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著者	OKANO, Satoshi
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Notes on Vocabulary and EFL[1)]

Satoshi OKANO

ABSTRACT

This article intends to bring to the foreground the use of students' L1 background knowledge. Especially in teaching the meanings of lexical items of English, the teacher should consider, prior to establishing the association of the concept and the form of L2 lexical item, how to take advantage of the vast storage of concepts which the students have acquired and are able to express with the lexis of their mother tongue. There should, therefore, be introduced stages in which the class is conducted bilingually.

In cognitive processes there is much in common between the speakers of L2 and L1. This fact substantiates arguments for the technique of representing the content of an L2 passage in a non-linguistic form. By the use of this technique, Japanese students should be allowed to exhibit their ability to describe what they have in mind. At the same time, there should be bilingual stages in which the students are made to explain the non-linguistic representation in their own mother tongue. This will be followed by exercises in which the same representations are explained by means of L2. This technique will make it possible for the students to learn L2 lexical items in a wider context of language use.

Keywords: *vocabulary, schema, background knowledge, bilingual technique, cognitive processes*

PREFACTORY REMARKS

It is often pointed out that vocabulary learning is an area of EFL to which due regard has not been paid. For instance, Jack Richards says at the outset of his often quoted article, "The teaching and learning of vocabulary has never aroused the same degree of interest within language teaching as have such issues as grammatical competence, contrastive analysis, reading, or writing, which have received considerable attention from scholars and teachers." (Richards 1980: 424) With the same sense of regret, the lack of interest in the area of vocabulary teaching in EFL has been complained about repeatedly (cf. Fox 1984: 27; Summers 1988: 111; Nation 1990: 1; McCarthy 1984: 12f.).

Vocabulary plays roles which are different from those of grammar and pronunciation. These latter two are of course inseparable components of the language structure, but the rules of grammar and pronunciation are strictly systematic. Therefore, in grammar and pronunciation, there is little room for choice from among the set of forms. People speak in quite a similar way as far as grammar and pronunciation are concerned. Since communicative value is generated where there is difference in the quantity of information stored[2)], this fact signifies that there is less communicative relevance in grammar and pronunciation than it is generally assumed that there is.

On the other hand, vocabulary is an open class of varied components from among which there is greater chance of free choice. There must, therefore, be greater communicative value in the difference between the lexical items chosen. This is the reason why "lexical items are powerful indices of 'expression' and are regularly marked attitudinally. Mistakes in lexical selection may be less generously tolerated outside classrooms than mistakes in syntax" (Carter 1987:

145) and pronunciation. To "native speakers faced with learner errors," lexical errors are normally rated "as more disruptive and more serious than grammatical errors." (Meara 1984: 229)

Most teachers of English in Japan, however, tend to think that "vocabulary can be left to take care of itself" (Nation 1990: 1) or that "vocabulary is somehow best left to be 'picked up naturally'." (Fox 1984: 27) This is particularly true in high schools and colleges. Although there is rising awareness of needs for intensified vocabulary teaching in EFL, efforts on the part of those teachers concerned are mostly limited to editing and compiling lists of lexical items on which students are supposed to focus their efforts. In this context, the importance of vocabulary teaching cannot be overemphasized in EFL, not only in terms of the number or the kind of lexical items[3] to be taught, but in terms of the enhanced productive and receptive strength on which the students can use lexical items in communication.

At this juncture, the distinction between direct and indirect vocabulary learning will be in order. "In direct vocabulary learning the learners do exercises and activities that focus their attention on vocabulary... In indirect vocabulary learning the learners' attention is focused on some other feature, usually the message that is conveyed by a speaker or writer." (Nation 1990: 2) In practice, however, there is the question of whether we should offer specialized courses of vocabulary teaching as an implementation of direct teaching.

In a class for direct vocabulary teaching, for instance, the teacher may be focussing on a list of lexical items and explaining the meaning of each of them. Or she[4] may teach how to analyze complex words and how to derive new words from the ones students already know. Such a class, however, cannot be attractive to the students, and, therefore, will fail in raising the students' motivation and developing their

skills.

Joanna Channell proposed to apply to vocabulary teaching the theories of semantic fields and componential analysis (cf. Channell 1981: 121). This is a type of direct vocabulary teaching. There will be some things to say for her, since this sort of theoretical/analytic instrument is informative and helpful to vocabulary learning. But direct vocabulary teaching should not be restricted to the application of semantics to EFL. It deals only with a very narrowly limited sphere of lexical information. It is, therefore, quite likely that M. J. McCarthy had J. Channell in mind when he said, "... vocabulary skill is clearly more than understanding the componential features of words and recognizing their typical collocations, more than the ability to define a word or slot it into a sentence, ..." (McCarthy 1984: 14)

What McCarthy implies seems to be that EFL encompasses more than linguistics tells us about the structure of a language. Linguistics as a scientific discipline has its own theoretical framework for the consistent explanation of the facts discovered. It has its own basic concepts which are more abstract than those used in EFL. F. de Saussure abstracted 〈la langue〉 and 〈la parole〉 from 〈le langage〉 and founded his structuralist theory on the concept of 〈la langue〉, at the cost of 〈la parole〉 and 〈le langage〉, which latter he regarded as too heterogeneous to be dealt with scientifically[5]. In the same way, N. Chomsky confined his interest to 〈competence〉 (or knowledge) as against 〈performance〉[6]. But seeing that EFL is not allowed to take note of elements of 〈la langue〉 [=competence] alone, we should look at EFL from the point of view of 〈le langage〉 [=performance]. We must agree with McCarthy when, in extending his approach, he speaks of viewing "the whole vocabulary-teaching problem in terms of a performance model rather than competence." (McCarthy 1984: 15)

Obviously, the use of lexical items in actual communication is an extremely complicated process. It is part of the integrating process of expressing and understanding. The process is so complicated that, currently, nobody can claim that they have succeeded in perfectly isolating every element of production/reception that might exist there. There is good reason for taking a holistic view and an eclectic methodology in teaching vocabulary in EFL.

Around the beginning of this century, Natsume Soseki[7], Japan's greatest literary figure in the modern times, objected to the 'division of labour' in EFL at school and supported a holistic point of view. In criticizing and deploring the contemporary Ministry of Education's failure in advancing appropriate procedures, he writes to the effect that in teaching a language, which is an organic whole, there should be no dividing it up into subjects, such as conversation, grammar, translation, etc. This is like dissecting a living body into parts like nervous system, gastro-intestinal system, respiratory organs, and so forth. For scientific research, such separation will serve the purpose, but it will not serve the purpose of teaching a language. A foreign language should not be taught separately by reading specialists, grammar specialists, translation specialists, composition specialists, etc. All these are teaching the same thing. With the idea of an organic whole in mind, the teacher should accommodate herself to the students' needs and take up some flexible way of teaching.

History repeats itself, however, and Soseki's remarks are still true of the present day EFL. Even pronunciation or grammar cannot be taught in vacuum; namely, in EFL there is no teaching a speech sound in itself or word order in itself, independently of the relevant lexical content. From the very initial stage of EFL, there is need for a holistic approach throughout.

SETTINGS

To reiterate, vocabulary has to be taught in terms of performance. But several elements in school situations hinder such communicative methodology from being put into practice. The first to mention is a long-standing traditional attitude prevailing in higher education in Japan. Jerry O'Sullivan says, "... the Japanese are not trained to think of English as a means of communication" (O'Sullivan 1992: 108). English has been taught in non-communicative ways at high school. This strong tendency lingers on in colleges and universities and prevents the ideas of communicative teaching from being realized in the classes.

The second element is the general lack of communication, not only between the teacher and the students, but among the peers in the class. This defect is not confined to EFL classes. A Japanese teacher teaching any other subject will also have difficulty in getting quick responses from her students unless there is a clear-cut answer. The students do not want "to talk in settings where they will stand out in front of their peers, ... rather than make themselves vulnerable as individuals." (F. E. Anderson 1993: 103)

Thirdly, there are factors for which the Ministry of Education is responsible. Its ordinance requires university curricula to be such that the class meets only once per week. The serious drawback coming from this is that it has disruptive and deterrent repercussions upon the continuous buildup of communicative ability. At the same time, the Ministry of Education ordinance does not pay any regard to the different conditions of instruction for different subjects or branches of a subject either. It is not unusual that a class for EFL consists of more than fifty students, just as does a course of economics. The excessive-

ly large class size is often a pretext for ineffective EFL teaching methods such as grammar-translation method.

There are other questions of teaching conditions which are extraneous to EFL proper. They are predetermined conditions to whose retrogressive force EFL teachers are only too vulnerable. In spite of these disadvantages, however, it should be part of a teacher's responsibility to devise some effective classroom technique to overcome the problems posed before her by the faults inherent in the system and set out to teach vocabulary in terms of performance.

COGNITIVE PROCESSES

Classroom teaching is a communicative process. There are two aspects to it which we have to address in this essay: namely, pedagogical and psychological aspects. In this section, the latter aspect shall be considered.

Nowadays there is nobody who believes that the use of language (performance) can be explained solely in terms of stimulus-response, as it used to be during the period in which Bloomfieldian structuralists were flourishing. Learning one's mother tongue and its use is much too complicated to be explained naively. So is the process of learning a foreign language. But recent developments of cognitive sciences tell us what should be pinned down in considering EFL methodology.

Learning may be renamed as the acquisition of knowledge, but there are different types of knowledge which are acquired in different ways. According to cognitive pscychologists, there are two categories of knowledge, i.e. the declarative knowledge and procedural knowledge which are differentiated from each other[8].

Declarative knowledge is mainly acquired through verbalized infor-

mation. This type of knowledge can be intentionally recalled, and the knowledge thus recalled can be the object of consciousness and expressible in linguistic or visual forms. On the other hand, procedural knowledge is not usually recalled in a linguistic form, but can only be realized in a practical operation. Usually this latter type of knowledge is not to be brought to the foreground of consciousness.

According to L. R. Squire (1987)[9], declarative knowledge is stored in the forms of semantic memory and episodic memory. Semantic memory is the memory of word meanings and concepts which are abstracted away from elements of the specific time and place where the meanings and concepts are acquired. On the other hand, episodic memory is the memory of events which an individual has experienced in relation to a specific local as well as temporal context. However, no clear division between the semantic memories and the episodic memories is said to exist.

Procedural knowledge is the knowledge of what to do and how to do it. There are several different types of procedural knowledge. For instance, the classical example of conditioned reflex movement is a procedural knowledge. So is the learning of sensory perception. There are plenty of instances of procedural knowledge that can be seen in everyday life. A good example of it will be the knowledge of how to drive a car. But there is no doubt that the knowledge of how to use a foreign language is also an example of procedural knowledge.

Although the knowledge of driving normally is not the object of consciousness in the course of practical operation, such knowledge is not acquired in one leap. At the initial stage of learning to drive, there has to be verbal explanation of how to do it. It may be given by the instructor or accessible through a handbook. This information obtained from the instructor or the handbook is stored in memory as

declarative knowledge. It has to be recalled repeatedly before the instructions are put into practice so that the learner can manage to drive more or less successfully. What occurs in this J. R. Anderson (1983)[10] calls the declarative stage of procedural knowledge acquisition.

The repetition of recall and the repetition of practising will eventually make the operation automatic; the operation of driving can be carried out without being consciously recalled in verbal forms. This is the way in which the procedural knowledge of driving is generated from the declarative knowledge. It is the transformation of declarative knowledge into a procedure. This transformation is called proceduralization[11].

If, then, the declarative knowledge is mainly verbal knowledge, does it solely consist of the knowledge of a language? Absolutely not. In addition to the linguistic knowledge, i.e. the knowledge of syntax and semantics, as well as the knowledge of vocabulary and idioms plus the knowledge of their use, there are extralingual types of knowledge of the world connected with the content of linguistic expressions and the contexts of situation.

How, then, is the declarative knowledge acquired? It is after all assumed that declarative knowledge is acquired in the form of schemata or scripts[12]. It is an integrated system of information which takes on a form termed schema, script, scenario or frames. The information about a car is a pretty well defined system of knowledge. With regard to driving, there is the background knowledge of a well defined procedure of handling a car. These pieces of information take on the form of a schema or a script.

As early as the 18th century, Kant, in his *Critique of Pure Reason*, gave a psychological account of the production of schemata "as an art hidden in the depths of the human soul." (Körner 1955: 71) To him,

schemata are produced by the human soul in some mysterious way[13]. So the schema for him was not simply the method of representing the mental process, but the result of the very process in which the mind operates towards the acquisition of a universally valid concept.

According to the present day cognitive sciences, the schema or script is the form assumed by the declarative knowledge. But the mental process underlying the form is no less important than the resulting form of representation. Whatever form the declarative knowledge assumes is the realization of a relevant mental process. As Kant says, schemata are the realized forms constructed through the mysterious mental processes.

The incessant process of construction underlies schemata or scripts. Every time there is a conceptual representation of a particular entity or event, such as a car or a car accident, the schema or script of the entity or event has to be constructed accordingly. This is borne out by experimental psychologists, such as M. D. Williams & J. D. Hollan (1981) and E. F. Loftus & J. C. Palmer (1974)[14]. However, the basic principle of the theory of schema is that it does not exist independently as a concrete entity, but that it has to be reproduced as often as the occasion arises.

Returning to language learning, consider the idea of 'word'. It is as if there were something independently existing as a palpable entity, like an apple. It is a countable noun, like 'apple', distinguishing a single existence from a plurality of existing words, just in the same way as 'apple' distinguishes itself from 'apples'. But the idea of 'word' as well as that of 'apple' has to be mentally constructed and reconstructed so that it is retained in consciousness as far as it is the object of consciousness.

'Word' and 'apple' as concepts are quite alike. The schematic

representation of 'word' and that of 'apple', however, show several contrastive features. Most significantly, the schema of 'apple' has the component of solid material existence; 'word' on the other hand has no such element, being the materialization of (part of) a communicative act. Without speech activity, there is no such thing as 'word'. Therefore, Jack Richards is right in saying: "... words are not simply labels for things but represent 〈processes by which the species deals cognitively with the environment〉 (Lenneberg 1967). The dictionary entries for a word try to capture the most frequent ways in which a word realizes a particular concept; however since this is always an active process of reconstruction, much of the way in which a particular meaning is formed cannot be recorded in the dictionary." (Richards 1980: 431)

METHODOLOGY

As with EFL in general, the teaching and learning of vocabulary has to start with the declarative knowledge and end with the complete proceduralization of that knowledge. Besides formal features, lexical information as declarative knowledge contains the declarative knowledge of its semantic and pragmatic components. Therefore, a teacher may begin by presenting her students with a list of semantically related lexical items and explaining the rules which govern the semantic relationships that hold among the items. Joanna Channell (Channell 1981: 116)'s proposal for applying to vocabulary teaching the theories of semantic fields and componential analysis is an instance of the method for declarative knowledge acquisition.

There is also a vast variety of background knowledge which make possible the use of a lexical item in an appropriate context of situation

as well as in an appropriate verbal cotext. This type of declarative knowledge can assume verbal forms, but it can also be represented non-verbally. Gillian Brown and George Yule (Brown and Yule 1983: 237f.) explain in terms of frames, scripts, scenarios and schemata the ways in which background knowledge is to be represented. Cognitive scientists, as has been observed above, suggest that the schema and the script represent the form in which the declarative knowledge about the background is acquired. The schema and the script are not only the forms in which an entity or an event is mentally represented, but they are also the ways in which a complex network of background knowledge is to be technically represented. They are the products of psychological processes as well as the features of explanatory procedures.

This is the reason why the theory of schema and/or script is a useful tool in teaching the meaning and the use of a lexical item. Although this is not always the case, an entity, the process and the relation involving the entity can be represented in the same schematic representation. 'A cooking apple' and 'cooking an apple' can be represented by a similar schema, with only a slight difference in the way in which the focus of attention is centered. By the same token, 'a car' and 'driving' or 'a cruiser' and 'cruising'[15] may be represented in a similar script, with a similar difference in the place of focus. Thus, one and the same schematic representation or script-type representation can be used for the purpose of explaining several lexical items in relation to each other within the same framework of semantic association.

There is another merit of schema/script representation. Because of the level of intellectural maturity at which the learners the age of eighteen or twenty have arrived, they have a plentiful storage of information acquired through their eighteen or twenty years of experi-

ence. The students, however, may generally be poor at a foreign language; they may be unable to show in L2 that they know so much — that there are schematic representations in their mind evoked in relation to existing stimuli and organized by means of the native language they can use with full competence. But if they are allowed to use L1 in developing those schematic representations, they will feel positive in showing how far they have advanced in comprehension. Furthermore, the content and structure of the schematic representation remain nearly the same, no matter whether it is organized through their mother tongue or in a foreign language. Considering the great disadvantage they are at when they are required to represent what they have in mind using L2, the schema or script in a graphic form will help the students to make explicit the extent to which their comprehension has been achieved.

There is, therefore, no need to stick to L2 in making use of the schema technique. This saves the class the tension caused by forcing the students to think in L2 during the entire lesson. If such a monolingual method is to be adhered to, the teacher will quite often have to lower the teaching materials to a level which ensures that the students can respond efficiently so that the lesson may proceed smoothly. The content will not match the students' level of maturity. The classwork may be exceedingly burdensome and boring, and a considerable length of time will be wasted in apathetic silence on the part of the students.

Finally, although the two-dimentional schematic representation looks as if it were fixed as seen mapped on a piece of paper, it is nebulous initially, and in a constant flux in fact, ready to be activated within the students' minds. And the students as learners usually find some difficulty in constructing in L2 the framework of an idea, especially that of an abstract concept, the complicated content of an

utterence, or the background knowledge with regard to a passage. Therefore, the teacher will be well-advised to introduce a bilingual technique and make use of the students' L1 wherever it is conducive to efficient and effective vocabulary teaching.

To sum up, it is advisable to introduce a bilingual step into a class of L2 vocabulary teaching so that the declarative knowledge of a relevant lexical content can be activated in the mind of the students. And the schematic representation of a lexical item should be repeatedly reconstructed in order to achieve a comparatively stable form. Then, prior to a more advanced stage in which L2 is used to the best advantage, such a stable form may be mapped on a piece of paper or on a board in the classroom and discussed in the mother tongue.

PROCEDURE

Most universities in Japan teach English in classes for reading. In this section, a procedure shall be considered with the teaching of both reading and vocabulary in view. It must be noted, however, that the procedure depends on the right reading selection as well as teaching method. If the textbook chosen does not suit the EFL purpose, this failure in selecting an appropriate textbook is bound to lead to the failure of the course as the whole, as well as vocabulary teaching. For instance, a piece of drama will not do[16]. What will serve the purpose best in order to improve the students' ability in English vocabulary will be the explanatory prose, because texts of this genre are in general logically organized, and therefore students can presume that the sequence of propositions is logically determined. Besides, the lexical items are usually void of special connotations, so that there is less chance of being misled into entanglement of irrelevant images.

Even if a good textbook is selected, that is not sufficient to ascertain a good teaching of reading. It can be an impediment to developing students' reading ability if the text is read by the method of total translation. Such a method must be abandoned by all means. Instead, there must be other techniques introduced such as those suggested in the previous section. The following is an example of techniques conducive to teaching of both reading and vocabulary well.

Consider the application of this technique to the reading of paragraphs. The students are at first asked to read in silence two to four pages comprising a dozen or more paragraphs. They are required to understand the initial sentence of each paragraph. In order to make sure whether they have understood, the teacher asks questions or make them write down in L1 what they take as the message. The series of paragraph-initial sentences are gone through and there emerges the content structure of the passage of two to four pages[17]. It is assumed that if they do understand a paragraph-initial sentence, they will be able to anticipate what might be coming after the second sentence of the same paragraph.

Then the teacher selects an important or convenient paragraph (or two) out of the passage and makes the students read it in silence carefully for the second time, so that they may be able to remember the content and recall it afterwards. After a few minutes, the teacher asks the class to shut the textbook and try to recall what they have just read. Then she makes them write down or draw a diagrammatic representation of as much as they can recall[18].

Thus, whatever the students imagine to follow the paragraph-initial sentence or whatever they can recall of the text they have just read, they are made to represent verbally or to map on a piece of paper in a two-dimensional form. This process of representing the content of

the text just read or the content imagined to come afterwards is the task of the construction similar to what J. Richards conceived and referred to in the citation above[19].

In this exercise, in which the student is made to map the schema, he constructs it with the power of imagination and shows it to his peers and the teacher. This task is evidently different from the kind of translation exercises the students are used to, in that it is free from dependence upon word for word translation. Instead, the student is asked to explain the mapped content in his own words, transforming a two-dimensional representation into a one-dimensional linguistic form. The student is allowed to start the explanation at any suitable point in the mapping. Thus he will learn the principle of text structuring according to which the beginning of the discourse determines what follows.

Another feature of this explanation exercise is that the student is given the freedom to use either L1 or L2 as he pleases, rather than sticking to the syntax and lexis of the original text. As the student usually has limited L2 capacity, he must be allowed to use L1 if he feels like it.

The use of L1 will stimulate the student, in that it makes him feel much more inclined to spontaneously express himself than by means of translation, and also in that it allows him to take advantage of the L1 background knowledge stored in his mind. The student will be willing to explain the map by means of L1, because he feels much more at ease than if he is required to speak L2 in which he is not yet competent enough. Thus, he will be motivated to be positive and expressive in the classroom activities.

This, however, is not the end object of the exercise; it is a midway stage in the progression. It is a step towards the use of L2 in the

interpretative account of the schematic representation.

Now the student has read the text in L2 and finds himself to be able to explain the content in L1. The next step is for him to give the explanation its L2 form. He will read the map and turn it into L2 expressions in the way he likes. Wherever he starts will determine what he is to say next. The ordering of parts of the content may be different from that of the original text, but it does not matter as long as the whole content is actualized in L2.

This is no verbatim translation work, but rather an exercise in free expression, although the content to be expressed is predetermined. If the student can express the same content not only in his own language but also in L2, then he can be assumed to be capable of a good command of the original text. It is only after thus giving his comprehension an explicit explanation in L2 that the student should be made to read the original text aloud.

At this point, the student may be made to campare the skill of the original with the clumsiness of his own way of expressing the same content. He will perceive how the author of the original has devoted his or her talent to the organization of the text. He will learn how he should improve the use of L2 with which he has tried to explain the schematic representation of the text.

Consider now the teaching of lexical items in this context. As has been noted above, it can be integrated with the teaching of reading if the teacher adopts the method of schema mapping outlined in the preceding paragraphs. In the mapping of the content of a text, it is represented in a network, with several nodes corresponding to the constituent nuclear concepts and relationships that hold between these concepts. The node may have the shape of a box, for example, as a container for a concept, and the relation will be expressed with a

connecting line, with or without directional indices[20].

The lexical items referring to the constitutent concepts are assigned to the node boxes, and the relations between them may or may not be given their verbal expressions. At the initial stage when the concepts and the relations are given expressions in L1, there is scarcely any serious problem about the schema network representation; the students will be able to readily explain the structure and the content of the schema.

At a more advanced stage, however, when the schema is to be represented with the L2 lexical items, and every nuclear concept and relation are to be explained in L2, the student, explaining the schema structure, has to resort to what inadequate vocabulary he has learned by then. He will be unable to immediately recall the right words to use in referring to the concepts or the relations. Experiencing difficulties, he will realize the importance of developing vocabulary and enriching the stock of lexical items at his disposal. At the same time, he may have secured the memory of the lexical items he has used in this exercise, particularly those which he has remarkably succeeded or failed in getting approval from the teacher and the peer students, even from himself.

Prior to this exercise, the teacher may help her students with a list of lexical items to be used in the explanation of the schema, or by encouraging them to pay heed to the lexical items they encounter while reading texts. The teacher may have recourse to the knowledge of word formation, semantics, etymology, cultural background and so forth. What is vital, however, is not the explanation based upon the information derived from linguistic sciences, but the way in which the students are taught to internalize —— to transform into the procedural knowledge the declarative knowledge of —— the lexical items, both in

their formal and semantic features, both in their actual and potential uses in appropriate contexts. This technique will stimulate the students to take note of any necessary lexical item and endeavour to obtain sufficient mastery of them, while studying in other E2 skills, such as speaking or writing at the same time.

To conclude, a reiterated emphasis will be in order upon the psychological status of linguistic forms, including words and other lexical items. They have no independent existence; they cannot exist unless they are actualized through language activity, i.e. unless they are internally reconstructed and actually enunciated by an individual speaker [=hearer]. This is the reason why the schema mapping technique is amenable to the classroom teaching of E2 vocabulary in Japanese universities.

CONCLUSION

The technique proposed above has not yet been subjected to a psycholinguistic experiment by which its efficacy will be accounted for statistically. Therefore, there may be arguments against it. For instance, the use of L1 in mapping and explaining the relevant schema may be questioned; some may suspect that making use of L1 at an earlier stage may hamper effective acquisition of L2 lexis. But what is assumed throughout this essay is that the background knowledge stored in the students' memory through the use of L1 should be more accessible to the students themselves than the L2 version of the same schema, and that the schema constructed by means of L2 will tend to be impoverished and rendered unserviceable on account of the inadequacy in L2 competence.

Such a study will after all be categorized as classroom-centered

research relying upon an accumulation of experiences. This might end up with a collection of maxims for conducting fruitful teaching in L2 vocabulary.

Concerning the concept of schema which allows for a variety of definitions[21], these differences are totally ignored in this paper. What is more forcibly underlined here are the mental processes of internalization and reconstruction in the course of vocabulary acquisition and vocabulary use, both in productive and receptive phases of performance.

However, it is our hope and belief that the teaching and learning of vocabulary at a Japanese university will be more profitably carried out in spite of the disadvantageous classroom conditions through introducing the schema mapping techinique[22]. The reason is that the students are allowed to rely confidently on the mass of background knowledge that has been stored in their mind.

This is not the end of it, however. The students are required to explain the already clarified schema by means of L2. They will, in this way, learn L2 lexical items in an appropriate context of situation sustained by their background knowledge. This is, we hope, one way of applying Jack Richards' dictum (Richards 1980: 431; see above p.93) to the situation of Japanese universities.

NOTES

1) This is an extended English version of the paper which was originally read in Japanese at the Hokkaido Chapter Conference of JACET on July 16, 1994. In rewriting it in English, the author depended upon the kindnesses of Mr. Lorne Kirkwold, his colleague for making some of the expressions more felicitous and free from errors. For any remaining

mistakes and infelicities none but the author himself is responsible.

2) Cf. Hockett 1977: 71-96.
3) In the context of EFL, a lexical item is assigned to either the recognition (passive) vocabulary or the productive (active) vocabulary. There is no clear line to divide the two categories, however. (Cf. McArthur 1992: 1092) Any lexical item that belongs to the category of production vocabulary starts its career as an item of recognition vocabulary; and quite a few end up as items of recognition vocabulary in the course of obsolescence.
4) In this essay, the teacher is referred to by the feminine pronoun, while the student is by the masculine. Cf. D. Sperber and D. Wilson, *Relevance*. Basil Blackwell. 1986, p.256.
5) Saussure 1955: 23ff.
6) Chomsky 1965: 4.
7) Natsume Soseki taught English at a middle school in the city of Matsuyama, Ehime from 1895 to 1896. He wrote an essay on the teaching of English in 1911. The relevant passage is quoted from it in Okano 1994: 52.
8) Ichikawa *et al*. 1994: 25-30.
9) L. R. Squire, *Memory and Brain*. Oxford U.P. 1987, referred to in Ichikawa *et al*. 1994: 80.
10) J. R. Anderson, *The Architecture of Cognition*. Harvard U.P. 1983, referred to in Ichikawa *et al*. 1994: 28.
11) Id.
12) Ichikawa *et al*. 1994: 26.
13) Immanuel Kant says, "Dieser Schematismus unseres Verstandes in Ansehung der Erscheinungen und ihrer bloßen Form ist eine verborgene Kunst in den Tiefen der menschlichen Seele, deren wahre Handgriffe wir der Natur schwerlich jemals abraten und sie unverdeckt vor Augen legen werden. So viel können wir nur sagen: das Bild ist ein Product des empirischen Vermögens der productiven Einbildungskraft, das Schema sinnlicher Begriffe (als der Figuren im Raume) ein Product und gleichsam ein Monogramm der reinen Einbildungskraft *a priori*, ..." — *Kritik der Reinen Vernunft*. Georg Reimer. 1911, S.136.
14) Ichikawa *et al*. 1994: 16f.

15) This does not mean that the schemata or scripts of the paired items exactly coincide with each other; it means that they can occupy places within the identical schematic network of a complex concept. This latter represents a superordinate concept covering the concepts of the pair.
16) Cf. *Gengo-Bunka Centre Kiyoh* (The Bulletin of the Language and Culture Centre), No.7. The College of Arts and Sciences, Tokyo University. 1986, p.58.
17) See Appendix A.
18) See Appendix B.
19) See p.93 above.
20) See Appendix B.
21) Joanna Channell regards schemata as comprising the semantic fields, while G. Brown and G. Yule regard as a topic what E. E. Smith and D. A. Swinney deal with as a schema. Cf. Channell 1981: 121; Brown and Yule 1983: 72; Smith and Swinney 1992: 303.
22) The present research is pursued independently of Suenaga 1993. It is impossible, however, to disregard the close relationship existing with him.

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APPENDIX A: Paragraph-initial Sentences Read and Explained by Students of H.P. Rickman, *British Universities*. Nan'un Doh. 1987, pp. 50f. & pp.53f.

[The text consists of 10 paragraphs, to which is given a number in the order of appearance. The underlined parts represent the main ideas of the paragraphs. The underlines are given to show that those parts read one after another will be sufficient for perceiving the content structure of the passage. The sentences in Japanese are selected from the works of 130 students.]

1．何年もの間、作者の仕事は、作者の大学で哲学を学びたいという生徒の入学願書を処理することであった。
2．この国の通常の健康な子供と同じように、ジェーンは5歳で学校に行き始めだいたい11歳になるまで小学校にいた。
3．例えば、ジェーンは公立の女学校に通っている。
4．Aレベルの勉強の2年目の秋、彼女は大学への願書を出さねばならない。
5．ジェーンは大学選びに助言をもらっていることだろう。
6．イギリスの大学の間に、順位づけがあるという事実がある。それは、古い大学であるオックスフォードやケンブリッジが最上位で、州立大学のいくつかが底辺にあるというのだ。
7．ジェーンは彼女の3番目の選択として私の哲学コースにしたので、彼女の入学願書が私のところに届いた。
8．彼女が勉強しているAレベルの試験のリストが続いて記載されている。
9．ほとんどの志願者はまだ在学中で、Aレベルの試験を受けていないので、これは、普通の手順である。
10．受験者の第3の範ちゅうとして、大人の学生というものがある。

APPENDIX B: Schematic Mapping by a Student of H. P. Rickman, *British Universities*. Nan'un Doh. 1987, p.22, *ll*. 10-23.