaning differences through either a pre-communicative or communicative task, which will be related to the ensuing main task. On the contrary, in the presentation of a grammar point in the 3P model, the teacher usually introduces to learners a linguistic form for the sake of practicing it, especially without any consideration for developing communicative competence in learners.

3. Method

3.1. Subjects

A total of 54 subjects, 38 preservice teachers and 16 inservice teachers

participated in the study. The 38 preservice teachers were second-year undergraduate students and were taking undergraduate courses including linguistics and second language acquisition theories, while 16 inservice teachers were taking an inservice training focused on developing four skills of English. They were solicited to respond to the 23-item instrument that inquired them whether each item had an implicative meaning or not.

3.2. Instrument

One of the researchers developed the 23-item instrument that measured the subjects' perceptions of implicative and non-implicative meanings. Specifically, 13 items including 'force' were presented as verbs with implicative meaning, whereas 10 items such as 'suggest' and 'tempt' were given as verbs with non-implicative meaning. The subjects were asked to indicate whether they could tell if any action corresponding to a statement occurred or not. Some of the items in the instrument included[1]):

(9) a. Bill forced Monica to kiss him.---Monica kissed Bill. (Yes/No)
b. The professor permitted the student to ask him a question.---The student asked him a question. (Yes/No).
c. My family doctor suggested to me that I should take a walk everyday.---I took a walk everyday. (Yes/NO)
d. The fine weather tempted me to go for a drive.---I went for a drive. (Yes/NO)
e. I persuaded her to go to the party.---She went to the party. (Yes/No)

3.3. Measure

The responses of the subjects were first categorized as 1 for a correct answer and 0 for an incorrect answer in SPSS 12 version. Then the data were submitted to Winstep 3, which is widely used for analyzing dichotomous data. The merits

1) In constructing the items in the instrument, the felicity conditions were kept in mind. The point of asking the questions is to get information on whether the respondents understand the meaning of the verbs in question without resorting to referents of the subject and object or to the context.

of using Winstep 3 include its efficiency of giving hierarchical order of difficulty based on logit values (Li & Olejnik, 1997; Lord, 1980; McNamara, 1996; William & Slawksi, 1980; Wright & Masters, 1982)

4. Results

4.1. Rasch Analysis Results

In Table 2 are the results of Rasch item analysis. The MnSq infit values ranged from 0.84 to 1.38. These infit values suggested acceptable unidimensionality of the instrument. The mean item measure was 0.00 logits with standard deviation of 1.25. The lowest logit value was -2.14 and the highest logit value 1.70. The range indicated that the hierarchy of items was successfully identified. Since the Rasch model assumes a true interval scale among logit scores, the item difficulties identified in the data are generalizable to other subjects who share similar characteristics.

Table 2. Item Statistics

ITEM STATISTICS: MISFIT ORDER

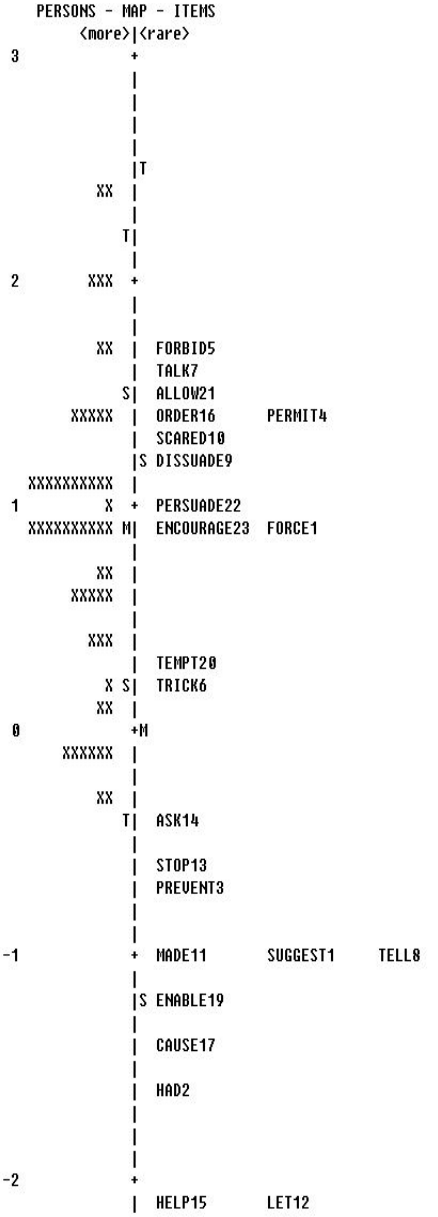
ENTRY NUMBER	TOTAL SCORE	COUNT	MEASURE	MODEL S.E.	INFIT MNSQ	INFIT ZSTD	OUTFIT MNSQ	OUTFIT ZSTD	PT-MEASURE CORR.	PT-MEASURE EXP.	EXACT MATCH OBS%	EXACT MATCH EXP%	ITEM	G
12	51	54	-2.14	.60	1.05	.3	2.01	1.4	A	-.09	.14	94.4	94.4	LET12	0
22	26	54	.95	.29	1.38	4.3	1.44	4.2	B	-.27	.30	38.9	61.9	PERSUADE22	0
9	23	53	1.17	.29	1.26	2.9	1.30	2.7	C	-.10	.30	49.1	62.9	DISSUADE9	0
7	18	53	1.60	.30	1.20	1.6	1.16	1.1	D	.03	.29	60.4	68.8	TALK7	0
5	17	53	1.70	.31	1.07	.6	1.13	.8	E	.17	.29	66.0	70.1	FORBID5	0
19	47	54	-1.18	.41	1.05	.3	1.10	.4	F	.11	.20	87.0	87.0	ENABLE19	0
15	51	54	-2.14	.60	1.03	.2	1.10	.4	G	.06	.14	94.4	94.4	HELP15	0
1	27	54	.87	.29	1.08	1.0	1.09	1.0	H	.18	.30	55.6	61.6	FORCE1	0
3	44	54	-.73	.36	1.08	.5	1.06	.3	I	.12	.23	81.5	81.4	PREVENT3	0
2	48	53	-1.56	.48	1.02	.2	.96	.1	J	.15	.18	90.6	90.5	HAD2	0
13	43	54	-.61	.35	1.01	.1	.98	.0	K	.23	.24	79.6	79.6	STOP13	0
4	21	54	1.36	.29	1.00	.1	1.00	.0	L	.29	.30	64.8	65.4	PERMIT4	0
10	22	54	1.28	.29	.96	-.4	.98	-.2	k	.34	.30	70.4	64.4	SCARED10	0
11	46	54	-1.02	.39	.93	-.2	.74	-.7	j	.36	.21	85.2	85.1	MADE11	0
20	34	54	.29	.29	.92	-.8	.90	-.8	i	.41	.29	72.2	66.5	TEMPT20	0
23	26	53	.91	.29	.91	-1.1	.89	-1.1	h	.44	.30	67.9	61.9	ENCOURAGE23	0
17	48	54	-1.36	.44	.89	-.2	.62	-.9	g	.41	.19	88.9	88.9	CAUSE17	0
21	20	54	1.45	.29	.89	-1.1	.86	-1.1	F	.46	.29	72.2	66.6	ALLOW21	0
8	46	54	-1.02	.39	.88	-.4	.77	-.6	e	.40	.21	85.2	85.1	TELL8	0
14	41	54	-.38	.33	.85	-.9	.75	-1.2	d	.50	.25	75.9	75.9	ASK14	0
16	21	54	1.36	.29	.85	-1.6	.82	-1.6	c	.52	.30	75.9	65.4	ORDER16	0
6	35	54	.20	.30	.84	-1.6	.78	-1.7	b	.54	.28	72.2	67.5	TRICK6	0
18	46	54	-1.02	.39	.80	-.7	.56	-1.4	a	.56	.21	85.2	85.1	SUGGEST1	0
MEAN	34.8	53.8	.00	.36	1.00	.1	1.00	.0			74.5	75.2		
S.D.	12.0	.4	1.25	.09	.14	1.3	.30	1.4			14.1	11.3		

4.2. The Item Map

The hierarchical ordering of items is reported in Figure 2. Item 5 (forbid) was the most difficult item followed by item 7(talk), item 21(allow), item 16 (order), item 4 (permit), item 10(scared), and item 9 (dissuade), and so on. The easiest items were item 15(help) and item 12 (let). This degree of difficulty can be read along the number line on the most right side. The numbers represent logit values in the MEASURE column in Table 2. Again, the average of the logit values is zero and one can see the letter M(ean) right across the value zero.

The item map has two columns of figures. In the first column on the left, each x represents a subject in this study. In the second column on the right, each word with an item number is distributed. The interpretation of the map is simple and straightforward. Any x (or a person) on the same parallel line with a word is interpreted as having the same possibility of getting the semantic meaning correct. For example, two persons (or two xx) are on the same parallel line with forbid5 (or item number 5 'Forbid'), which means that two persons had the 50% of chance getting the semantic meaning of the item 'Forbid5' correct. So, it is considered that the two persons had the chance of getting the item 'Forbid5' correct. If any x is above the counterpart word, the person x is said to have better chance of getting the counterpart semantic meaning correct. However, if any x is below the counterpart semantic meaning of the word, the person x is said to have less chance of getting the counterpart semantic meaning of the word correct. In other words, it is very unlikely the person will get the semantic meaning correct. Thus, since 7 persons are either on the parallel line or above the item 'Forbid5', those 7 persons are likely to get the item 'Forbid5' correct. According to the Table 2, one can be confident that all of the 54 persons has the chance to get the items 'Ask14' and below correctly, which also indicates that items 'Ask14' and below are easy items that everyone gets right.

Figure 2. Item Map



5. Discussion

5.1. The Distribution of Items

The examination of Table 2 and Figure 2 showed that subjects' perceptions of the verbs were distributed along the continuum with the mean of zero logit and standard deviation of 1.25. Items below the mean mostly consisted of implicative verbs including 'help', 'cause', 'enable', 'make', 'prevent', and 'stop', though some non-implicational verbs were observed as well including 'tell', 'ask', and 'suggest'. Among these below the mean items, 'help', 'had', 'cause', and 'enable' were the easiest items. A generalized pattern of the distribution is that the subjects had higher odds of correctly assigning implicational meaning to each verb than non-implicational meaning to each verb. This pattern found here indicates that implicational meaning may be primary or unmarked. This hypothesis may seem plausible in that the definitely predictable meaning in a verb can give the reader or the hearer some sense of direction. Instead, if the non-implicative meaning of a verb were unmarked, the reader or the hearer would continue to remain undecided on the actual resultant behavior transpired by a verb. This finding also suggests that teachers of English may not be worried too much about implicative verbs because they are relatively easier for learners to acquire than non-implicational verbs.

5.2. Cross-linguistic Influence Examined

Further analysis of the most difficult verbs indicated the cross-linguistic influence on the acquisition of meanings of implicativeness or non-implicativeness in verbs. Specifically, the verbs of 'forbid', 'order' and 'force' were compared as follows:

(10) a. They forbade him from entering their village. (Non-implicative)
b. Kutul-un ku-ka tongney-ey tuleo-ci mos-ha-tolok
They-FM he-NOM village-LOC enter-CLM NEG-do-CLM
kumciha-ess-ta (Implicative)
forbid-PST-DEC

(11) a. The captain ordered his crew to carry their weapons all the time. (Non-implicative)
b. Sencang-un senwen-tul-eykey muwki-lul kaci-ko
Captain-FM crew-PM-DAT weapon-ACC have-CLM
tani-lako myenglyengha-ess-ta (Implicative)
go-CLM order-PST-DEC

(12) a. The bank robber forced the bank teller to open the safe. (Implicative)
b. Unhayngkangto-ka unhayngwen-eykey kumko-lul yel-tolok
Bank robber-NOM teller-DAT safe-ACC open-CLM
kangyoha-ess-ta (Non-implicative)
force-PST-DEC

In (10), (11) and (12), each pair of sentences in two languages were translated word for word. The differences in semantic meanings in each verb are quite striking. In other words, any one who knows the two languages would agree with the semantic meaning differences in two languages. This suggests that it is reasonable to conclude that the cross-linguistic influence may be a critical factor that contributed to subjects' little chances of getting these items correct. This finding indicates that teachers of English may need to be aware of this type of semantic meaning transfer in designing lessons of semantic meanings.

5.3. Consciousness Raising of Implicativeness and Non-implicativeness Meanings

5.3.1. Deductive Approach towards Teaching Semantic Meanings

As Ellis (2003) indicated, there can be two different types of consciousness raising tasks: deductive and inductive consciousness raising activities. In a deductive consciousness raising, the teacher may provide a rule associated with a grammar point and ask learners to apply the rule and come up with new sentences. To give one example of a deductive consciousness raising, the following procedure may be used.

Aims: Learners will be able to give implicativeness or non-implicativeness of

verbs using examples of their own sentences.

Step 1. The teacher pre-selects verbs that students are likely to use to perform a task. For example, in a decision-making task in which learners should decide on items, say 15 items, to take with them for an adventure, they are likely to use such verbs as 'suggest', 'recommend', 'allow', 'let' , and so on.
Step 2. The teacher gives examples of those sentences, each followed by its implicativeness or non-implicativeness. For example, following cards of verbs will be made and distributed as part of the pre-task.

Verb: Let
Example sentence: I will let my group members carry a bag of candy with us, no matter how our ship gets crowded.
Indication of implicativeness?: Yes or No
So, it means that my group members will definitely carry a bag of candy with us.
Your own sentence using 'let':_____.
Indication of implicativeness? Indicate Yes or No for your own sentence.
So, it means that_____.

Verb: Allow
Example sentence: I will allow my group members to bring in a lifeboat in case our ship runs into an iceberg.
Indication of implicativeness?: Yes or No
So it means that my group members may bring in a life boat but they may choose not to bring it in if they do not want.
Your own sentence using 'allow':_____
Indication of implicativeness? Indicate Yes or No for your own sentence.
So, it means that _____

Step 3: The teacher collects some examples of sentences of those verbs from learners and review them especially in terms of implicativeness and non-implicativeness

5.3.2. Inductive Approach towards Teaching Semantic Meanings

The other way of drawing learners' attention to the semantic aspect of implicativeness and non-implicativeness dimension is providing learners with an inductive consciousness raising activity in which learners are guided to learn the semantic aspect from their own hypothese on a set of sentences.

Aim: Learners will be able to tell whether or not a verb is implicative or non-implicative based on the data they explore.

Step 1. The teacher gives a list of sentences to learners who should judge each statement in terms of implicativeness or non-implicativeness as in Table 3. Learners should write about what each sentence may mean in their own words in terms of implicativeness or non-implicativeness.

Table 3. Comparisons of L1 and L2 Verbs

	Sentence	So, are you sure it really happened or not sure?	Then, what does the sentence mean?
1	The parent tricked his son into taking the medicine.	Yes	
2	The parent permitted his son to buy a bicycle.	No	
3	The parent encouraged his son to go to college.	No	
4	The parent prevented his son from crossing the street.	Yes	
5	The parent ordered his son to do his homework.	No	
6	The parent suggested to his son that he need to take a walk every other day.	No	
7	The parent had his son print letters clearly.	Yes	
8	The parent tempted his son to go to a library.	No	

9	The parent helped his son search the information on the internet.	Yes
10	The parent told his son to study math for two more hours.	No

Step 2. The teacher goes over each statement written by learners on the third column, helping them with implicativeness or non-implicativeness meanings.
Step 3. The teacher helps learners to come up with two classes of verbs with regards to implicativeness and non-implicativeness.
Step 4. The teacher gives a set of non-implicative verbs on the board and has learners to write a second sentence that starts with 'but'. For example,

The parent ordered his son to write his uncle a letter but his son did not.

6. Conclusion

In this study, the semantic dimension of implicativeness or non-implicativeness was explored with the application of Rasch modeling. Especially, through the Rasch modeling analysis, hierarchical ordering of verbs were identified and the pattern of item difficulties was explained. The results indicated that more systematic feedback on this semantic aspect may be the solution to the lack of knowledge of subjects in this study. The sample lessons provided in this study may provide L2 learners of English with the opportunity to talk about the semantic dimension of these verbs, which is quite independent of syntactic analysis.

The hierarchical ordering of these verbs also indicated that research on interlanguage should involve exploring learners' construction of semantic categorization at a certain stage of L2 acquisition. Otherwise, any interlanguage rules identified by the researcher may not give the complete picture of the language learning process of L2 learners. Therefore, it is necessary to teach and learn the meanings of the verbs with the help of Korean translations having the

same implicature as English sentences in which the English verbs occur, as in (7).

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