To avoid confusing children, a reading approach from the very beginning should stress logical relationships based on experiences. Drilling words, sounds, or even sentences should be avoided since these practices lead to deviant schemes. A lifetime scheme involves teaching a child a process. Children need to learn a process by which they can organize ideas in order to produce or comprehend. The semantic organizer approach is such an attempt to help children internalize theoretically models of proficient readers and writers. It is the link between cognitive organization and written syntactic structures. A semantic organizer describes the basic concept. There are six different types of semantic organizers: (1) realia clusters which make use of real objects that children organize around a central topic; (2) picture clusters, which involve only pictures; (3) verb clusters, which are composed of a single verb with pictures and later, nouns related in a diagram; (4) noun clusters, which involve both nouns and verb phrases; (5) concept clusters, which are less structured and represent relationships of ideas to a topic without much regard to the type of words used; and (6) episodic clusters, which demonstrate relationships of events over time. Prior to writing a paragraph, a student can be taught to organize ideas logically without becoming concerned simultaneously with the syntactic issues involved in the writing of sentences. Then the student can concentrate on how the ideas will be structured into sentences. Organization is the key to retrieval; hence, memory (and therefore, comprehension) is assisted if a student is taught to store information components in an organized retrieval scheme. (HOD)
ORGANIZING: KEY TO READING AND WRITING

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Introduction

Good teaching should involve from the very start the development of schemes which do not need to be greatly modified, only further developed. It is unprofitable to build a scheme which eventually needs to be corrected. Unfortunately, this has happened in numerous learning situations and many children seem to have developed sets of strategies and processes which substantially deviate from those of proficient readers and writers.

Deviant schemes for reading and writing seem to develop readily in some children. One reason for the development of deviant schemes very likely has to do with teaching approaches which may lead children toward learning schemes which will eventually need to be altered. Approaches which emphasize surface structure aspects of language unfortunately seem to guide many children toward recoding (pronouncing each word) rather than decoding (reconstructing meaning from written language). Approaches which emphasize words or phrases in isolation seem to result in schemes involving word-by-word reading with little concern for integrative thinking during reading. These approaches are usually not based upon the strengths a child brings to reading and writing tasks. They are usually unrelated to children's previous experiences. To avoid confusing children, a reading approach, from the very beginning, should stress logical relationships based on experiences. Drilling words, sounds, or even sentences should be avoided. These practices lead to deviant schemes.

A lifetime scheme involves teaching a child a process. Children need to learn a process by which they can organize ideas in order to produce or to comprehend
written language. To teach a student a process, a reliable way of organizing ideas, is to provide a student with the independence of becoming a self-teacher. Students need to learn clear and logical processes which can be generalized and transferred from teacher-directed activities to internalized self-directing sets of strategies. It is important that these strategies develop in such a way that information may alter from topic to topic, but the scheme itself need never change in its basic design. Semantic organizers are extremely useful in developing such a scheme.

A semantic organizer is a type of diagram or map which represents, minimally, the organization of a paragraph. It is a form of outline. However, it is more adaptable and yet basically more stable than most forms of outlines. Semantic organizers relate minor categories to major categories. Since most well-written material is organized around a central topic, the topic becomes the major category of a semantic organizer. A semantic organizer is used chiefly to help students organize written language so that minor categories are logically related to major categories or topics.

The semantic organizer approach is an attempt to help children internalize the theoretically models of proficient readers and writers. Early instruction using semantic organizers is recommended for children so that deviant models or schemes (which deviate from proficient ones) may be avoided from the beginning. Children need to know that written language conveys meaning -- not just the meanings of isolated words, but the meanings represented by semantically-related units.

The semantic organizer approach which will be described in this paper helps the child avoid deviant schemes and develop more proficient schemes in both reading and writing. The approach has been developed through working directly with children and observing their growth in processing written language. Pupils learn to process written language at early ages. Even four-year-olds have been able to process written language using semantic organizers when initial introduction is based on direct experiences.

Semantic organizers provide the link between thought processes and syntactic structures. Children do not initially concentrate on syntax. They concentrate more
on semantic relationships in their early language development. Only after they have developed these relationships do they attempt to approximate the adult forms of language which are more related to syntax. As language matures, children tend more and more to use the language of the adult community. But in the beginning, child language differs from adult language. It is different because the relationship of ideas and the syntactic representation is very close. The syntax is the semantic relationship without transformation.

The child has not developed standard adult structures which complicate language and also increase the distance between ideas and their representation in language. Child language may not be syntactically mature, but it is usually understood by a parent. It can be understood because adults attend to the semantic aspects of the child's utterances and to the contextual clues. Parents accommodate their language expectations in order to understand the child's language. They accept the fact that the child's language differs from their own. They usually do not correct a child for syntactic errors because there is some kind of realization that attention should be paid more to understanding the message. The child's language is not wrong. It is semantically rather than syntactically structured. Or to put it another way, the "syntax" of a young child's language is the semantic relationship.

A semantic organizer can help facilitate the assimilation of written language to schemes. The content and relationships are based on a young child's experience and interests. Just as children first concentrate their linguistic efforts on semantic relationships, so too the semantic organizer approach emphasizes semantic relationships. Cognitive organization (internalized experience) forms the base for this approach. Some children seem to have difficulty relating cognitive organization to written syntactic structures. The semantic organizer is a link between the two. Cognitive organization is connected to syntactic structures via semantic organizers. For many children, this connection is extremely important. Most children appear to benefit greatly when they are given a visual stabilizer such as a semantic organizer which can be used to organize ideas without becoming overly concerned with syntactic structuring.
A "semantic organizer" describes the basic concept. There are six different types of semantic organizers: realia, picture, verb, noun, concept, and episodic clusters. Realia clusters make use of real objects which children organize around a central topic. Picture clusters involve only pictures. Verb clusters are composed of a single verb with pictures and later nouns related in a diagram. Noun clusters involve both nouns and verb phrases. Concept clusters are less structured and represent relationships of ideas to a topic without much regard to the type of words used. Episodic clusters demonstrate relationships of events over time. They are often the most complex of all the semantic organizers.

In order to provide a frame of reference as we discuss semantic organizers, we present here two examples. This verb cluster was developed by a youngster in the first grade:

```
Books
  ↓
walk
  ↑
Dogs
  ↓
Horses
  ↓
Cats
```

The cluster represents the idea that dogs, cats, and horses walk, but books don't walk.

The concept cluster below represents complex ideas:

```
accretion disks
  ↑
whirlpools
  ↑
Black Holes
  ↓
strong gravity
no light escapes
  ↓
event horizon
  ↓
"surface"
  ↓
death of a star
  ↓
final spasm
  ↓
singularity
  ↓
Cygnus X - 1
bright as a galaxy
```


A semantic organizer can help a student organize ideas prior to writing or reading. It can also help a student organize ideas after reading. Prior to writing a paragraph, a student can be taught to organize ideas logically without becoming concerned simultaneously with the syntactic issues involved in the writing of sentences. Then, once the ideas are organized, the student can concentrate on how the ideas will be structured into sentences.

After reading, a student can be taught to organize the author's ideas. In this way the student can work through the connected ideas and understand how an author has related comments (minor categories) to a central topic. By organizing an author's ideas in this way, a student can more easily retain the information read since we more easily retrieve organized ideas from memory rather than isolated bits of information. Organization is the key to retrieval, hence, memory (and therefore, comprehension) is assisted if a student is taught to store information components in an organized retrieval scheme.

**A Life-Time Scheme**

The following is a semantic organizer in which a minimal number of words is used but the relationships of the ideas are organized around a central topic.
A concept cluster eliminates the relatively unimportant words. It is a type of outline unrestricted by the conventions of "proper" outline form. In writing, the student constructs a concept cluster by using only words essential to the basic meaning. Then the student translates the relationships into sentences within a paragraph form. After reading, a student can be helped to develop a concept cluster by selecting the topic of the passage and relating the words representing the important concepts to that topic. The development of semantic relationships and syntactic structures is thus separated into two tasks.

A semantic organizer is an excellent tool for clarifying ideas as a task separate from structuring syntax. It can be overwhelming for a child to work on organizing ideas, relating them semantically, and at the same time developing syntactic structures. A semantic organizer separates the tasks. In preparing to write, the student first considers all the related ideas, then organizes them semantically. Keeping the semantic organizer in view, the student can then formulate appropriate syntactic structures without forgetting the basic ideas.

The same system is useful for very basic relationships. For example, relationships in the following semantic organizer can be demonstrated as interrelated. The child will be less likely to confuse swim with the concept of float if he/she understands the following verb organizer:

```
Fish

Ducks

swim

Frogs

Chairs
```

The perpendicular line associated with chairs is intended to indicate that chairs are excluded as an acceptable semantic relationship in regard to swim. The exclusion line is also known as the "don't line" indicating that chairs don't swim.
Developmental Sequence: Overview

Realia Clusters

The semantic organizer approach develops from readiness tasks in which young children are taught to organize real objects and/or pictures in relation to a topic which is also represented by objects and/or pictures. The approach develops with initial emphasis on the child acting upon things which are familiar, developed from real experiences within certain contexts. By using realia and pictures, the young child learns to construct the realia clusters, the basic design of the semantic organizer. The child can use strings or draw lines on large pieces of papers demonstrating relationships of topics and related objects. At the same time, the child also demonstrates understandings of non-related objects. For example, a child might choose a picture of a baseball game as the topic. (At this stage, topics should involve some representation of activity.) Placing this picture on the floor, the child seeks related items, such as a baseball glove, cap, baseball, and then perhaps a football. The child then uses string to connect the related objects, i.e., the glove, cap, and baseball. The child also learns to place the football near the picture but places another diagonal string across the connecting line indicating that the football does not belong in the topic-comment relationship. Thus the child indicates the inclusive categories as well as the single exclusive category, the football. The child also learns through repetition the basic process which leads to fundamental organizational strategies underlying reading and writing activities as developed through the semantic organizer approach.

Parents and teachers of young children can photograph a real situation (the topic) and children can learn to relate real things to the photograph. These pictures should involve activity such as a family eating dinner, children playing, or a teacher performing a simple experiment. Dull pictures which lack activity should be avoided.

Children will need guidance in constructing their realia clusters. The basic way of introducing the procedure is through modeling. The teacher or parent constructs the organizer and then asks the child to do the same. Child and adult work together
in finding related things. Eventually the child constructs the organizer independently.

**Picture Clusters**

Picture clusters can be constructed after the child has developed a few realia organizers independent from adult help. Picture clusters can be introduced in combination with realia clusters. In this way pictures of things rather than the things themselves can be used. For example, a picture of a family eating dinner can be used as the topic. A real spoon and a real plate can be used along with a picture of a chicken. Almost anything can somehow be related to a dinner; the child, however, should be able to explain the relationship. For example, a picture of a clock can be considered inclusive to a dinner topic if the child explains that it shows the time to eat. Use the child's reasoning as the base for determining inclusive and exclusive categories.

**Verb Clusters**

The next step in readiness involves teaching a child to act out verbs. A young child can be introduced to verbs by performing the actions described by the verb. This can be done through a game such as Simple Simon. Children respond to the written verb by performing the action indicated. As soon as three or four verbs are learned in this way, appropriate agents of verbs can be taught. For example, a teacher may hold up a card with a written verb such as *fly*. Children in the class may have cardboard wings, cardboard dog ears, or rabbit ears as they represent the animal. The children with cardboard wings can "fly" around the room while the rabbits and dogs stay still. Children will vary in their costumes. One day a child may represent a bird, the next day a dog, etc. Knowledge of verbs of action grow rapidly with such an approach. More details about these activities are explained in the next chapter.

By introducing verbs in the manner above, children learn not only meanings but more importantly they learn the semantic relationships between actions and appropriate agents of that action. They also learn that certain agents are not acceptable in
relationship to that verb, for example, "dogs don't fly." In this way they learn both inclusive and exclusive categorical relationships.

After the young child has learned to respond to a number of action verbs, a semantic organizer can be introduced. The following diagram is an initial semantic organizer in which the verb is the topic of the organizer and the agents are represented by pictures which are pasted around the topic. In this type of semantic organizer one agent category is usually not acceptable as related to the verb. This exclusive category, in this case chair, helps to define what the verb logically cannot accept as an agent.

![Semantic Organizer Diagram]

The student is provided with much practice at the picture level.

After a child is familiar with the verb cluster and with the action-agent relationships as semantically related words, he/she can be taught rather directly to produce an entire paragraph. The actual teaching approach is performed through modeling. The teacher demonstrates what the child is expected to do by first performing the task. Then the child is guided to construct a similar diagram. After successful completion, the diagram is changed slightly so the child can demonstrate an understanding of the process. In this way, a child can produce a paragraph based upon the semantic organizer provided. If a child is not ready to write, he/she may be able to construct a paragraph by arranging prepared words on cardboard.
Special attention must be devoted to the teaching of the negative form when representing the exclusive category in a sentence. With repetition, children usually have no problem in understanding the function of the exclusion or "don't" lines. The negative "don't" appears to be a more natural expression than "do not." As adults, we understand that don't is a contraction of do not, but for children who usually use don't first, do not is an expansion of don't.

Reversibility is an important aspect of learning. Once children have been taught to produce paragraphs based upon semantic organizers, the reverse of the activity can be taught. Children can demonstrate their understanding of paragraphs by representing the relationships in semantic organizers. Based upon the following paragraph, a youngster can construct the following diagram:

Turtles swim. Fish swim.

Frogs swim. Chairs don't swim.

*Diagram*
Plural nouns are initially employed so that the base form of the verb may be maintained. In this way the child is introduced to semantic organizers which make use of the same form of the verb which the child has already learned in the readiness procedures.

In this approach, the paragraph is the initial organizational unit. However, the initial emphasis is still on the verb and the semantic relationships to nouns. By keeping the verb as central to the paragraph at this early stage in the approach, the sentences within the paragraph maintain a high degree of regularity. Thus the child can begin to learn to recognize semantic relationships within written sentences of repeated syntactic patterns.

The first verbs for developing initial verb clusters are verbs of action as related to agents. The verbs of process, benefaction, and state are developed in this approach sequentially.

Verbs of process accept patients rather than agents as their subjects. The patient of the sentence as related to a process verb does not represent the initiator of the action, and therefore, is not the agent of the action. The following demonstrates how the process verb *floats* can be used in conjunction with an experiment when objects are placed in water.

*A pencil floats. Soap floats.*

*A cup floats. Wood floats.*

*But a fork does not float.*
Benefactive verbs usually involve verbs such as have, want, need, got, lost, etc. In this semantic organizer the entire verb phrase is central to the diagram.

Dogs and people and cats and fishes have two eyes. But televisions don't have two eyes.

In the semantic organizer provided as an example, the verb to be is joined with the entire verb phrase as central to the diagram.

Noun Clusters

Although verb-centrality has been emphasized in the initial development of the approach, normally paragraphs are organized in terms of a topic which is best represented as a noun. Verbs seem to be central to sentences; nouns are usually central to a paragraph. The following semantic organizer demonstrates a noun cluster.
Once a child has learned to organize around a noun, some paragraphs which are similar to those found in published material can be introduced. The child can demonstrate comprehension at an organizational level by constructing the diagram after reading. Soon the child can be taught to read such a paragraph, organize it semantically, and then to write a "summary" of the original based upon the semantic organizer. The following is an example:

This is a pintail duck. Pintail ducks fly long distances. They also fly at very fast speeds. Pintail ducks swim well. They make noises but they don't really talk.

Pintail ducks fly far and very fast. They swim well. But pintail ducks don't really talk.
Expansion of language complexity is controlled as the child moves from the verb cluster to the noun cluster. Verb clusters represent relationships which are rather easily translated into syntactic structures (sentences). The sentences derived from verb clusters generally have the same pattern because the patterns depend directly upon the verb. If the verb remains the topic, the sentence patterns are more easily controlled. However, when the noun becomes the topic, the sentence patterns are less likely to be controlled. The verbs representing the related ideas often demand a variety of sentence patterns. For example, in order to represent the semantic relationships expressed in the following semantic organizer, four different types of syntactic structures can be used.

![Semantic Organizer Diagram]

are very big

Elephants

have trunks

eat peanuts

live in jungles

The following paragraph represents the basic semantic relationships expressed in the above noun cluster.

Elephants live in jungles. Elephants eat peanuts. Elephants are very big.

Elephants have trunks.

By the time a student is able to write a paragraph such as the one above, he/she will have learned the verb phrases with the aid of verb clusters. For example, a verb cluster which would be taught prior to the above noun cluster might be:

![Semantic Organizer Diagram]

Monkeys

Elephants

live in the jungle

Tigers

Camels

By the time a student is able to write a paragraph such as the one above, he/she will have learned the verb phrases with the aid of verb clusters. For example, a verb cluster which would be taught prior to the above noun cluster might be:
Of course, as in the case of all language learning, students need to understand the relationships through experience. They would need to have had some experience with the animals even if only through films or film strips.

**Concept Clusters**

Concept clusters are more complex. A concept cluster does not closely control sentence patterns. Syntax and semantics move further away from one another.

Nouns may be placed in the topic box and either verbs, nouns, adjectives, or whole phrases may represent related ideas. By the time concept clusters are introduced, the student should have a good grasp of the basic organization of a paragraph as well as the ability to deal with sentence boundaries (capitals, periods). A concept cluster is represented by the following example:

```
verb

Topic
(noun) (verb)
(adjective) (phrase)

adjective

noun
```

Related comments can be represented in a great variety of language forms. The concept clusters is not controlled or related in terms of types of words. It is a demonstration of how concepts are related to a topic. Much expository material is published in books, magazines, etc., can be represented by a concept cluster. A brief example is provided here:

```
four legs

Dogs

bark

animals

cute
```
**Episodic Clusters**

The previous semantic organizers represent basic organizational structures of information organized in terms of super and subordinate relationships as if things are at rest. These are basic semantic organizers for developing early strategies for proficient processing of written language. Material which is organized in terms of motion or change is usually more complicated because both categorizing and sequencing are involved. These involve relating a series of episodes. The following is an example of an episodic cluster represented by a type of flow chart.

```
pressure  
/   
/    
/     
earthquake  tremor
  
California  fault

  
cars  
/  
/   
houses  Destruction

  
animals  bridges
```

This flow chart represents the relationships of two events over time where change has taken place, as well as super and subordinate relationships. A story is one type of written material which is organized usually over a period of time. A story makes use minimally of two episodes. For example, in the very short story represented above, the two episodes are implied to be in a cause-effect relationship and involve a sequence of two events.

As plots thicken, so do episodic clusters with many possible cause-effect relationships represented by a number of boxes and arrows. These episodic organizers are more complex than the super- and subordinate types of organizers. They should be introduced to children well after they have developed abilities to produce and to comprehend semantic relationships in simpler expository material.
Summary

Theoretical ideas were related to an approach to teaching children how to read and to write. This semantic organizer approach can be useful in helping children to organize their ideas at a semantic level as an activity separate from syntactic structuring.

The semantic organizer approach develops a life-time scheme. The same basic processes can be learned by a very young student and can be useful to an adult writing a doctoral dissertation. Semantic organizers can help children to develop proficient schemes and avoid deviant ones in learning to read and write.

Semantic organizers provide an important link between ideas and syntactic structures. The approach is based upon language acquisition principles. As language matures within an individual the syntactic structures become more complex. Semantic organizers expand to permit great complexity.

Initial language structures are more closely related to basic semantic relationships than to adult syntactic structures. The approach presented here acts as an aid to simplifying relationships expressed in complex syntactic structures. The student can be taught to identify the more important relationships and to develop semantic organizers making use of the fewest words possible.

Vocabulary can be taught using semantic organizers in such a way that the student learns not just the meaning or a synonym for a word but the use of the word in relation to other words. Students can be taught the parameters of meaning of vocabulary words. Exclusive and inclusive categories are important for developing all the features needed in order to be able to use words appropriately in contexts. An overview of the developmental sequence was demonstrated along with explanations based on some theoretical issues discussed previously.