The Entry Survey is a 22-item, individually administered test assessing kindergarten children's language skills. Sixteen of the items address the semantic development of the following pairs of polar opposites: before-after, large-small, tall-short, and thick-thin. The remaining six items address letter identification ("c," "m," and "h") and word identification ("up," "in," and "with"). The rationale for the design of the survey is presented, and testable hypotheses of child language underlying the survey are listed. (Author)
DESIGN OF THE KINDERGARTEN PROGRAM ENTRY SURVEY

Pamela L. Coker & Stanley E. Legum

ABSTRACT

The Entry Survey is a 22 item individually administered test assessing kindergarten children's language skills. Sixteen of the items address the semantic development of the following pairs of polar opposites: before-after, large-small, tall-short, and thick-thin. The remaining six items address letter identification ('c', 'm', 'h') and word identification ('up', 'in', 'with'). The rationale for the design of the Survey is presented and testable hypotheses of child language underlying the Survey are listed.
INTRODUCTION

The Kindergarten Program Entry Survey is designed to assess kindergarten children's language skills. The design of the Entry Survey was constrained by two explicit requirements. The first was that the test could not take longer than four to five minutes to administer for each child. The second was that the test should be easily and correctly administered by teachers who are not trained experimenters. For this reason the recording of responses had to be kept simple. This restriction makes it very difficult to collect any syntactic or phonological data because the elicitation methods used would require the teacher to record some fairly complex production data. This narrows the major focus of the Entry Survey to semantic development. Additionally, since the Entry Survey is to serve as a pre-test for the Kindergarten Program, three letter identification and three word identification items were included to assess the child's reading proficiency before starting the program.

Four word pairs of polar opposites (before-after, large-small, tall-short, thick-thin) were chosen for several reasons. First, the acquisition of opposites is one of the few areas researched in semantic development. For each word pair there have been at least two studies with identical results (before-after: Clark, 1971; Hatch 1969; large-small, tall-short, thick-thin: Wales & Campbell, 1970; Donaldson & Wales, 1970; Tashiro, 1971). Second, these studies have shown that for each pair
there are at least three and perhaps four response patterns which may reflect stages of semantic acquisition. Furthermore, the word pairs have a particular order of acquisition which can be used as an additional means of stratification.

In assessing letter identification, the alphabet can be viewed as a rough continuum of letters from easy to difficult. The following three criteria were used to establish the continuum:

1. The letters at the beginning of the alphabet are easier than those at the end.
2. Letter names which are also English words are easier than those which are not.
3. Letters with high graphic confusability with other letters (e.g., p-b) are more difficult than those which are graphically unique. (From Blair & Ryckman, 1969, reporting Popp, 1964; Smith, 1928, and Blair & Ryckman nursery school children.)

The letters 'c', 'm', and 'h' were chosen by these criteria to represent an easy, a moderately difficult, and a difficult letter. The level of mastery of the alphabet can be predicted from the relative difficulty of each letter as well as the number of letters identified.

'Up', 'in', and 'with' were chosen for the word identification task. As with the letters these three words represent varying degrees of difficulty as measured by Coleman (1970). His measure was number of errors recorded before a non-reading child could correctly read a particular word eight times. He found that 'up' had 0-5 errors, 'in' had 10-15 errors and 'with' had 20-25 errors. Coleman looked at other word classes as well (nouns, verbs, adverbs, adjectives, etc.). These were not considered for the Entry Survey because of the high variability across
primers of what nouns and verbs appear. Since primers have a high concentration of function words (a less extensive class of words than nouns or verbs) the child with some reading experience would have a greater chance of being exposed to any specific function words than to some particular nouns or verbs of the same level of difficulty. The basic reason why prepositions were chosen over other function words was that except for pronouns Coleman's range of errors for other function words was not as great as it was for prepositions. Pronouns were rejected because the only pronoun in the 0-5 error range ("I") is also a letter and thus confounding.

The Entry Survey permits tests of the following hypotheses.

(1) Each pair of polar opposites is acquired through a sequence of semantic development in which the positive member of the pair is learned first and the negative member is learned last. Additionally for some intervening time the negative member is treated to mean the positive member.

Before-After - Four hypothesized stages of acquisition.

Stage 1: The child does not distinguish either term and adopts an order of mention strategy. The child will respond correctly to "Point to the house before you point to the car" but incorrectly to "Before you point to the shoe, point to the car.

Stage 2: The child learns before but he still uses an order of mention strategy for after.

Stage 3: The child treats after to mean before.
Stage 4: The child learns after.

Polar Adjectives (Large-Small, Tall-Short, Thick-Thin) - Four hypothesized stages of acquisition.

Stage 1: The child does not distinguish either term and responds randomly.

Stage 2: The child learns the positive member of the pair (large, tall, thick) and responds randomly to the negative member of the pair (small, short, thin).

Stage 3: The child treats the negative member to mean the positive member.

Stage 4: The child learns the negative member.

(2) There is a specific order of acquisition of polar adjective pairs:

(a) large-small
(b) tall-short
(c) thick-thin

(3a) Acquisition of the absolute terms (large, small, tall, short, thick, thin) precede the acquisition of their respective comparatives (larger, smaller, taller, shorter, thicker, thinner).

(3b) The child learns the comparative marker -er and then generalizes it to all the adjectives he knows.

(3c) Acquisition of the comparative is identical to acquisition of the absolute terms. The four stages are:

Stage 1: The child distinguishes neither the positive member plus -er nor the negative member plus -er and responds randomly.
Stage 2: The child distinguishes the comparative of the positive member but still responds randomly to the comparative of the negative member.

Stage 3: The child treats the comparative of the negative member to mean the comparative of the positive member.

Stage 4: The child learns the comparative of the negative member.

(4) The letters chosen for the Entry Survey are learned in the following order:
   (a) 'c'
   (b) 'm'
   (c) 'h'

(5) The words chosen for the Entry Survey are learned in the following order:
   (a) 'up'
   (b) 'in'
   (c) 'with'

MATERIALS SPECIFICATIONS

The Entry Survey is a booklet consisting of two sample items (A and B) and 22 survey items (see Table 1 for the breakdown of the items). The booklet is arranged so that when the child and teacher sit across from one another the child sees the stimuli on one page and the teacher reads the instruction from the other page. The 22 items fall into the following three response patterns:
(1) The child must point in the correct sequence to two objects.

   e.g., Instruction: "Point to the car before you point to the house."

   (Vertical Stimulus Array)
   [car]
   [house]

(2) The child must point to one object.

   e.g., Instruction: "Point to the thick glass."

   (Horizontal Stimulus Array)
   [thick glass]  [thin glass]
   (or)

   Instruction: "Point to a flower taller than this one."
   (Teacher places finger on arrow.)

   (Horizontal Stimulus Array)
   [taller flower]  [medium flower]  [smaller flower]

(3) The child must identify a letter or word.

   e.g., Instruction: "What is the name of this letter?"

   (Stimulus Array)
   [c]

See Table 1 for response patterns for each item.

Four forms of the Entry Survey were constructed to control for the following factors:

1Material in square brackets is pictured.
(1a) **Response Bias.** It is anticipated that when the child responds by pointing to two objects he might adopt an up-down or down-up pointing strategy.

(1b) On the comparative items (where comparison to a standard is required) it is also possible that the child will adopt a response bias dependent upon where the standard is placed in the array. For example, the child always points to either the object to the right of the standard or the object to the left of the standard.

(2) **Learning effects.** It is also anticipated that the child might experience some learning due to presentation of prior items (e.g., "large" might facilitate "larger").

(3) **Interference effect.** A high degree of failure can be expected on the letter name and word identification items. This raises the possibility that performance on the immediately following items may suffer. A random set of four items was chosen to follow each of these six difficult times. The item difficulties in these "unfavorable" positions will be compared to the item difficulties for equivalent items in other positions.

One Entry-Survey booklet and answer sheet will be provided to each teacher for administration to each child individually. The approximate time for each child is three-five minutes. Different classrooms in the same school will be assigned different forms of the test on a random basis.
**Table 1**

**ITEM DESCRIPTION.**

<table>
<thead>
<tr>
<th>Instruction</th>
<th>Number of Items</th>
<th>Stimuli Used</th>
<th>Response Pattern</th>
</tr>
</thead>
<tbody>
<tr>
<td>before</td>
<td>2</td>
<td>car, house, cat, shoe, house</td>
<td>Points to both objects in sequence.</td>
</tr>
<tr>
<td>after</td>
<td>2</td>
<td>cat, shoe, cake</td>
<td>Points to both objects in sequence</td>
</tr>
<tr>
<td>large</td>
<td>1</td>
<td>car, house cake</td>
<td>Points to one object</td>
</tr>
<tr>
<td>small</td>
<td>1</td>
<td>cake</td>
<td>Points to one object</td>
</tr>
<tr>
<td>larger</td>
<td>1</td>
<td>egg</td>
<td>Points to one object compared to standard</td>
</tr>
<tr>
<td>smaller</td>
<td>1</td>
<td>egg</td>
<td>Points to one object compared to standard</td>
</tr>
<tr>
<td>tall</td>
<td>1</td>
<td>tree</td>
<td>Points to one object</td>
</tr>
<tr>
<td>short</td>
<td>1</td>
<td>tree</td>
<td>Points to one object</td>
</tr>
<tr>
<td>taller</td>
<td>1</td>
<td>flower</td>
<td>Points to one object compared to standard</td>
</tr>
<tr>
<td>shorter</td>
<td>1</td>
<td>flower</td>
<td>Points to one object compared to standard</td>
</tr>
<tr>
<td>thick</td>
<td>1</td>
<td>glass</td>
<td>Points to one object</td>
</tr>
<tr>
<td>thin</td>
<td>1</td>
<td>glass</td>
<td>Points to one object</td>
</tr>
<tr>
<td>thicker</td>
<td>1</td>
<td>book</td>
<td>Points to one object compared to standard</td>
</tr>
<tr>
<td>thinner</td>
<td>1</td>
<td>book</td>
<td>Points to one object compared to standard</td>
</tr>
<tr>
<td>c</td>
<td>1</td>
<td>c</td>
<td>Identifies verbally</td>
</tr>
<tr>
<td>m</td>
<td>1</td>
<td>m</td>
<td>Identifies verbally</td>
</tr>
<tr>
<td>h</td>
<td>1</td>
<td>h</td>
<td>Identifies verbally</td>
</tr>
<tr>
<td>up</td>
<td>1</td>
<td>up</td>
<td>Identifies verbally</td>
</tr>
<tr>
<td>in</td>
<td>1</td>
<td>in</td>
<td>Identifies verbally</td>
</tr>
<tr>
<td>with</td>
<td>1</td>
<td>with</td>
<td>Identifies verbally</td>
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</table>
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