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# A Content-Based Approach to the Learning of Vocabulary Through Composition and Schematic Mapping

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## ABSTRACT

This paper is a preliminary study of the teaching of vocabulary to 1st year Japanese Studies majors in the newly created Faculty of Humanities of Hokkai Gakuen University. The teaching was centered around a theme-based student centered approach incorporating schematic mapping. The purpose behind this approach is an attempt to demonstrate to the students that they, not the teacher, are their own best resource when learning a new language, or anything else for that matter. The affective and cognitive components of this teaching approach are given a theoretical basis and presented as factors influencing student achievement in the classroom. It is hoped that exposing students to this approach will enable them to become aware of a learning strategy with which to continue their education beyond the classroom, that is, throughout their lives.

**Keywords:** *vocabulary, composition, schema theory*

## INTRODUCTION

### *Background*

The 21 students described in this study are 1/3 of the first group of Japanese Studies (day) majors in the new Faculty of Humanities. In addition to the Vocabulary class described, they are required to take a

Faculty of Humanities' Listening Comprehension/Pronunciation class and two other English classes from the Faculty of General Education in their first year of university study. All the English classes meet once a week for 90 min. over 24-26 weeks.

The goal for this program is not to have students attain an arbitrary level of proficiency in English usage, but to enable them to express their views of Japanese culture and language through the medium of English. To this end, the classes have been structured around culturally oriented themes to expose the students to the knowledge of Western culture necessary for making comparisons to their own. This approach, besides being convenient for our program, is also pedagogically sound as reflected in current literature. This content-based approach to instruction is defined as follows:

“... the integration of particular content with language-teaching aims. ... (where) the activities of the language class are specific to the subject matter being taught, and are geared to stimulate students to think and learn through the use of the target language.” (Brinton et al., 2).

#### *Description of the Vocabulary Course*

The use of content-based instruction to improve vocabulary retention has been recently reported (Kiji and Kiji, 1993). While the results of this study are certainly not conclusive, they do indicate that the learning of vocabulary is enhanced when the context is made meaningful for the students. Reading researchers have also found the following:

“The easy way to learn words is not to work with individual words at all but with meaningful passages of text.” (Smith, 148)

Besides the use of thematic study units to provide content, there is

an attempt to make the Vocabulary class more student centered by encouraging the students to personalize the theme through the incorporation of written final products in narrative form. This use of narrative essays for beginning levels of composition instruction is supported by current pedagogy (Blot and Davidson, 97). The essays not only provide a goal with which to focus the content of the thematic unit but also an accessible document that provides evidence of progress as well as areas that need further work. These essays use topic prompts that encourage students to furnish information about their own preferences and experiences. It is hoped that this personalization of the thematic unit will heighten the students' involvement with the content and, thus, increase their motivation.

Prior to writing the essay, the students interact orally with each other in order to help them formulate and organize their preferences and experiences (Blot and Davidson, 97). In addition, having to converse about the topic highlights the vocabulary that will be necessary to complete the tasks that follow. The students' ability to respond adequately to oral questions posed by their partners (the responses are recorded in a written report) should make them aware of their readiness to respond to an essay prompt on the same subject.

Since the oral skills proficiency of 1st year students is understandably rather low, the above interaction is in the form of a teacher structured interview/questionnaire with which partners' elicit information that should prove useful in the subsequent writing assignment. Many language instructors have found that structured activities are useful in Japanese classrooms, as in the following quote by textbook author and School for International Training (SIT) faculty member Kathleen Graves:

“In my experience with Japanese learners, I have found that activities

may need to be highly structured so that their roles are clearly understood. Once they know what is expected of them, they will rise to the challenge and become active participants.” (quoted in Edwards, 4)

### *Application of Reading Theories to the Writing Process*

In terms of psycholinguistic research, reading and writing can be viewed as two halves of written language (WL), a vehicle allowing communication over time and space. Psycholinguist Kenneth Goodman regards interactions with WL as transactional: writing as generative WL and reading as receptive WL. In summary, the writer, through transactions with the writing process, generates, or constructs, a text to represent some meaning; the reader, through direct transactions with the published text, reconstructs the text in his mind and, from this, constructs his own interpretation of the writer's intended meaning. Thus, meaning passes indirectly from the writer via the written text to the reader. The most important concept contained in the above is that meaning is not inherent in the text itself, but rather that the text has a potential for transmitting meaning, with the skills of the writer in originally constructing the text and those of the reader in both reconstructing it and constructing meaning, determining the extent of comprehension (Goodman, 81-82).

I propose that the symmetry inherent in the relationship of writing to reading — i.e., many of the same language and cognitive skills are necessary in both the generative and receptive processes for the successful transfer of meaning from writer to reader — allow the following quote by M.B. Hanf to be extended to include writing:

“... reading is essentially a language-thought activity, [where the three basic critical thinking skills are defined as] ... (1) acquisition of

information, (2) organization (structuring and symbolizing), and (3) evaluation.” (Hanf, 225-230)

Thus, by extension, these three cognitive skills are also necessary for the writer to be able to encode information representing some meaning in a manner that will enable the reader to construct his version of the original meaning as accurately as possible.

### *Definition of Schema Theory*

Reading researchers have long known the following:

“Learning is self-directing and self-reinforcing when children are in a situation which makes sense to them, that can be related to what they know already. ... Anything I cannot relate to the theory of the world in my head will not make sense to me. I shall be bewildered.” (Smith, 55 and 148)

Schema theory was created in an attempt to explain the relationship of thought to the brain, not in structural or organic terms but in terms of stored knowledge and experiences and their effect on the thoughts and actions of individuals. With schema theory, everything that people learn, in fact everything that makes people individuals, is presumed stored in the brain in a conceptual filing system (Rumelhart, 8). The organized, stored information is defined as an individual’s schemata (plural of schema). The stored knowledge grows and is modified as individuals gain new information and experiences. People can, thus, be described as storehouses of innumerable schemata — background information schemata for specific events, objects, etc., in addition to abstract concept schemata concerning associated feelings, ideas, etc. In fact, the schemata that we contain determine who we are as individuals as well as members of a culture.

For the purposes of this report, as I and others have done previous-

ly, schemata is divided into two categories: 1) formal schemata — the background knowledge of and experience with textual organization (grapho-phonetic system, syntactic system, semantic system, rhetorical structures, etc.) — and 2) content schemata — the background knowledge of the content (vocabulary, associated information, cultural background, personal attitude, etc.) (Carrell 1983a, 560).

In previous reports, I and others have applied schema theory to reading and schematic mapping to improving native language (L1), English as a second language (ESL), and English as a foreign language (EFL) reading skills (Hanf, 225-226; Carrell 1983a, 560, 1983b, 184, and 1988, 3; and Suenaga). Although some may argue that the Japanese language is nonalphabetic and non-Western, and thus schema theory is inapplicable, studies have shown that L1 readers in another non-alphabetic Asian language, Chinese, use reading strategies similar to English L1 readers (Field, 173-175).

### *Schematic Mapping*

From the above, it is clear that any thought process, including writing, requires considerable reliance on an individual's schemata. One way that writers can directly access vocabulary schemata appropriate to a theme is through schematic mapping, a simple technique that enables the user to graphically encode information in an organized manner. This technique emphasizes the active participation of users, provides immediate feedback, and encourages critical thinking (Hanf, 225-226). The mapping directly stimulates perceptual contextualization and comprehension and, it is hoped, retention.

“Sensory data that come together are stored together. ... Bringing back one item in an image also tends to bring back the other items in that same image.” (Stevic, 23)

In this case, the sensory data consists of vocabulary — individual words or short phrases — appropriate for the content being studied. This vocabulary is selected by the student and written onto a previously blank piece of paper. The organization and interrelationships among the words are indicated graphically: a two dimensional map.

Through this technique, users learn to identify not only main ideas, subcategories, and supporting details but also associated vocabulary — the same skill that is necessary when constructing coherent paragraphs and essays. Critical thinking is involved when they must identify information, evaluate its suitability as map components, and determine what interconnects the information and makes it whole — i.e., being aware of specific categories of information and a network of interrelations among them. After initially accessing their own previously acquired schemata for a particular topic, users then further develop it as an on-going process by combining several types of mapping activities onto one map; different colors are used to show where they started and what they have added or corrected.

This addition and self-correction to the schemata that students bring to the thematic unit leads to learning as suggested by W. Kintsch:

“It is change, incongruity, surprise that leads to new learning. ... Misfits between the apperceptive mass and new information ... provide the right conditions for learning, which is now conceived of as a correction or addition to existing knowledge structures.”  
(Kintsch, 611)

## **CLASSROOM PROCEDURE**

Since the Vocabulary course is taken in the first year when students are being introduced to the syntactic and rhetorical features of



paragraph and essay writing, the students are provided with main ideas/topics as well as themes. Depending on the theme and exercise, the students either work in pairs, groups of three or four, or individually.

The students begin their schematic map on an initially blank piece of paper by adding the theme in the center. Radiating out from the theme are lines labeled as main ideas/topics; branching off these main idea lines are lines representing subcategories, which might themselves have additional lines representing supporting details. Associated with all of these various lines are the appropriate vocabulary items, either individual words or phrases, necessary for their explication

The construction of this vocabulary schematic map proceeds through several stages interspersed with other language related activities to bring focus on additional vocabulary items that are necessary but not yet mapped as well as on syntactic forms that may prove useful.

1. The students map previously known vocabulary items — i.e., pre-existing schemata — onto their maps in appropriate locations: main ideas/topics, subcategories, or supporting details. They are allowed to consult other students but not dictionaries in order to instill the concept that they are their own best resource
2. In the second stage, they are allowed to use dictionaries to make spelling and semantic corrections, convert Japanese to English, and add new entries — using a different color to signal changes.
3. The third stage features grammar lessons to focus on syntactic forms that probably would be useful in their essays.
4. The fourth stage is an attempt to incorporate the above syntactic forms and vocabulary into an oral exchange among students involving the content of the forthcoming essay. Since the students are only in their first year, the exchange is formatted as a

structured mutual interview with pre-set questions.

5. Students finding that they have insufficient vocabulary or information to answer their partner's questions can add additional items to their maps.
6. Prior to writing personalized narratives, they read a sample essay on the same theme in order to provide a model for appropriate organization and types of semantic structures. This step would not be necessary at later stages of their learning when essay formats and rhetorical patterns have become familiar. For a similar reason, they are allowed to refer to their maps but not dictionaries.

## RESULTS AND DISCUSSION

The results, although encouraging, have to be considered preliminary because the students have only encountered two themes with this method. The most striking feature noticed among most of the students is the increased involvement in their own learning. Because the classroom exercises have become less abstract by the contextualization created by the use of student centered themes, the students are more eager to communicate their thoughts through the medium of English. This increase in motivation is a reflection of their understanding that the goal of their learning is not to improve examination results, something of rather short-term and limited value, but to communicate a part of themselves to others. Also, they have gained confidence because the mapping process directly involves them with the selection and categorization of vocabulary appropriate to their ideas with only minimal external direction. My assumption is that students who are more directly involved with learning tasks will progress more rapidly from being passive participants in the classroom, mere recipients or con-

sumers, to being active seekers of knowledge; this transition is necessary to develop students as independent learners and, moreover, thinkers.

The more open classroom environment that this method requires is based on the following assumptions:

We learn by doing.

The teacher grants students what they bring; i.e., they are accepted as individuals who have accomplished many of life's most difficult learning tasks prior to entering school — communicating in their native language, acculturating to their society, and dressing and feeding themselves — and thus bring to the classroom the acquired knowledge as well as the skills used to acquire them.

People's own best resource is themselves.

## **CONCLUSION**

Despite the short implementation period of a few weeks, most of the students are able to understand and accomplish what is required in the Vocabulary course although some still need a certain amount of encouragement to keep them on task. Of course, the ostensive purpose of the course is the acquisition of vocabulary; however, more global issues such as communication and learning strategies are also of concern. When students are encouraged to begin taking charge of their own learning in the classroom, they are practicing to become learners able to take charge of their own learning throughout their lives: the purpose of education. By the end of their Freshman year, it is hoped that all students who feel a need to communicate in English will not only have become better writers but also have learned critical thinking skills that will prove useful beyond the English classroom.

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