Since concepts are the mental divisions man makes among the concrete and abstract phenomena of his environment so he may generate, maneuver, and control their relationships in a manner to satisfy his physical, emotional, social, and aesthetic needs, concepts should be the vortex of intelligence. Too often students are taught as if they lack a concept when all they really lack is a vocabulary item for the standard or learned language environment. Teaching strategies should direct the development of the ability to express concepts appropriately for any language setting. The following conceptual relationships form a hierarchical seriatim which may be followed in directing the development of conceptual clarity for any concept: concurrence, distinctness, appurtenance, dimensional, self-activity, equivalence, reaction, association, and functional dependence. Using these conceptual relations in conjunction with vocabulary appropriate for the learned, formal, and informal language environments, a demonstration is presented of how a person may be able to express a concept using one set of vocabulary items, but not another set. The concepts can be taught without focusing on prestige or standard formal vocabulary. The syntax of thought is universal; the syntax of language is specific to a speech community. (TO)
Teach Concepts, Not Words

by
Leon E. Williamson
New Mexico State University

Paper Presented
at
WCRA's Seventh Annual Conference
Oakland, California
April 4, 5, 6, 1974
Teach Concepts, Not Words

Since concepts are the mental divisions man makes among the concrete and abstract phenomena of his environment so he may generate, maneuver, and control their relationships in a manner to satisfy his physical, emotional, social, and aesthetic needs, concepts should be the vortex of intelligence and not vocabulary items as evident in most intelligence, aptitude, and achievement tests. For illustrative purposes, consider items 111 to 120 for form B of the Peabody Picture Vocabulary Test. They are crucial in achieving a score which would place a person with a chronological age of seventeen years six months to eighteen years five months in the average range of intelligence quotients. To the right of each item are other vocabulary items which may be used to express the same concept in other language settings or environments. Settings for language usage are easily identified if one thinks in terms of learned, formal, and informal.
<table>
<thead>
<tr>
<th>Vocabulary Item</th>
<th>Learned</th>
<th>Formal</th>
<th>Informal</th>
</tr>
</thead>
<tbody>
<tr>
<td>111. constrain</td>
<td>fetter</td>
<td>restrain</td>
<td>keep under wraps</td>
</tr>
<tr>
<td></td>
<td>manacle</td>
<td>control</td>
<td>hold up</td>
</tr>
<tr>
<td></td>
<td>gyve</td>
<td>curb</td>
<td>sit on</td>
</tr>
<tr>
<td></td>
<td>incarcerate</td>
<td>suppress</td>
<td>sit upon</td>
</tr>
<tr>
<td></td>
<td>immune</td>
<td>confine</td>
<td>sit down on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>crack down on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>put the lid on</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>bottle up</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>squish</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>squelch</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>hog-tie</td>
</tr>
<tr>
<td>112. tangent</td>
<td>osculatory</td>
<td>touching</td>
<td>next to</td>
</tr>
<tr>
<td></td>
<td>impinging</td>
<td>in contact</td>
<td></td>
</tr>
<tr>
<td></td>
<td>conjunction</td>
<td>meeting</td>
<td></td>
</tr>
<tr>
<td></td>
<td>contiguous</td>
<td>abutting</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>beside</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>against</td>
<td></td>
</tr>
<tr>
<td>113. sconce</td>
<td>holder</td>
<td></td>
<td>roost</td>
</tr>
<tr>
<td></td>
<td>container</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>top</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>bracket</td>
<td></td>
<td></td>
</tr>
<tr>
<td>114. hoary</td>
<td>venerable</td>
<td>old</td>
<td>old hat</td>
</tr>
<tr>
<td></td>
<td>superannuates</td>
<td>ancient</td>
<td>has-been</td>
</tr>
<tr>
<td></td>
<td>inferm</td>
<td>antique</td>
<td>model-T</td>
</tr>
<tr>
<td></td>
<td>senescent</td>
<td>ageless</td>
<td>dodo</td>
</tr>
<tr>
<td></td>
<td></td>
<td>elderly</td>
<td>mossback</td>
</tr>
<tr>
<td></td>
<td></td>
<td>mature</td>
<td>fuddy-duddy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>doddering</td>
<td>fossilized</td>
</tr>
<tr>
<td></td>
<td></td>
<td>senile</td>
<td>no chicken</td>
</tr>
<tr>
<td></td>
<td></td>
<td>vetern</td>
<td></td>
</tr>
<tr>
<td>115. pendant</td>
<td>superincumbent</td>
<td>hang</td>
<td>gallos</td>
</tr>
<tr>
<td></td>
<td>cernuous</td>
<td>suspend</td>
<td>floppy</td>
</tr>
<tr>
<td></td>
<td>penduline</td>
<td>drape</td>
<td>sagging</td>
</tr>
<tr>
<td></td>
<td>beetle</td>
<td>droop</td>
<td>loppy</td>
</tr>
<tr>
<td></td>
<td></td>
<td>dangle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>swing</td>
<td></td>
</tr>
<tr>
<td>116. prodigy</td>
<td>neonate</td>
<td>wonder</td>
<td>stunner</td>
</tr>
<tr>
<td></td>
<td></td>
<td>marvel</td>
<td>wonder-for-hogs</td>
</tr>
<tr>
<td></td>
<td></td>
<td>geneus</td>
<td>champ</td>
</tr>
<tr>
<td></td>
<td></td>
<td>sensation</td>
<td>punk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>off-spring</td>
<td>little bugger</td>
</tr>
<tr>
<td></td>
<td></td>
<td>papoose</td>
<td>chip off the</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>old block</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>brat</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>sapling</td>
</tr>
</tbody>
</table>
To assume a person does not have any of the concepts represented by items 111 to 120 just because he does not respond correctly to one or all of these verbal stimuli is nonsense. Vocabulary tests reveal how American education is too pedantic to assess the degree to which students have acquired conceptual clarity for any concept. Too often students are taught as if they lack a concept when all they really lack is a vocabulary item for the standard or learned language environment. Thus, "learning" language is used to block students' use of concepts they may apply very effectively in their home. In reality, formal education helps people to acquire vocabulary to express concepts in formal and learned settings. Unfortunately, vocabulary items used to express the same concepts in informal settings are taboo in education. Yet students and instructors spend most of their talking time in
informal language settings. Nothing reveals man's variation in expressing his finite number of concepts more than does Roget's Thesaurus.

Since concepts and not selected vocabulary items should be the vortex of intelligence, teaching strategies should direct the development of the ability to express concepts appropriately for any language setting. The following nine conceptual relationships form an hierarchial seriatim which may be followed in directing the development of conceptual clarity for any concept (Williamson, 1970).

1. Concurrence: recognizing members of the concept (mammal: man, pig, goat, whale, horse, etc.)

2. Distinctness: recognizing what is not a member of the concept (mammals: duck, snake, lizard, bee, etc.)

3. Appurtenance: being aware of unique characteristics which result in placing members in the concept (mammal: hair, live birth, milk glands)

4. Dimensional: knowing the range in sizes for members of the concept (mammal: from small field mouse to the whale)

5. Self-activity: understanding an act or activity peculiar to members of the concept (mammal: nursing)

6. Equivalence: recognizing two or more members of the same concept based upon scientific but subtle similarities (mammal: man, whale)

7. Reaction: recognizing an effect one concept has upon another (mammal: eats plants; provides food for some parasites)

8. Association: recognizing a cause-effect between one concept and another (mammal: producing carbon dioxide for plants; plants producing oxygen for mammals)
9. Functional dependence: recognizing what members of one concept depend upon for continued existence (mammal: sun, water, plants, male and female)

Using the above conceptual relations in conjunction with vocabulary appropriate for the learned, formal, and informal language environments, it is easy to demonstrate with the concept constrain how a person may be able to express a concept using one set of vocabulary items but not with another set. The demonstration will be made by giving a word or symbol for each of the nine relations that will evoke the correct response if the person can express the concept in that language setting. Three foils or distractors are given with each correct choice. The answer is underlined. The order for the language settings is: (1) informal, (2) formal, and (3) learned.

concept = constrain

Concurrence: Recognizing members of the concept.

Informal:  a. set-up
           c. the run of
                   b. squelching
                   d. half-baked

Formal:  a. choice
         c. approve
                 b. refuse
                 d. control

Learned:  a. manacle
           c. clementness
                   b. peremptory
                   d. aquiesce

Distinctness: Recognizing what is not a member of the concept.

Informal:  a. crack down
           c. bottle up
                   b. sit on
                   d. own hook

Formal:  a. restrain
         c. assert
                 b. curb
                 d. arrest

Learned:  a. incontinence
           c. incarcerate
                   b. gyve
                   d. extinguish
Appurtenance: Recognizing characteristics unique to members of the concept.

Informal: a. happy person  b. scared person
          c. unhappy person  d. sick person

Formal: a. police officer  b. priest
        c. laborer       d. sales clerk

Learned: a. stack of books  b. reading a book
         c. writing a book  d. burning a book

Dimensional: Recognizing the range in size or degree of intensity of the concept.

Informal: a. _____ b. _____

Formal: a. _____ b. _____

Learned: a. _____ b. _____

Self-activity: Recognizing an act or activity peculiar to members of the concept.

Informal: a. can't move  b. can't read
          c. can't sleep   d. can't sing

Formal: a. bind       b. associate
        c. help       d. demand

Learned: a. leniency  b. compulsion
         c. plenary    d. monopolist

Equivalence: Recognizing two or more members of the same concept based upon scientific but subtle similarities.

Informal: a. empty jar and blank page
          b. empty bathtub and empty room
          c. empty pocket and empty purse
          d. empty box and empty bed

Formal: a. beautiful girl and homely girl
        b. man in jail and a hermit
        c. woman sleeping and woman singing
        d. baby walking and baby crawling

Learned: a. man praying and man reading
         b. a man singing and a man reading
         c. a man laughing and a man eating
         d. a man dancing and a man carving
Reaction: Recognizing an effect one member of a concept has upon a member of another concept.

Informal:  
1. a boy tying up a package  
2. a boy tying up a dog  
3. a boy tying his shoe  
4. a boy tying strings together  

Formal:  
1. doctor examining a man  
2. gardener watering flowers  
3. fireman putting out a fire  
4. barber cutting a man's hair  

Learned:  
1. beaver building a dam across a stream  
2. bird pecking meat from a crocodile's teeth  
3. kangaroo with a baby kangaroo in its pouch  
4. dog under a tree with a bird in it  

Association: Recognizing a cause-effect relationship between two concepts.

Informal:  
1. black cat completing crossing a street behind a car just involved in a wreck  
2. fat lady eating a chicken while looking through a door too small for her  
3. man praying while lightning strikes another  
4. grocery store and a hungry child  

Formal:  
1. a dairy and a half beef hanging  
2. a garden and a swarm of insects  
3. a withered plant on a desert  
4. two men shooting each other with hungry children standing behind them  

Learned:  
1. public speaking and a man in jail  
2. angry boss dismissing workers and picket signs in front of his business  
3. a teacher and a student holding a report card with four f's on it  
4. an unhappy student walking away from a school and a happy truck driver  

Functional dependence: Recognizing what members of a concept needs to exist.

Informal:  
1. don'ts  
2. homes  
3. parents  
4. books  

Formal:  
1. lawyers  
2. rules  
3. libraries  
4. interference  

Learned:  
1. nonpartisan  
2. federalism  
3. statutes  
4. emancipation
Teaching strategies and evaluative instruments which focus on prestige vocabulary and not concepts are obscurants which have no place in a profession proclaiming the ethics educators do. Yet, they abound in most educational institutions. They set the boundaries and the goals to which professors and teachers commit themselves to lead their students. Unfortunately, too many educators have become slaves to words rather than their masters. Bernstein's (1961) theory of "restricted" and "elaborated" language codes is widely accepted with an assumption that the "restricted" code (a different dialect than that accepted as the standard in a speech community) fails to develop and refine the intellect. There is not one shred of evidence that any particular language or a dialect within a language is more effective in developing and refining an intellect. The syntax of thought is universal; the syntax of language is specific to a speech community. Let's conclude with a description given by Vygotsky (1962: 150).

Thought, unlike speech, does not consist of separate units. When I wish to communicate the thought that today I saw a barefoot boy in a blue shirt running down the street, I do not see every item separately: the boy, the shirt, its blue color, his running, the absence of shoes. I conceive of all this in one thought, but I put it into separate words. A speaker often takes several minutes to disclose one thought. In his mind the whole thought is present at once, but in speech it has to be developed successively.
References

