Teaching Prepositions to Japanese EFL College Students: Bridging Theory and Practice

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Abstract

Although universities in Japan have begun emphasizing on the importance of English education in producing globally-competitive human resources, in reality, the English proficiency level of the Japanese college students has deteriorated. Judging from the current situation, the Japanese college students need to take more English classes to improve their English proficiency level. However, they found it difficult to learn English in the classroom more than what they already have due to time constraint. This paper introduces modular-style teaching materials that are offered at our university in the e-learning system called e-Alps, which utilizes Moodle. E-Alps is a platform that enables the students to learn English on their own, outside classroom, to overcome the problem of limited English learning class hours. The English materials are available on e-Alps for students to download freely. This paper is twofold. Firstly, it discusses the semantics of the English preposition *to* and secondly proposes a modular-style material concerning *to* and will prove our material to be advantageous for the Japanese EFL (English as a Foreign Language) students.

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INTRODUCTION

There are many grammatical items that Japanese EFL students find very difficult to fully understand and proficient in using it; preposition is one of them. The EFL leaners consider *to*, one of the most polysemous prepositions, very difficult to master completely. The following is the usages of *to* according to Cobuild, the sixth edition.

- a. \<goal\> Two friends and I drove to Florida.
- b. \<event goal\> We went to a party.
- c. \<attached\> There was a piece of cloth tied to the dog's collar.
- d. \<direction\> Hemmingway's studio is to the north.
- e. \<receive\> He picked up the knife and gave it to me.
- f. \<feeling direction\> Marcus has been most unkind to me today.
- g. \<related\> He is a witty man, and an inspiration to all of us.
- h. \<talk goal\> I'm going to have to explain to them.
- i. \<reaction\> He survived, to the amazement of surgeons.
- j. \<the opinion\> It was clear to me.

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    k.   \<the state towards\> The shouts changed to screams.
    l.   \<the employer\> Rick worked as a dresser to Nigel.
    m. \<time, amount reached\> from 1977 to 1985
    n. \<last thing\> I read everything from fiction to history.
    o. \<from ~ to\> Larry and Andy had drifted from place to place.
    p. \<to and fro\> She stood up and began to pace to and fro.
    q. \<time\> five to eight
    r. \<ratio\> engines that can run at 60 miles to the gallon
    s. \<simultaneity\> Amy woke up to the sound of her doorbell ringing.
    t. \<nothing to it\> There is nothing to it.

The usages of *to* such as in (a) and (b) are easy for the Japanese EFL students to apprehend. Nevertheless, usages such as in (r) and (s) are relatively difficult to master. The difficulty of apprehending (r) and (s) is detected when the Japanese EFL students sat for a test on English prepositions, which will be detailed in Section 4.

This paper is twofold. Section 2 examines the polysemy of *to*, and section 3 introduces modular-style teaching materials based on the discussion in section 2. Section 4 then argues for the effectiveness of using such modular-style teaching materials in teaching English prepositions, and section 5 summarizes the arguments presented in section 2, 3 and 4.

THE SEMANTICS OF TO[1]

2.1   Previous Studies

Semantics[2], or the polysemy of preposition *to*, has been widely studied. These studies can be generally divided into three streams, which will be briefly reviewed in this section. The central meaning (usage) of the word is divided into three streams i.e. 1) direction and its goal; 2) direction; and 3) others that do not indicate any movement.

2.1.1   Stream 1: Central Meaning as Direction + Goal

Most of the previous studies fall into this category. Studies by Lyons (1977), Ueno (1985), Langacker (1987), Kishimoto (2001), and Inoue (2008) can be listed as typical examples of the first stream. Langacker (1987), in the following example, explains that "[b]ecause (1a) employs the preposition *to*, it emphasizes the path traversed by *the letter* with *Susan* as goal" (Langacker, 1987, p. 39).

    (1) a. He sent a letter to Susan.
        b. He sent Susan a letter.

Though this explanation seems close to our gut feelings concerning the semantics of *to*, it is not adequate to explain its usages such as in (2), (3), (4) and (5):

    (2) This is the handle to the broom.   (Wada, 2009)

    (3) Amy woke up to the sound of her doorbell ringing.   (=(s)) (Cobuild)

    (4) I had a two-door Chevy that got 15 miles to the gallon.   (COCA)[3]

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[1] This section is a revised version of Kato, Hanazaki and Hanazaki (2014).
[2] There are also syntactic studies of *to* dealing with its grammatical functions, or semantic studies that try to list all the use of *to* in questions. For space reasons, we will review only those that deal with the polysemy of *to*; not others.
[3] COCA= Corpus of Contemporary American English

(5) Diana is standing to my left.   (Tyler & Evans, 2003)

It is just impossible to argue that the *handle* "traverse" to the "goal" of *broom*, nor *Amy* to the *sound of her doorbell*, nor *15 miles* to *the gallon*, or *Diana* to *my left*. Therefore, an alternative explanation is needed.

2.1.2   Stream 2: Central Meaning as Direction

Matsubara (1999), Haspelmath (2003), and Kunihiro (2005) can be cited as the representatives of this second stream. Kunihiro (2005), for example, illustrates the core meaning of *to* and argues that *to* only indicates the movement or the trajectory that TR moves, and the contact of the TR with the LM is only implied.[4]
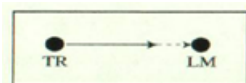

Figure 1. The core meaning of *To* (Kunihiro, 2005)

This argument explains the difference of (1a) and (1b), but cannot explain (2) to (5) in Section 2.1.1 i.e., *the handle* in (2), *Amy* in (3), *15 miles* in (4) nor *Diana* in (5) do not 'move' or 'traverse' to the LM's.

(1) a. He sent a letter to Susan, but by accident, it did not reach Susan.
    b. *He sent Susan a letter, but by accident, it did not reach Susan.

2.1.3   Stream 3: Central Meaning does not Indicate Any Movement

Included in this stream are studies by Tyler and Evans (2003), Tanaka et al. (2006) and Wada (2009), which are among the small number of studies. Tyler and Evans argue that "both path and motion are not primarily coded by *to*" (2003, p. 150) and present the 'proto-scene' of *to* (see Figure 2). Meanwhile, Tanaka et al. (2006) argue that *to* can indicate something close to a 'reason' as in example (6) and this contradicts the direction implied in example (1). From this observation, they further argue that the core meaning of *to* should be something that excludes any movement or direction, i.e., TR and LM are facing each other (see Figure 3).

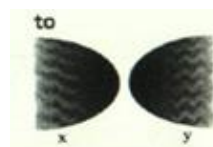**Figure 2.** The 'Proto-Scene' of *To*
(Tyler & Evans, 2003)

Figure 3. The core meaning of *To*
(Tanaka et al., 2006)

(6) The firefighter came to our rescue.

In other words, this stream argues that the movement that *to* seems to indicate is generated by the "on-line interpretation with the linguistic context" (Tyler & Evans, 2003) of the sentence; *to* only indicates that the TR is facing the LM, and the movement is indicated by the verb.

The analysis of the data from COCA and Cobuild confirms this argument. The analysis on the examples shows that the word *to* that indicates the <goal> always appears with verbs of motion such as

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[4] TR =Trajector, LM =Landmark

come and *go*. Therefore, it is assured that the meaning of movement is expressed by the verbs, not by *to*. Subsequently, this means that *to* does not imply any movement. However, the argument that the TR and LM are 'facing each other' does not explain the usages of *to* in examples (2), (3), (4) and (5). For instance, *the handle* and *the broom* are not 'facing each other.' This is clearer when you look at example (7), in which *the key* is not 'facing' the door, but rather it is a part of the *door*.

(7) The key to the door   (COCA)

To sum up, although the argument that *to* does not indicate any movement is acceptable, the data needs to be further examined to uncover what the core meaning of *to* is.

2.2   Alternative Proposal: The Core Meaning as Correspondence

Based on the argument that *to* does not imply any meaning of movement, this section scrutinizes the 'troublesome' examples of *to* and examines its core meaning. This paper argues the following;

A. The core meaning of *to* is correspondence; and
B. The meanings of *to* are determined by the two factors i.e., i) In which semantic field the event is taking place; and ii) what the LM is understood to represent within such semantic field

The analysis of this study focuses only on the most common usages of *to* i.e., the <goal> and <direction> and the 'troublesome' ones such as (2) to (5) due to the space limitation. The other usages not handled in this paper are discussed in Kato, Hanazaki and Hanazaki (2014). In this study, < > as in <Direction> is applied to indicate the usage listed in dictionaries and 【 】 as in 【Movement】 indicates the semantic field.

2.2.1   *<Goal>*

The data analysis from Cobuild and COCA reveals that this usage only appears with the verbs of motion such as *drive* as in example (8) or *go* as in example (9) shown below;

(8) Two friends and I drove to Florida.   (=(a))   (Cobuild)

(9) He went to Harvard.   (COCA)

This means the usage of <goal> is not the meaning that *to* itself has, but the usage is generated through the 'online interpretation' (Tyler & Evans, 2003) with the linguistic context. In other words, the linguistic context such as the verb in a sentence allows the whole sentence to be understood in the semantic field of 【movement】 , and in such field, *to* in the sentence is 'interpreted' within the field. For example in (8), the 'corresponding' TR and LM are *two friends and I* and *Florida*. In the semantic field of 【movement】 , these two noun phrases are understood as the starting point and the end point; hence, *Florida* is understood as the <goal> of the movement.

2.2.2   *<Direction>*

This usage is 'troublesome' only when one argues that the central meaning of *to* includes movement. In other words, if one argues that the central meaning of *to* does not imply any movement, this usage comes with no difficulties. This usage always appears with the verb *be*, which indicates the semantic field of 【position】 . In such field, nouns that are used as TR and LM with the preposition *to,* which indicates 'correspondence', are understood as things that are close-by in space. In example (10), the two nouns that are shown to 'correspond' are *Hemingway's studio* and *north*, and they 'correspond' in the semantic field of 【position】 indicated by the verb *is*. If they 'correspond' in space, the interlocutors understand the two nouns as something placed nearby, hence justifying the usage of <Direction>.

(10) Hemingway's studio is to the north.   (=(d))   (Cobuild)

(11) Diana is standing to my left.   (=(5))   (Tyler & Evans, 2003)

2.2.3 *<Simultaneity><Reaction>*

These 'troublesome' usages are difficult to explain if one argues that *to* indicates the movement toward the LM, which will be understood as goal; in these usages, the TR never 'moves towards' the LM. If one argues the TR and LM 'correspond' in a semantic field, these usages come with no difficulties. The characteristic feature of these usages is that the TR and LM are usually events, not nouns. If the TR and LM are not nouns, they cannot indicate the semantic field of 【position】,but they indicate that the two events co-occur in time. For instance, in (12), the event of *Amy waking up* and *the doorbell ringing* exist correspondingly to each other. Hence, this is understood as events that co-occur and when the two events co-occur in time, they are often understood as cause and effect. (cf. Michotte, 1963; Hanazaki, 2011) The same can be said of the usage that is listed as <Reaction>; in (13), the event that *I learned that he won* and *I am surprised* co-occur in time, hence, are understood as cause and effect.

(12) Amy woke up to the sound of her doorbell ringing. (=(s), (3)) (Cobuild)

(13) To my surprise, he won.

2.2.4 *<Belonging>*

This usage is also easily understood if one argues that *to* indicates "correspondence". The two nouns 'correspond' in the semantic field indicated by the linguistic context. For instance, in (14), *the handle* and *the broom* 'correspond' in the semantic field of 【pair existence, which is indicated by the verb *be* and nouns that indicate things[5]. Hence, they are understood as things that co-exist. In (15), the semantic field of 【pair existence】 occurs on a sentence level supported by *there* construction, with *a certain coldness* and *him* being the pair.

(14) This is the handle to the broom. (=(2)) (Wada, 2009)

(15) There is a certain coldness to him. (Cobuild)

2.2.5 *<Ratio>*

This usage, too, can be easily understood if one considers the TR and LM as 'corresponding' to each other in a specific semantic field. The TR and LM 'correspond' in the semantic field of 【rate】 indicated by the linguistic context. In (16), *gallon* appears with a definite article *the*, which shows that the gallon should be understood as a unit. In such semantic field, the two nouns are interpreted online as representing a ratio.

(16) I had a two-door Chevy that got 15 miles to the gallon. (=(4)) (COCA)

2.3 Summary of the Semantics of *To*

The quick survey on the most common usages as well as the 'troublesome' usages of the preposition *to* has justified the argument on the core meaning of *to* as 'correspondence.' The examples also confirm that the TR and LM are interpreted within the semantic field indicated by the linguistic context.

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[5] This differs from [position]. [Position] and [pair existence] both involves the verb *be*, but [position] is indicated by the verb *be* AND nouns that indicate positions in space. In contrast, [pair existence] is indicated by the verb *be* AND the nouns that indicate things.

THE PROPOSED MODULAR-STYLE TEACHING MATERIAL FOR PREPOSITION *TO*

Although universities in Japan have been emphasizing on the importance of English education and producing globally-competitive human resources, in reality, English proficiency level of the Japanese college students has deteriorated. Judging from the current situation, the Japanese college students are required to take more English classes to improve their level of proficiency. However, they found it hard to do so due to time constraint. Therefore, the Japanese EFL instructors need to provide assistance to facilitate the students who want to improve their English outside class time. The instructors need to provide materials that (a) enable students to study with ease; (b) are interesting to students; (c) enable the students to use the grammatical item at will after studying the material; and (d) motivate students to study.

In this section, an example of modular-style teaching material available in our university website is presented along with the four mechanisms that bring advantages to this kind of materials.

3.1 The Mechanism for Students to Study with Ease: Modular-Style Material

The teaching materials that this paper finds effective and easy for the students to learn grammatical items are the modular-style teaching materials that are offered on the e-learning platform used at our Japanese university called e-Alps. The materials are made available on the website for students to learn English independently outside the classroom to overcome the problem of limited learning hours during English language lessons. The students can download them freely, and the materials are modular-styled, which means that they are each short and cover one grammatical item. The students can focus only on the grammatical items they need to study more. Figure 4 is the webpage where the students find the list of the grammatical items that are uploaded.

Figure 4. The table of contents page of the material

3.2 The Mechanism for Students to Find the Material Interesting: Materials Based on Cognitive Linguistics

The materials are developed based on cognitive linguistics, which tries to explain WHY a certain linguistic phenomenon exists, instead of making the students memorize its usages. If the material focuses on making the students memorize the various usages through tests such as fill-in-the blanks, it makes the materials uninteresting and demotivates the students to go through the materials. The materials proposed here adopt the explanation style of why a grammatical item is used in such a way and in the case of *to*, the material explains all the usages of *to* based on the arguments in section 2. Specifically, the material explains the various usages of *to* by using the core meaning of 'correspondence' and shows the contexts in which *to* is used. Figure 5 has some example pages of the material.

Figure 5. Some sample pages of the material

3.3 The Mechanism that Enables Students to Use the Sample Sentences at Will after Studying the Material

The samples of sentences used in the material are basically from COCA and Cobuild. This fact guarantees that the sentences are those that are used in daily lives, not artificially created. Also, the material provides the context in which the example sentences are used, so that the students can learn when to use the item. Figure 6 are some example pages of the material.

Figure 6. Some sample pages of the material

3.4   The Mechanism for Motivating Students: Pre-test and Post-test

Each modular-type material contains a pre-test and post-test. The pre-test allows students to identify which usages they do not understand so that they can focus on those usages. Furthermore, the fact that there is a post-test at the end of each material encourages the students to concentrate on learning the material in preparation for the test. The following are the tests for *to* and *at*, in which the instructions are given in Japanese (Figure 7 and 8).

Figure 7. Pre-test   **Figure 8.** Post-test

THE RESULTS OF APPLYING THE ARGUMENTS IN SECTION 3

This section examines the effectiveness of the materials based on the mechanisms discussed in section 3, quantitatively as well as qualitatively. Quantitative analysis was done by using a *t*-test on the results of the tests taken by the students of four controlled groups, and qualitative analysis was done by conducting a survey as well as interviews on students who have studied the materials.

There were four controlled groups [6] involved. The groups were instructed to follow certain procedures. The students in the four groups are about the same English proficiency level, which is confirmed by the fairly consistent results in the pre-test and the time required in doing the pre-test. One group (Group I) has all, and the rest of the groups lack one of the mechanisms discussed in Section 3[7]. The four groups were:

Group I did the assignment based on section 3 mechanisms
Group II did the assignment but not in a modular-style material   (lacking 3.1)
Group III did the assignment but not utilizing cognitive linguistics   (lacking 3.2)[8]
Group IV did the assignment without being notified about the pre and post-test   (lacking 3.4)

The four groups have been carefully prepared. Group II studied prepositions in general but we made sure that they were given the same amount of explanation about the preposition *to* as compared to the other groups. Group III studied *to* using the explanation that lists all the usages of *to* without any cognitive linguistic explanations. Group IV learned the same material as Group I but without any instructions that the students would be sitting for a post-test after doing the modular-style material. The results are shown in Table 1.

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[6] The number of students in each group was 35, and each group corresponds to 4 freshman English classes that Kazuo teaches at Shinshu University.
[7] We did not provide a controlled group that lacks 3.3. because determining whether the students can use the grammatical item at will after studying the material requires a longitude study.
[8] For ethical reasons, we taught Group II and III with our materials after the survey.

Table 1. The result of the four controlled groups.

Group	Pre-test Post-test (average out of 10)		Time (pre-test)	Time (post-test)	Result of *t*-test on pre-and post-test
I	3.48	9.31	3min.	2min.30sec.	p=1.52E-26 <0.01 different
II	4.58	5.26	2min.15sec.	3min.10sec.	p=0.13>0.1 not different
III	5.33	6.4	3min.	3min.10sec	p=0.000596<0.01 different
IV	4.44	6.15	3min.	3min.30sec.	p=0.001<0.01 different

Table 1 shows that the four mechanisms in Section 3 were proven to be effective. Based on the t-test results, group II did not show much improvement in understanding preposition *to* (p=0.13>0.1), and group III and IV showed some improvement but not as much as Group I (the t-tests on the differences in improvement between I and III were p=5.47514E-12<0.01, I and IV: p=8.17E-12 <0.01). The effectiveness was further confirmed by the time needed to complete the pre- and post-test.

As for the qualitative data, we conducted a survey as well as interviews. We conducted a survey on how each student answered the questions given to them. Comparison was made on the scores of pre- and post-test of each student and the acquired usages of *to*. The students answered the 'easy' ones such as (a) and (b) correctly in both pre- and post-tests, and their scores on the ones that labelled as 'troublesome' such as in (r) and (s) improved, especially in Group I and IV. This indicates that the modular-style material that focuses on the core meaning of *to* as compared to listing all the usages, and explains why and how the usages are related to the suggested core meaning was more effective to the students in learning the 'troublesome' *to* usages.

Also, the students in the groups were asked to provide their opinions on the materials. The feedback showed that the materials were well received by the students. The students said that materials were helpful in highlighting the core meaning of *to* without having had to memorize all the usages listed in a major English-Japanese dictionary. Also, the fact that the focus is on one preposition (i.e., *to*) makes it favorably received by most of the students. In brief, the quantitative as well as qualitative data showed that the modular-style material on preposition *to* was helpful in improving the students' understanding of the preposition.

The popular teaching materials which are currently being used in the Japanese EFL learning are those that are based on the studies reviewed in Section 2.1. These kinds of materials are represented by the materials studied by group II and III of the study. These materials have shown minimal effects on helping the students' understanding of *to*. Therefore, the modular-style teaching material based on cognitive linguistic principle for the preposition *to* is proposed based on its effectiveness shown in this study.

CONCLUSION

This paper discusses two arguments, namely the semantics of the preposition *to* and the effectiveness of the modular styled material based on the argument of the semantics of *to*. Section 2 has reviewed previous studies on preposition *to*, which have lack of support in explaining 'troublesome' usages of *to*. For instance, the argument on the core meaning of *to* as direction or endpoint is inadequate in explaining the usage of *to* in *Amy woke up to the sound of her doorbell ringing*. Therefore, this paper proposes a systematic explanation of the polysemous *to* i.e., (i) the central meaning of the word is 'correspondence' and (ii) the usages listed in the dictionaries are not the meanings of the word per se, but the interpretation of the interlocutors as they interpret it in the linguistic context. Section 3 has introduced a module-style teaching materials that is developed based on the proposal in section 2. Finally, section 4 confirmed the effectiveness of the material based on the t-test results, the amount of time the students

took to complete the pre- and post-test, and the survey and the questionnaires to the students who studied the material. Most of the students who used the material and took the tests admitted the advantages of this type of learning English in motivating them to learn English outside the classroom. Therefore, this research has shown that the modular-style teaching materials are promising in improving their English proficiency level and must be used in college English education.

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DATA SOURCE

Cobuild Advanced Learner's Dictionary, 6th Edition.
COCA = Corpus of Contemporary American English